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FARM NOTES.

Saving the Seed Corn.

Much has been said and written upon this topic in recent years, yet each spring many farmers find themselves without seed corn that will germinate properly, and have to depend upon purchasing a supply for planting or run the risk of a poor stand by using such seed as they have, and in many instances both chances must be taken. This can all be avoided by the saving of sufficient seed corn in the fall and storing it in such a way that its germinating qualities will not be impaired during the winter. The advantages of selecting seed corn from the stalk before the crop is cut have been enumerated in previous issues of the Michigan Farmer, and a considerable proportion of farmers have taken that precaution.

Another method of saving the seed corn which affords a degree of natural selection was related to the writer by a prominent farmer recently, who stated that he husked the ears which the corn binder knocked off from a 30-acre field and found that a very considerable portion of them were good seed ears. These ears were gathered as soon as possible after the corn was cut and were properly stored in a suitable rack in the basement of the house near the furnace, so that the seed will be practically fire dried. This kind of selection insures the saving of both early and heavy ears and is perhaps as good a selection as would be secured by any other method. In order to make this method available the work should be done before heavy rains have occurred after the corn is cut. Of course, it is now too late to practice this kind of selection this year but the idea may be worth a trial in subsequent seasons by those to whom it has not occurred.

Those who have not already saved their seed corn, however, must do so from the product as it is husked. Where the corn is husked by hand, this can easily be done by leaving a few husks on the ears saved and drawing them to one side when the husking is done and gathering them all separately before or at the time the corn is drawn. Where the husking is done by machine huskers, the seed ears can be saved when the corn is being shoveled into the cribs for storage. The disadvantage of this method is that one cannot take into consideration the character of the plant upon which the ears grew. However, it is more preferable to save the corn this way in the fall and properly store it so that it will be thoroughly cured before winter than to attempt to select corn for planting from the crib, as so many farmers find themselves obliged to do at planting time.

The manner in which the corn is stored is not so important so long as some method is used which will permit a free circulation of air all about the ears. It can be quickly secured by the use of binder twine, two strands being crossed between the ears, forming a long string of ears which can be hung from a rafter or other convenient place in the garret or some suitably dry room. A corn rack can be made by the use of two by fours and narrow strips or by the use of a pole into which nails have been driven to hold the ears by simply sticking them on at the butt or by any of the numerous satisfactory methods which have been frequently described in these columns. It matters not the method so long as the corn is thoroughly cured out and stored in a suitable place which will prove satisfactory. But it would mean many dollars in the pockets of Michigan farmers in the aggregate if every farmer would give this matter his early attention in order that the seed for next year's crop might be uniformly good and thus insure

a uniformly good stand of corn throughout the state.

Harvesting the Potato Crop.

Early in October, potato digging is the important work upon a great majority of Michigan farms. The potato crop is an important cash crop in our state and more farmers are each year making it a factor in their operations. With the present scarcity and high price of farm labor the method of harvesting the potato crop is of considerable economic importance upon any farm where even a small acreage is grown. An increasing number of machine diggers are being an-

directly into the cellar for storage or pitting them in the field, the advantage lies with immediate storage, in the writer's opinion, as the work is no greater and all danger of freezing will then be avoided, as will the labor of handling again if the crop is not sold at once.

Opinions differ as to the advisability of sorting in the field or picking the entire crop up as it is dug. With the availability of the machine sorter the work of sorting can be most cheaply done when the crop is marketed and as this is an important factor in order to get the crop secured before freezing weather it is

cured in the late planted crop in all sections of the state, due to the unusually hot weather which prevailed at planting time. However, this may not affect the yield as greatly as has been anticipated and the relation of the number of plants per acre to the yield secured will be an interesting development in harvesting this year's crop.

The date at which digging should begin is another matter in which the grower's individual judgment must be exercised. The writer has made potatoes a cash crop for a good many years and has made it an almost invariable rule to begin digging not later than the second week in October, as in normal years this will not give any too much time to get the crop harvested before freezing weather occurs. However, when frosts do not occur until late and the crop is too green to dig, it may be necessary to delay the potato harvesting until a later date than above indicated. From present appearances it would seem that this is likely to be the case this year, but in that event every preparation should be made to push the work when it is begun and shorten the harvesting period as much as possible in order that damage from freezing may be eliminated, as a crop of frosted potatoes is a difficult and expensive proposition to handle. In the harvesting of the potato crop there is great latitude for the exercising of good judgment on the part of the grower to secure the most economic results.

Adding Humus to the Soil.

I have some land up in Clare county north of Harrison. It is sand and gravel, and has been burned off until there is little humus left. I would like to know what the best plan would be to bring the soil to its highest producing power. I thought of sowing it to cowpeas in the spring, plowing those under and sowing it to clover. Would it be necessary to put on any commercial fertilizer? If so, what kind and how much? Would it be better to put in the clover first?

N. L.

There is no doubt of the wisdom of adding vegetable matter to this soil as the quickest means of bringing it to a point where it will profitably produce ordinary farm crops. In a good many instances it has been found practicable to seed burned over lands in midsummer by sowing clover and grass seed, depending upon the autumn rains to cover it so as to insure successful germination. All through the northern portion of the upper peninsula where the snow comes early and prevents a severe freezing of the ground, this has been found a practicable means of getting at least a partial stand of grass upon wild lands which will enable its use for pasture until such time as the hard wood stumps have rotted off. Sometimes the seed is harrowed in the ground with an A drag such as is commonly used on new land.

This inquiry does not make it plain whether this land has been cleared and previously farmed or not. At any rate, it is now too late in the season to use this method of seeding clover, and from the statement that the cowpeas are to be sown in the spring to be later plowed down as a green manure, it would appear that this is cleared rather than wild land. In that case, it would doubtless be beneficial to add some commercial fertilizer at the time when sowing the cowpeas, as by this method a larger crop can be grown for the purpose of plowing down later, and the ultimate results would doubtless be more satisfactory than if the fertilizer was used when the clover is sown. If the ground contains the bacteria peculiar to cowpeas, no nitrogen would be needed, at least only a very small percentage of this plant food could be profitably used but the mineral elements of plant food, or phosphoric acid and potash will help the cowpeas to make



A Fine Field of Sugar Beets on the Farm of Geo. A. Weiler, of Eaton County.

usually used because of the saving of labor effected, and under nominally favorable conditions the digger is a valuable factor in the economic harvesting of the potato crop.

The handling of the tubers is, however, not less important and here methods vary greatly. However, it has been thoroughly demonstrated that the most economic method of handling the crop is to pick them in crates and draw them either to market or to the cellar for storage in the crates into which they are picked. A platform wagon is a great convenience for this work, but where it is not avail-

generally considered most economical to eliminate sorting in the field, especially as the labor employed will not always do the work satisfactorily.

Where any portion of the crop is dug by hand some of the best producing hills should be saved for seed to be used in a seed bedding plot the following year. This will not involve a great amount of labor and is a means to the end of increasing the yield of variety grown, which should not be neglected.

As to the advisability of selling the crop when dug, or storing them for later marketing, advice is of little value. This



Seed Corn Should Not be Stored in Piles, But on Racks in a Dry Room.

able the crates can be piled on top of each other and drawn on an ordinary wagon bed of planks. Where they are to be placed in the cellar for winter storage it is a much better plan to slide the crates down a plank through a window or door into the cellar to be dumped by hand, rather than to empty them into a chute as is quite commonly done, since they peel considerably when so handled and the bruises will make them look badly when taken out for marketing.

As to the two methods of putting them

is an individual problem into which the facilities for storing, the need for the money which the crop would bring and the statistics of the season's production should all be taken into consideration. Government reports have shown the crop prospects to be the poorest in many years. The fall weather has, however, been favorable for the late development of the crop and final yields are hard to estimate even at this date. One factor which will doubtless reduce the Michigan yield considerably is the poor stand se-

a better growth and will not be lost to any extent by subsequent leaching, and any residue of the plant food not utilized by the cowpeas will remain in the soil for the benefit of future crops.

For the most profitable result, it would in the writer's opinion, pay to utilize the cowpeas in some manner, such as hogging them down in the fall; or a portion could be sown to common Canada peas, and thus be available for the hogs before the cowpeas reached a suitable stage of maturity. In this way some profit would be derived from the crop grown for green manure and the plowing down of this crop could be delayed until it had practically ripened, which will generally produce better results, since the plowing down of a large growth of green vegetation has a tendency to cause an acid condition of the soil, which might necessitate putting on an application of lime.

Handled as above suggested, the soil would be well covered over in the winter and the vegetable matter could be plowed down in the spring and possibly added to a profitable extent by discing in rye and vetch in the early fall, when the land would be in condition to use for a regular crop rotation in which clover should be used at as early a period as possible.

Without doubt, this inquirer is beginning in the right place for the improvement of this comparatively new soil and a very large proportion of Michigan farmers would do well to begin at the same point in the improvement of their worn lands, the fertility of which has been depleted perhaps as greatly by depriving them of their humus as of their actual plant food.

Fall Plowing for Cucumbers.

How would it do to fall plow land intended for cucumbers next year?
Montcalm Co. N. H.

There would be nothing to be gained by fall plowing for the cucumber crop. For best results, if the crop is planted on a clover sod, the ground should be well covered with stable manure during the winter or in early spring, and plowed early and worked thoroughly to prepare a good seed bed before the time to plant the crop. Since a fine seed bed can be prepared by spring plowing, there would be nothing gained by plowing in the fall, as is sometimes the case with early planted crops.

LILLIE FARMSTEAD NOTES.

Alfalfa.

The common belief is that alfalfa is a drought resisting plant; that it will grow continually in dry weather, but my alfalfa don't seem to be of that variety. As I have stated before, we got no second growth of alfalfa this year. It didn't produce as large a growth as common red clover in the same field. On the clover meadows I got quite a nice little growth for seed and cut it and saved it, but the alfalfa never grew enough so that we could harvest it. I put the mowers on and clipped it but didn't attempt to rake it up, and it didn't grow at all until the recent heavy rains. On that field which has been seeded now two years, during the drought, I top-dressed with 500 lbs. of commercial fertilizer. The fertilizer analyzed 1:3:4. The theory is, of course, that I ought not to have used the brand containing one per cent of ammonia because alfalfa is a nitrogen gatherer and all that was necessary to use was the phosphoric acid and potash, but this brand I could get easily and no phosphate and potash was at hand, and then I have learned from experience, I think, that one does not lose anything when they buy a little bit of nitrogen whether it is for alfalfa or corn or wheat or oats, or any other crop. A little nitrogen helps put the right kind of color into the growing plant. Well, since the rain has come I never saw anything grow in my life like the alfalfa. It has grown in the last two weeks, a foot, and if it was not so late in the season I believe I would cut it and make hay of it, although if the present rains continue it would be impossible to cure it. But I want to give it the best kind of a chance and so I am going to leave this on the ground to protect it over winter. Without doubt, the fertilizer had a little to do with this growth but the dominant factor in this growth was moisture. Alfalfa seems to need moisture and responds to moisture as much as any crop that I ever grew. Of course, the red clover fields are coming on for a third crop now, after we have cut off the crop for seed. They look green and luxuriant as far as you can see them.

Saving Seed Corn.

A portion of my seed corn this year I selected from the growing stalks. I picked

it off from what I considered to be typical corn plants, but only a small portion of it, because this is a slow process. I need about 10 bushels of shelled corn for ensilage corn seed and I do not attempt to select this seed from the growing plant. This year we selected it from the seed which the binder knocked off in cutting 30 acres of corn. We followed the binder pretty closely in picking up the corn as it is knocked off, husking it, and taking care of it before it was even wet. In all, there was about 100 baskets of corn on the ground, big, nice, well developed ears the most of them. As a matter of fact, I have the nicest ears of corn this year that I think I ever grew. I attribute part of it to the 500 pounds of commercial fertilizer which I put onto the ground last spring before planting. Besides that it has been warm weather this summer and warm weather will make corn grow. However, this corn got a bad start. As I stated earlier in the season, immediately after planting we had a severe rain which packed the ground, rotted some of the corn, and it was a long time before we could get onto the ground to cultivate. When we did get on the ground was hard and we had to put the cultivators in so that it was almost all that a team could pull to loosen up the ground. It was hard work. Yet in spite of all this we have got the corn. Not a big crop because I didn't have a perfect stand. But we have got good sound corn, and I have selected ensilage corn seed from this corn, and I have got it on the racks in the basement of the house away from the wet weather where we have a fire almost every evening now, and will have more and more, so that it will be thoroughly fire dried, and it is where it will not freeze this winter. and I am positive that I will have good prime seed corn next year.

Last spring I bought a bushel of Wing's White Cap Yellow Dent. I was a little afraid that this corn, grown down in Ohio, would be a little bit late for our latitude, and such has proven the case. There is no soft corn, yet we have had an exceptionally good corn year. Had it been a poor corn year there would have been very much of it that would have been soft corn, and yet I like the corn. It has vigor, it is a grower, and has some tremendous ears. I am of the opinion that if this corn is planted thickly it will make a most excellent ensilage corn, it contains so much vigor, and I am going to save quite a lot of it for ensilage seed, and have selected out some of the earliest ears and will plant part of the field corn to this again next year. I am sure that this will, with a fair season, mature, by selecting the earliest ears. I wouldn't want to do this every year because I believe that it will lower the vitality of the plant by selecting every year the earliest ears, but we must have a corn that will ripen for field purposes.

My Holt's Mammoth has done exceedingly well this year, and, of course, I am going to save the major portion of the seed corn for next year from Holt's Mammoth.

Sugar Beets.

Since the rains have come the sugar beets seem to have taken on a new lease of life. There was getting to be a yellowish tinge to the field before the rain came which showed that they were maturing, but now they are green and rank and are growing wonderfully. What effect this will have upon the percentage of sugar I do not know, yet I do not think they were far enough along so that there is any new growth started. They have simply revived and if warm weather continues two or three weeks they are bound to make a splendid growth, and they were pretty well grown to begin with.

Ensilage Corn.

We did not get our ensilage corn planted until well in June again this year, and part of it is hardly fit to go into the silo at the present writing, (September 28), and I am making plans to cut it and fill the silos next week. A portion of the field was planted to a larger kind of ensilage corn which I sent off and got and it is not fit yet, but I shall not wait, and next year I will plant my own seed corn for ensilage. No more of the big southern corn for me. This makes two or three times that I have experimented with a larger corn, and it is not satisfactory.

Rye and Rape in the Hog Run.

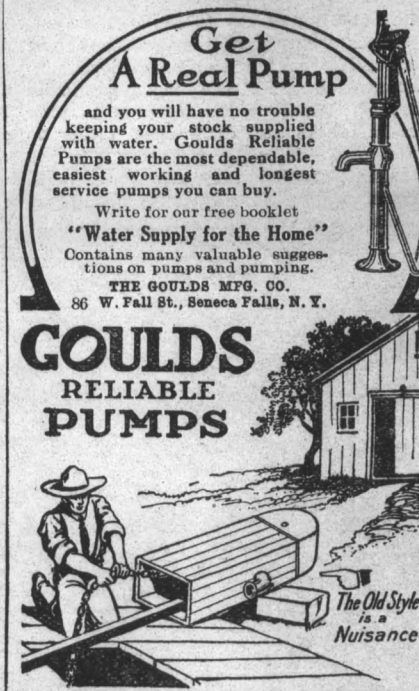
Before the rains came the hog run which has been sown to rape and rye the very first part of August had made no growth. In fact, in some places it had not come up. Since the rains it has made a wonderful growth. In some places the rape is a foot high and rye covers the ground and is rank and green.

COLON C. LILLIE.

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LIVE STOCK

FEEDERS' PROBLEMS.

Beet Tops as a Green Forage.

Are beet tops all right to feed to sheep? What is the best way to preserve them without a silo? Are they all right to feed to sheep, if bean pods are fed in connection with them? How heavy should I feed each if they are both good?

Clinton Co.

READER.

There is considerable difference of opinion among beet growers as to the value of the tops as a green forage for live stock. Dairymen who have fed them intelligently, using only a moderate feed of the green tops or the ensilage made from same once each day in combination with corn silage and dry forage, value the tops very highly for this purpose. On the other hand, some who have fed them more liberally have noticed deleterious results, and especially when they have been fed liberally to sheep.

Some sheepmen have suffered considerable loss from the liberal feeding of beet tops, as well as unwholesome results where fed liberally to cattle. These undesirable results have doubtless been due to the presence of a considerable amount of potash salts and a degree of oxalic acid in the beet leaves. There is, however, no question but that the beet tops can be safely fed to dairy cows if only a moderate feed is given once each day, and while he has never used them it is the writer's opinion that they could be made a moderate factor in the ration for sheep with safety, although, as above noted, there is undoubtedly some danger in their use as a sheep feed, particularly where care is not exercised in feeding them.

They are, however, too valuable as a supplementary feed, especially under the present conditions of high-priced hay, to make it a good business proposition to neglect their use. Of course, the silo is the best means of preserving the tops for later feeding, although they can be placed in a pit made from lumber or even rails or packed in a compact pile for later feeding with the loss of only a foot or so of the outside which will decay and exclude the air from the interior of the pit or pile. For late fall feeding they can be left in the field in small piles as they are placed after the beets are topped and drawn directly to the barn as needed. The feeding should begin gradually and never be excessive, using only a small feed once each day in connection with other forage, and particular care should be exercised if they are fed to sheep and the feed discontinued or reduced in case any deleterious effects are noted.

A Ration for the Working Horses.

In feeding corn and oats to horses, is it better to grind them together? If so what proportion should be used of each? If ground, should the corn be crushed, cob and all?

Branch Co.

A. R.

Where corn and oats are fed to horses it is a good plan to grind them together as suggested in this inquiry. Where horses are at hard work and where timothy hay is fed as a roughage, a satisfactory ration from the standpoint of maximum results is about one-third corn and two-thirds oats. Where good clover hay or mixed hay is used, a mixture of one-half corn and one-half oats may be a very satisfactory feed for work horses, and in the winter season an even larger proportion of corn, say two-thirds corn and one-third oats can be used with satisfactory results. A little bran used in connection with the feed will prove a valuable aid in keeping the horses in good condition. However, when oats are high and scarce, approximately the same nutrients can be secured by the combination of and old process oil meal. Nine pounds corn and two pounds of oil meal will furnish approximately the same digestive nutrients as 14 pounds of oats, and if a mixture of this kind is combined with some oats and a little bran, the ration will be somewhat cheapened.

The writer has used a ration composed of 600 pounds of corn, 100 pounds of oil meal, 100 pounds of bran and about 200 pounds of oats with very good results. Oats have a tonic effect not possessed by other grains and the presence of the oat hulls lightens the feed and makes it more easily penetrated and acted upon by the digestive juices. A degree of the same effect will be secured by grinding the corn cobs and all, although there is little, if any, actual feeding value in the corn cobs and it is difficult to get them ground fine enough, and for horses it is doubtful whether there is anything to be gained in grinding the corn, cobs and all, where either oats or bran are to be used

in connection with the corn meal making up the grain ration.

SELECTING THE BREEDING FLOCK.

Such a high standard of perfection has not yet been reached in cross-breeding that our flocks do not possess some undesirable qualities. Many of these it is very undesirable to have transmitted to the progeny. Especially is this true when we may want to keep some to increase our breeding flock, or to replace any that may be passing the stage of their highest usefulness.

The first and greatest law of breeding is "like begets like." We should always remember that the progeny may inherit the bad, as well as the good, qualities of the ancestry. In many cases the tendency is stronger to reproduce the former more prominently.

In all forms of life, both animal and vegetable, there seems to be a natural tendency to degenerate. Unless a persistent and intelligent effort is made to select those individuals that show the most good characteristics the effort for improvement will be unsuccessful.

The season is now at hand when the sheep breeder should be looking over his flock for the last time to determine which are the best specimens to reserve for future use as breeders.

One of the greatest hinderances to the most effectual and permanent improvement of our flocks is that the breeder does not study carefully enough the individual qualities of his sheep.

He depends perhaps too much on the general appearance of his flock as a whole.

In many cases the flock is turned out to pasture in the spring and but little more attention is paid to them except to see that they have salt regularly and are not molested.

When weaning time comes they are gotten up, the lambs sorted out, and the flock is turned away again till mating time comes later in the season.

It always pays well to give much attention to individual merit. This is true with the growing lambs and also in the further development of the younger members of the flock.

A close acquaintance with the individual makes more easy the intelligent introduction of new blood. This will result in the desirable qualities becoming fixed, and transmitted to the progeny with a greater degree of certainty. There are always individuals in every flock that materially influence the selling price of both wool and mutton. Their produce, which must sell along with the rest, is of superior or inferior quality. The elimination each year of the most undesirable animals from the flock means a more firm establishment of a strong flock foundation. Upon this we may continue to grade to a higher standard of excellence. This always means greater satisfaction and greater profit.

In retaining animals to constitute the breeding flock for next season those individuals that have shown strong prepotency should be selected. They will more firmly fix those desirable qualities sought for and tend to increase the productiveness of the flock.

There are usually some ewes that have served their days of usefulness and had better be discarded. In selecting lambs to take their places it is important to look well to the good and bad qualities of their parents.

Many lambs are far from being as good individuals as either of their parents. Of course, such would be undesirable material with which to replenish our flocks.

Ewe lambs from individuals that have proven themselves good breeders and producers are the safest ones to be retained for breeding purposes.

One thing that every breeder should always strive to do is to establish some particular type throughout the flock. This is of much importance. Nothing goes farther than uniformity. It never fails to attract attention. It always pleases the eye of the visitor or prospective purchaser. This quality has many times sold a flock of very common or medium quality for a long price.

Individuals that are strong producers have usually inherited the trait from their ancestors. The development should always be encouraged. There may be ewes in the flock that produce a fleece of greater length and stronger fiber than others. This should be noted and remembered in the selection for the upkeep of the flock. They are important factors in profitable sheep husbandry.

Ingham Co.

H. M. YOUNG.

TRADE MARK.
CRESCENT
GOLD FILLED
Reg. U.S. Pat. Off.

TRADE MARK.
JAS. BOSS
GOLD FILLED
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This is a Crescent gold-filled watch case enlarged to show detail. You will find "gold-filled" watches sold by all sorts of jewelers at all sorts of prices. If you buy on price or guarantee stamp you are pretty sure to get a shoddy case.

You can tell a reliable case by the depth of the engraving and engine-turning—and by the "Crescent" or "Jas. Boss" trademarks stamped inside.

Deep engraving always indicates a thick gold-wearing surface. In a trashy case the gold is not thick enough to stand deep cutting. The design is shallow cut or merely burnished on.

Don't be misled by irresponsible "guarantees" stamped inside the case. A true warranty of value and service is the "Crescent" or "Jas. Boss" trademark. They are standard with the fine jewelry trade and have been for fifty years.

The Keystone Watch Case Co.

Established 1853

Philadelphia

This New Press Enables Hay Balers to Clean Up \$10 a Day

With hay at its present price and a new Sandwich Motor Press, any live fellow can clean up \$10 a day. Baling hay is a delightful occupation, and you can make more money during the six months' baling season than most men make in a whole year. The few hundred dollars you invest in an outfit brings 4 to 8 times as big returns as the same amount put into farming or a retail business.

The Motor Press is a combination Sandwich All-Steel Belt Power Press and high-grade gasoline engine. Complete and compact. Works like lightning—easy to move—always ready for work—no setting up of engine required. Chain drive. No belts to adjust, or lose power. Easy to start or stop press instantly.

Outfit of best, most substantial construction throughout. Steel press—axles, wheels and platform reinforced throughout. 7 H. P. hopper-cooled engine—brake test, 9 H. P. Tank underneath. Equipped with batteries and magneto, combination seat, battery and tool box, and standard gasoline pump. If you have engine, buy Press alone. Any standard hopper-cooled engine can be used.

Sandwich All-Steel Motor Press

This outfit bales 2½ to 3½ tons per hour. Has self-feeder equipment. Takes double charge of hay. Has no condenser box, needs no foot tamping—feeds direct from fork. No balance wheels, no complicated gears, no high speed machinery. Fast, simple, strong and light of draft. Should you desire a smaller outfit—one less expensive and having capacity of, say 1½ tons per hour, we can furnish it, using either a 4 or 5 H. P. gasoline engine.

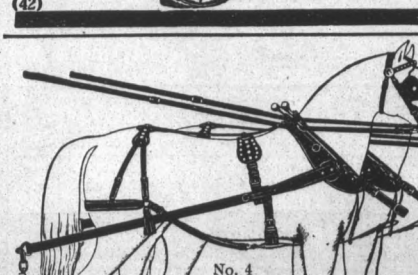
We make presses with or without engine—wood frame and steel frame, horse power and engine power, in all sizes up to 5-ton per hour capacity.

Drop us a line today for new book, about the Astounding Profits in Hay Baling. Let us tell you more about this wonderful Sandwich Motor Press.

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Write for Free Book on Hay Baling (42)

Bales 3½ Tons Per HOUR



HARNESS

HORSE

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ARMSTRONG & GRAHAM

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READ THIS GREATEST TRUST-BUSTING OFFER—\$175 SAVED
Tear out this ad—it is good for a 6 H.-P. Gasoline Engine 60 Days FREE
 (This offer good for only the first farmer sending from each postoffice)

This "SIX MULE TEAM" GASOLINE ENGINE must absolutely do all work on the farm—right under my own

38,000 of Our Gasoline Engines Sold—16 Returned

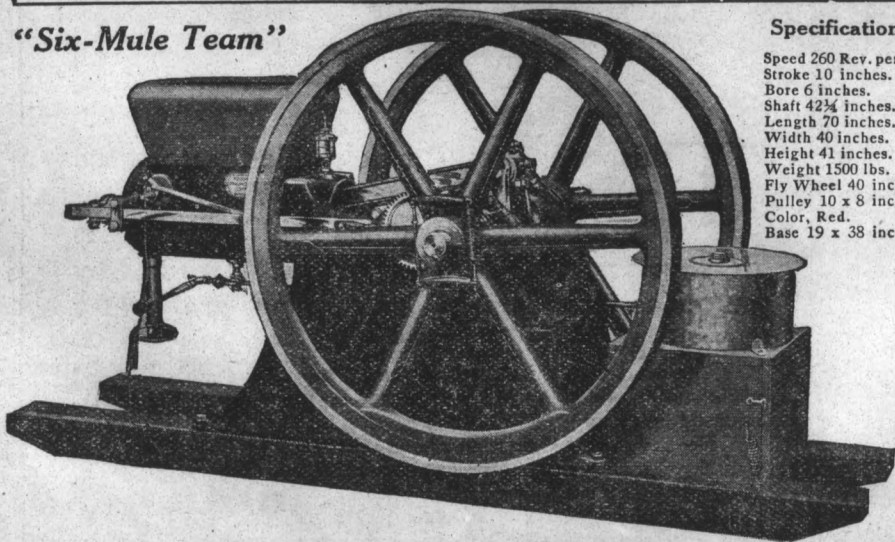
Our "Six Mule Team" Engine is the greatest success of our two-years' fight against gasoline engine trusts—a \$300 gasoline engine for \$125.

First, we saved the farmer \$30 with that record-maker engine, "The Chore Boy"—then we saved him \$50 with the 2½ H.-P. beauty, "The Hired Man"—now we come out with a 6 H.-P. engine, the greatest, the strongest, the best in the world, and save him \$175. We call it "Six Mule Team" and it lives up to the name.

Two years ago when the farmer was paying two prices for a cheaply-made rattle-trap scrap of iron, dubbed a "Gasoline Engine," when he was paying out his hard-earned money to support corporation officers, who never walk, but ride around in taxicabs—we first sold our little "Chore Boy" Engine. And the gasoline engine trust sneered and said, "All right—they will be out of business in six months. They cannot sell an engine at that price and live right. They don't know how to make money on gasoline engines—they are a bunch of rubes." Since then we have sold over 38,000 gasoline engines.

Doesn't this look as though the farmer knows a square deal when he meets it face to face—as though it paid to make an engine that was A-1 in every particular and sell it at a decent price, instead of trying to put 100 per cent dividends in the pockets of kid-gloved, cigarette-smoking sports who do not know a gasoline engine from a threshing machine, and who spend their time and money on women in Peacock Alley or along Broadway. We think it does—that is why we are selling this "Six Mule Team" Gasoline Engine at \$175 less than the trust. It's your big chance—tear out this whole page, send it in today with your name and address. Nothing else necessary.

"Six-Mule Team"



Specifications:

Speed 260 Rev. per M.
 Stroke 10 inches.
 Bore 6 inches.
 Shaft 42½ inches.
 Length 70 inches.
 Width 40 inches.
 Height 41 inches.
 Weight 1500 lbs.
 Fly Wheel 40 inches.
 Pulley 10 x 8 inches.
 Color, Red.
 Base 19 x 38 inches.

nose—for 60 days—before
 I pay you a penny cash

Associated Manufacturers Company,
 Waterloo, Iowa

GENTLEMEN—If you will take all the risk and send me this great big, massive, beautiful, quiet running, powerful gasoline engine, called "Six Mule Team," and guarantee that it will develop from 6 to 8 H.-P. or I don't pay, I will accept it for 60 Days' FREE TRIAL. You must instruct the station agent to allow me to carefully uncrate and examine this engine—if it does not suit me, I'll tell the agent to ship it back, freight collect.

You also guarantee that this "Six Mule Team" has a larger bore and a longer stroke, larger fly wheels, and is heavier than any mail order or trust engine made, selling as high as \$300, and that I will save \$175 for my own pocket—that the

Price is ONLY \$125

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If I like the engine when I see it at the station, I will take it out to my farm, abuse it, overload it, put it up against work that my neighbors are using a 6 H.-P. engine for. If it does not do the work with less gasoline per H.-P. per hour, if I do not decide that it is the best engine I ever saw—if I don't make up my mind that this "Six Mule Team" engine is the best bargain I ever made, then—I will on or before 60 days ship it back freight collect. If I accept it I will send you \$125 cash, or if I prefer, send you half cash, and three notes, due in 30, 60 and 90 days, 7% interest.

This engine to be fully covered by your protection-for-life guarantee.

Name _____

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MINERAL HEAVE REMEDY

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NEGLECT Will Ruin Your Horse
 Send to day for only PERMANENT CURE

\$3 PACKAGE will cure any case or money refunded.
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Our summer importation, in our estimation the best lot of horses we have ever had at Oaklawn, has arrived. Numerous important prize-winners are included, then the high average is the main thing, as every animal would be a credit in any herd. Write us, **DUNHAMS, Wayne, Illinois.**

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CATTLE.

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

HOLSTEIN BULLS

FOR SALE

Registered bulls from four to ten months old for sale that are closely related to Hengerveld De Kol, De Kols 2nd Butter Boy 3rd, and Colantha 4th's Johanna. The dams are heavy milkers and mostly in the A. R. O. Prices reasonable. Send for list. Bigelow's Holstein Farm, Breedsville, Mich.

Purebred Registered HOLSTEIN CATTLE
 The Greatest Dairy Breed
 Send for FREE Illustrated Booklets.
 Holstein-Friesian, Assn., Box 164, Brattleboro, Vt.

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.
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HOLSTEIN BULL—sired by best son of CALF Pontiac Butterboy—56 advanced registry daughters—and out of daughter of Korndyke Queen De Kol, over 24 lbs. butter in 7 days. Best breeding on earth. Price right.
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BULL FOR SALE—Handsome thoroughbred yearling Holstein Bull, excellently well bred. Dam a 1200-lb. cow. At a bargain. Cannot be duplicated for three times the price.
 ROUGEMONT FARMS, Detroit, Mich.

Holsteins—Grandsons of Pietertje Hengerveld's Count De Kol, 2 months to 3 years old. Breeding best, prices lowest.
 HOBART W. FAY, Eden, Mich.

Holsteins—Parties wishing to upgrade write for my Bull proposition.
 CHAS. S. RILEY, R. 1, Metamora, Michigan.

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

HOLSTEIN BULLS—1 with a 20-lb. Dam. A grand one at a low figure. Several fine ones at lower cost. LONG BEACH FARM, Augusta, Kalamazoo Co., Mich.

DEKOL-KORNDYKE Holstein bull calf, choicest A. R. O. breeding. Splendid individual, \$50. Ypsilanti Farms, Ypsilanti, Mich., Cole Brothers, proprietors.

FOR SALE—3 yearling Holstein-Friesian bulls, also bred heifers \$150 to \$200 each. Bull calves \$40 to \$50. 33 years a breeder. Photos and pedigrees on application. W. C. JACKSON, South Bend, Ind., 719 Rex St.

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

FOR SALE—Reg. St. Lambert Jerseys. Cows and Bulls from high producing stock. O. A. BRISTOL, Fenton, Michigan.

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 CRYSTAL SPRING STOCK FARM.
 Silver Creek, Allegan County, Michigan.

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

Dairy Bred Shorthorns—a few bred heifers for sale. Cash or good note. J. B. HUMMEL, Mason, Mich.

LILLIE FARMSTEAD JERSEYS.
 HERD BULLS (Vidas Signal St. L. No. 58197; Jubilee's Foxhall, No. 82299).

Bull calves sired by these great bulls and out of splendid dairy cows, many of them in test for register of merit. Also a few heifers and heifer calves for sale. Write for description and prices. Satisfaction guaranteed, or money refunded.
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Register of Merit Jerseys. Official yearly lot of young bulls from dams with official records of 483 pounds and upwards of butter.
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For Sale—Double Standard Polled Durham Bulls, heifers, and cows. I am closing out. Write for prices. Sanford Gasser, Sherman, Mich.

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 Sired by Tomlin's Interested Prince 71648, whose dam made 733 lbs. butter in one year, authenticated test. Choice individuals. Prices Reasonable.
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Durocs & Victorias—Growthy Spring Boars & Gilts of choicest breeding from Prize Winners. M. T. STORY, R. 248, Lowell, Michigan.

Berkshires—Sows bred for fall farrow. Boar pigs for fall service. Quality and breeding first-class. Prices reasonable. C. O. Corey, New Haven, Mich.

Berkshires—Buy a service Boar now, for sale. C. S. BARTLETT, Pontiac, Mich.

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TWO Berkshire Gilts, sired by Handsome Prince 3. Bred for Aug. farrowing, will sell at \$40 & \$45 also a few spring pigs left. A. A. PATILLUO, Deckerville, Mich.

Berkshire Service Boar for Sale—Three old, magnificent specimens. Son of the great Longfellow's Duke. Dam by Baron Masterpiece. None better anywhere. For one-third value for quick sale.
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IMPROVED CHESTER WHITES—Choice young 1 boars of March and April farrow. I will also sell 10 thoroughbred Holstein cows to freshen in Sept. and Oct. W. O. Wilson, Okemos, Mich. Both phones.

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FOR SALE—3 Chester White Boars, farrowed last March. Right in every way and ready for service. Sire winner of 9 first prizes and dam a Grand Champion at the 1909 International. BONNIE BRAE FARM, ALGONAC, MICH.

O. I. C.—either sex, March farrow—the large, growthy kind. Order now and get first choice.
 C. J. THOMPSON, Rockford, Michigan.

PURE O. I. C'S—Bred from prize-winners and large type. Both sexes, not akin, this spring farrow. Call or write. F. A. C. Schweitzer, Montezuma, O.

O. I. C's—growthy kind. Right type at farmers' prices. A. NEWMAN, R. No. 1, Marlette, Michigan.

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

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

O. I. C. Fall Pigs either sex. Pairs not akin. A few gilts bred for spring farrow. All stock shipped C. O. D. if desired. H. T. CRANDELL, Cass City, Mich.

O. I. C's—Boars all sold. Choice young sows weighing 150, also 60 Aug. & Sept. pigs, either sex, pairs not akin. Order early. Fred Nickel, Monroe, Mich., R. 1.

DUROC-JERSEY SOWS bred for Sept. farrow. Also spring gilts and boars of choicest breeding at right prices. E. R. CORNELL, Howell, Mich.

Duroc Jerseys FOR SALE—A few spring boars bred for good breeding. Write for prices. J. A. MITTEER, Stockbridge, Michigan.

BUTLER'S BIG TYPE POLAND-CHINAS—size, bone, quality. 10 big fall boars at \$25; 100 spring pigs \$10 to \$15; 50 fall pigs \$30; 5 registered Shrop bucks at \$10 to \$15; 8 reg. Jersey bulls at \$15 to \$25; 50 reg. Shrop ewes at \$10. We are the farmer's friend. J. C. Butler, Portland, Mich.

DUROC-JERSEYS—ASK FOR CAREY U. EDMONDS, Hastings, Mich.

FOR SALE—DUROC-JERSEY bred sows, pigs and Shepherd Pups. Express prepaid. J. H. BANGHART, Lansing, Mich.

DUROC-JERSEYS—25 fine spring gilts, popular blood lines. Good individuals; 10 fine boars, 5 bred sows due to farrow soon. JOHN MCNICOL, R. No. 1, North Star, Mich.

WALNUT HILL DUROCS—17 fancy sows bred to Mich. Col. for August and Sept. farrow. 185 spring pigs, both sexes, priced right. Write or come J. C. BARNEY, COLDWATER, MICHIGAN.

LARGE TYPE P. C.—Largest in Michigan. Pigs sows. Weigh 160 to 175 lbs. at 4 months. My motto: "Not how cheap but how good." Will pay expenses of those who come and do not find what I advertise. W. E. LIVINGSTON, Parma, Mich.

Poland Chinas—Extra good spring and fall pigs either sex. L. W. BARNES & SON, Byron, Shiawassee Co., Mich.

POLAND CHINA SPRING PIGS from large styled stock. Also dairy bred Shorthorns, both sexes, all ages, prices low. ROBERT NEVE, Pierson, Mich.

Big Type P. C. Boars and Sows sired by expansion. A. A. WOOD & SON, Salline, Michigan.

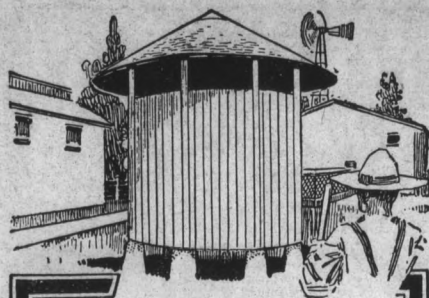
Poland-Chinas—A few big type Sept. Gilts bred for Sept. farrow. Also spring pigs. E. D. BISHOP, Route 38, Lake Odessa, Mich.

Three Extra Good Fall P. C. Boars
 By Next In Line. 32 spring male pigs ready to ship. I ship C. O. D. and furnish pedigree promptly. If you want good as the best, write me for prices.
 WM. WAFFLE, Coldwater, Michigan.

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 WATERMAN & WATERMAN.
 Successors to the Murray-Waterman Co., ANN ARBOR, MICH.

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

Sheep Ads. on page 303.



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Concrete foundations for cribs stop this loss instantly. They are absolutely vermin-proof and practically everlasting.

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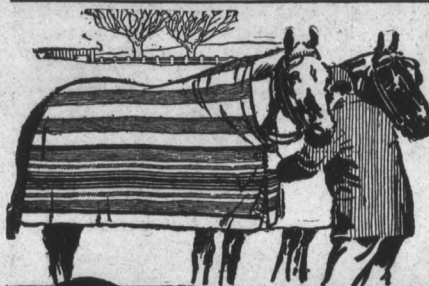
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Always look for the 5A trade mark
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NEWTON'S REMEDY is Death to Heaves, Coughs, Distempers. Safe, positive cure that is Guaranteed for Heaves. It gets at the root of the trouble. A scientific remedy for indigestion, which is the real cause of heaves. Heaves affect the lungs only indirectly. Newton's Remedy drives out intestinal worms and is an excellent stomach and bowel conditioner. Book explains fully, free, \$1 per can, at dealers, or sent direct, prepaid. THE NEWTON REMEDY CO., Toledo, Ohio

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(Continued from last week).

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Senior Yearling Bull—First, W. F. McCray.

Junior Yearling Bull—First, J. H. & J. W. VanNatta.

Senior Bull Calf—First, J. F. McCray; 2nd, J. H. & J. W. VanNatta; 3rd, Louis Norton.

Junior Bull Calf—First, J. H. & J. W. VanNatta; 2nd, W. T. McCray; 3rd, Louis Norton.

Cow 3 years or over—First, J. H. & J. W. VanNatta; 2nd, W. T. McCray; 3rd and 4th, Louis Norton.

Heifer 2 years—First, J. H. & J. W. VanNatta; 2nd, W. T. McCray; 3rd, Louis Norton.

Senior Yearling Heifer—First, J. H. & J. W. VanNatta; 2nd, W. T. McCray; 3rd, Louis Norton.

Junior Yearling Heifer—First, W. T. McCray; 2nd, J. H. & J. W. VanNatta; 3rd, Louis Norton.

Senior Heifer Calf—First, W. T. McCray.

Junior Heifer Calf—First and 2nd, J. H. & J. W. VanNatta; 3rd, W. T. McCray; 4th and 5th, Louis Norton.

Exhibitor's Herd—First, J. H. & J. W. VanNatta; 2nd, W. T. McCray; 3rd, Louis Norton.

Breeder's Herd—First, J. H. & J. W. VanNatta; 2nd, W. T. McCray; 3rd, Louis Norton.

Four get of sire—First, J. H. & J. W. VanNatta; 2nd, W. T. McCray; 3rd, Louis Norton.

Senior Champion Bull—Ribbon badge, J. H. & J. W. VanNatta.

Junior Champion Bull—Ribbon badge, W. T. McCray.

Senior Champ. Female—Ribbon badge, J. H. & J. W. VanNatta.

Junior Champ. Female—Ribbon badge, J. H. & J. W. VanNatta.

Grand Champion Bull—Cup, J. H. & J. W. VanNatta.

Grand Champion Female—Cup, J. H. & J. W. VanNatta.

Shorthorn Steers.

Steer 2 years old or over—First and 4th, Carpenter & Ross, Mansfield, O.; 2nd, J. Lessiter's Sons, Clarkston, Mich.; 3rd, L. C. Kelly, Ypsilanti, Mich.

Steer 1 year and under 2—First and 2nd, Carpenter & Ross; 3rd, Lessiter's Sons; 4th, L. C. Kelly.

Steer under 1 year—First, Carpenter & Ross; 2nd, Lessiter's Sons; 3rd, L. C. Kelly.

Champion Steer—Carpenter & Ross.

SHEEP.

Ramboillet.

Ram 2 years or over—First and 2nd, F. S. King Bros., Laramie, Wyo.; 3rd, A. E. Green, Orchard Lake, Mich.; 4th, E. M. Moore, Wixom, Mich.; 5th, P. C. Freeman & Son, Lowell, Mich.

Ram 1 year old—First, 2nd and 4th, F. S. King; 3rd, A. E. Green; 5th, P. C. Freeman & Son.

Ram Lamb—First and 5th, F. S. King; 2nd and 4th, P. C. Freeman; 3rd, E. M. Moore.

Ewe 3 years and over—First, 2nd and 3rd—F. S. King; 4th, P. C. Freeman; 5th, A. E. Green.

Ewe 1 year old—First, 2nd and 4th, F. S. King; 3rd, P. C. Freeman; 5th, P. C. Freeman.

Ewe Lamb—First, F. S. King; 2nd and 4th, P. C. Freeman; 3rd, John E. Webb, Southport, Ind.; 5th, E. M. Moore.

Flock—First, F. S. King; 2nd, P. C. Freeman; 3rd, E. M. Moore; 4th, A. E. Green; 5th, John E. Webb.

Four Lambs—First, F. S. King; 2nd, P. C. Freeman; 3rd, E. M. Moore; 4th, John E. Webb; 5th, A. E. Green.

Grand Champion Ram—Cup, F. S. King.

Grand Champion Ewe—Cup, F. S. King.

Hampshire Down.

Ram 2 years or over—First, Wm. Cooper & Nephews, Chicago, Ill.; 2nd, C. O. Judd, Kent, Ohio.

Ram 1 year old—First and 2nd, C. O. Judd; 3rd, Cooper & Nephews.

Ram Lamb—First and 4th, C. O. Judd; 2nd and 3rd, Cooper & Nephews; 5th, F. W. Harding, Waukesha, Wis.

Ewe 2 years or over—First and 2nd, C. O. Judd; 3rd, Cooper & Nephews; 4th, H. H. Cherry, Xenia, Ohio; 5th, F. W. Harding.

Ewe 1 year old—First and 4th, Cooper & Nephews; 2nd and 3rd, C. O. Judd; 5th, F. W. Harding.

Ewe Lamb—First and 3rd, C. O. Judd; 2nd, Cooper & Nephews; 4th and 5th, F. W. Harding.

Flock—First, C. O. Judd; 2nd, Cooper & Nephews; 3rd, F. W. Harding.

Four Lambs—First, C. O. Judd; 2nd, Cooper & Nephews; 3rd, F. W. Harding.

Grand Champion Ram—Cup, Cooper & Nephews.

Grand Champion Ewe—Cup, Cooper & Nephews.

Horned Dorsets.

Ram 2 years old or over—First, H. H. Cherry, Xenia, Ohio; 2nd, Wm. Newton, Pontiac.

Ram 1 year old—First, H. H. Cherry; 2nd, Wm. Newton.

Ram Lamb—First and 2nd, H. H. Cherry; 3rd, Wm. Newton.

Ewe 2 years old or over—First and 2d, H. H. Cherry; 3rd, Wm. Newton.

Ewe 1 year old—First and 2nd, H. H. Cherry; 3rd, Wm. Newton.

Ewe Lamb—1st, 2nd and 3rd, H. H. Cherry; 4th, Wm. Newton.

Flock—First, H. H. Cherry; 2nd, Wm. Newton.

Four Lambs—First, H. H. Cherry; 2nd, Wm. Newton.

Grand Champion Ram—Cup, H. H. Cherry.

Grand Champion Ewe—Cup, H. H. Cherry.

Southdowns.

Ram 2 years old or over—First, Chas. Leet, Mantua, Ohio; 2nd, J. Lloyd Jones, Burford, Ont.; 3d, Wm. Newton, Pontiac.

Ram 1 year old—First, Chas. Leet; 2nd, J. Lloyd Jones; 3rd, Wm. Newton.

Ram Lamb—First, Chas. Leet; 2nd and 3rd, J. Lloyd Jones; 4th, Wm. Newton.

Ewe 2 years or over—First, J. Lloyd Jones; 2nd and 3rd, Chas. Leet; 4th, Wm. Newton.

Ewe 1 years old—First and 2nd, Chas. Leet; 3rd and 4th, J. Lloyd Jones; 5th, Wm. Newton.

Ewe Lamb—First and 2nd, Chas. Leet; 3rd and 4th, J. Lloyd Jones; 5th, Wm. Newton.

Flock—First, Chas. Leet; 2nd, J. Lloyd Jones; 3rd, Wm. Newton.

Four Lambs—First, Chas. Leet; 2nd, J. Lloyd Jones; 3rd, Wm. Newton.

Grand Champion Ram—Cup, Charles Leet.

Grand Champion Ewe—Cup, Charles Leet.

HORSES.

Belgian.

Stallion 4 years or over—First, W. W. Collier, Pontiac; 2nd, Bell Bros.; Wooster, Ohio.

Stallion 3 years—First, 2nd and 3rd, Bell Bros.

Stallion 2 years—First and 2nd, Bell Bros.

Mare 4 years or over—First and 2nd, W. W. Collier.

Mare 2 years old—First, Bell Bros.

Champion Stallion—Cup, Bell Bros.

Champion Mare—Cup, Bell Bros.

American Carriage.

Stallion 4 years or over—First, W. W. Collier, Pontiac; 2nd, J. R. Peake & Son, Winchester, Ill.; 3rd, G. W. Slaughter, Detroit; 4th, Wm. Bowerman, Jackson.

Stallion 3 years old and under 4—First, Peake & Son; 2nd, Wm. Bowerman; 3rd and 4th, G. W. Slaughter.

Stallion 2 years or under 3—First, W. W. Collier; 2nd and 3rd, Peake & Son.

Stallion 1 year old and under 2—First, 2nd and 3rd, W. W. Collier; 4th, Peake & Son.

Stallion Colt—First, W. W. Collier.

Mare 4 years old or over—First and 4th, Peake & Son; 2nd, G. W. Slaughter; 3rd, W. W. Collier.

Mare 3 years old and under 4—First, W. W. Collier; 2nd, C. J. Buchanan, Indianapolis, Ind.; 3rd, Peake & Son; 4th, F. G. Kerby, Detroit.

Mare 2 years and under 3—First, W. W. Collier; 2nd and 3rd, Peake & Son.

Mare 1 year and under 2—First, Peake & Son; 2nd, W. W. Collier.

Filly Colt—First, W. W. Collier.

Stallion with 4 of his get of either sex—First, Peake & Son.

Mare and 2 of her produce—First and 2nd, W. W. Collier.

Champion Stallion—Cup, W. W. Collier.

Champion Mare—Cup, Peake & Son.

Clydesdales.

Stallion 4 years old or over—First, Geo. Ackerman & Son, Elkton, Mich.; 2nd, A. H. Haynes, Applegate, Mich.

Stallion 3 years old—First, Endicott Farms, Birmingham, Mich.; 2nd, Ackerman & Son.

Stallion 1 year old—First, Ackerman & Son.

Stallion Colt—First, Ackerman & Son.

Mare 4 years old or over—First, 2nd and 3rd, Ackerman & Son.

Mare 1 year old—Ackerman & Son.

Mare Colt—First, Ackerman & Son; 2d and 3rd, Endicott Farms.

Stallion and his 4 get—First, Ackerman & Son.

Mare with 2 of her produce—First, Ackerman & Son.

Champion Stallion—Cup, Ackerman & Son.

Champion Mare—Cup, Ackerman & Son.

English Shire.

Stallion 3 years old—First, Bell Bros; 2nd, Miller & Singer, Wyandotte, Mich.

Champion Stallion—Cup, Bell Bros.

Heavy Draft Mares and Geldings.

Mare or gelding 4 years old or over, shown in harness—First, 2d, 3rd and 4th, Ackerman & Son.

Mare or gelding 3 years old, shown in harness—First, Ackerman & Son.

Mare or gelding—First, Ackerman & Son; 2nd, Richard Muirhead.

Mare or gelding 1 year old—First and 2nd, Ackerman & Son.

Filly or Stallion Colt—First, Endicott Farms; 2nd, Ackerman & Son.

Brood Mare with Colt under 3 years—First, 2nd and 3rd, Ackerman & Son; 4th, Endicott Farms.

Four grade Colts any age—First, Ackerman & Son.

Pair heavy draft horses over 1,500 lbs.—First and 2nd, Ackerman & Son; 3rd, Endicott Farms.

Shetland Ponies—Breeding Stock.

Stallion 3 years or over—First, 2nd and 3rd, C. E. Bunn, Peoria, Ill.; 4th, Stonycroft Farms, Pontiac.

Stallion 2 years old—First and 2nd, C. E. Bunn.

Stallion 1 year old—First and 2nd, C. E. Bunn.

Stallion Colt—First and 2nd, Stonycroft Farms.

Mare 3 years or over with colt under 2 years—First, 2nd and 3rd, C. E. Bunn; 4th, Stonycroft Farms.

Mare 2 years old—First and 2nd, C. E. Bunn; 3rd, R. J. Hall, Detroit.

Mare 1 year old—First and 2nd, C. E. Bunn.

Mare Colt—First, C. E. Bunn; 2nd, Stonycroft Farms.

Percherons.

Stallion 4 years or over—First and 2nd, Bell Bros.

Stallion 3 years—First and 2nd, Bell Bros.

Stallion 2 years—First, 2nd and 3rd, Bell Bros.

Mare 3 years old—First, Bell Bros.

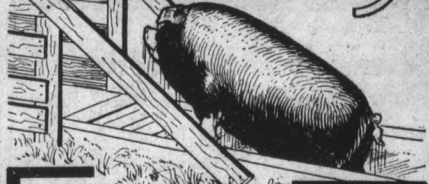
Mare 2 years old—First, Bell Bros.

Best five stallions—First, Bell Bros.

Champion Stallion—First, Bell Bros.

Champion Mare—First, Bell Bros.

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ABSORBINE

THE DAIRY

CONDUCTED BY COLON C. LILLIE.

THE COST OF PRODUCING CLEAN MILK.

The movement is general for the production of better milk to supply our great centers of population. The National Department of Agriculture, the different State Departments, and the Boards of Health of the states and cities have all been investigating, publishing suggestions, influencing legislation, and enforcing ordinances and statutes for the purpose of getting to the public a product that is more suited to conserve health and please the palate. But while the varied suggestions are made to farmers to clean up their barns and premises and conditions are forced upon them by legislative enactment, when the farmer attempts to charge the city patrons for the additional work demanded of him in order that he may deliver his milk, there is general denunciation of his greedy nature. And this raises the question, "How much should the farmer receive for the extra expense incurred in the production of clean milk?"

Little work has been done to furnish accurate statements regarding the increased cost of producing milk of a sanitary nature over the cost of producing the ordinary kind. The United States Department of Agriculture has recently undertaken to learn how much extra a farmer should receive to cover the additional cost. A system of scoring dairies has been instituted by the department and it has been determined that to increase the score of a dairy from 42 points to approximately 70 points, where 15 cows are kept, an added expense of about five cents per cow per day for labor and, in extreme cases, five and one-half cents for new and additional equipment is required. To this should probably be added five cents more to remunerate the proprietor for his extra care, which makes an additional increase of from 15 to 15½ cents per cow per day for producing milk under modern sanitary conditions. The average cow produces from five to twelve quarts of milk per day. The additional expense would therefore be from one to three cents a quart. The larger the amount of milk produced by a cow the less would be the additional cost per quart. From these figures it would seem that under average conditions and with average cows, reasonably clean milk would cost around two cents more per quart than slovenly milk.

Would it be reasonable for any farmer to charge the city man this additional two cents per quart for the milk he furnishes him? It would seem so for the pure milk is worth more. It is cheaper for the consumer, for it better conserves health and is certainly much more palatable to him and his family than is the product which contains bacteria and dirt of all kinds. Dirty milk ought not to be considered as a merchantable article at any price no matter how low it may be sold. Indiana has a statute prohibiting the sale of milk in which a sediment can be found. It would seem that such a law is commendable but when the farmer is required to produce a better quality of milk he should be paid for the additional labor and it seems that two cents per quart would measure approximately the additional cost of milk produced under modern sanitary conditions.

A RECORD WHICH SHOWS THE POSSIBILITIES IN DEVELOPING A DAIRY HERD.

Ayer and McKinney, proprietors of Meridale Farms, located in Delaware county, New York, have attained notable results in their efforts to make their herd return a profit at the pail and churn. There are now in this herd, 97 cows which have qualified for the American Jersey Cattle Club Register of Merit, in a year's authenticated work. These averaged for the year, 7,596 lbs. of milk, with an average of 5.306 per cent butter-fat, and 462.33 lbs. of butter per cow. In these 97 are included 44 which are less than four years old, 42 between the ages of four and ten years, and 11 animals ranging in age from 10 to 18 years. The 42 cows in their prime averaged 8,497 lbs. of milk and 510.7 lbs. of butter per cow. The 11 cows over ten years of age averaged 7,979 lbs. of milk and 491 lbs. of butter. The 44 youngsters averaged 6,640 lbs. of milk, 409 lbs. of butter.

Of these 44, 17 were heifers with first calf, and these produced 104,586 lbs. of milk, 6,352 lbs. of butter, an average of 6,152 lbs. of milk and 373 lbs. of butter each. Two of these were but two years old at the beginning of the test, and these produced 14,192 lbs. of milk, 780 lbs. of butter, an average of 7,096 lbs. of milk and 390 lbs. of butter. Of the animals under four years of age, 18 exceeded by 62 lbs. per cow, the highest Register of Merit butter-fat requirement for any age. In their year's work, 69 cows exceeded an average of 500 lbs. of butter per cow. Their average milk production was 8,210 lbs. per cow, with an average of 5.306 per cent of butter-fat. Eleven cows produced over 600 lbs. of butter per cow during the year; their average being 10,017 lbs. of milk, and 603 lbs. of butter per cow.

THE NATIONAL DAIRY SHOW.

Announcements are at hand for the 1911 annual meeting of the National Dairy Show, to be held in Chicago from October 26 to November 4. It will pay every dairyman and all who are interested in the dairy business, directly or indirectly, to attend this great national exhibition of dairy cattle, dairy products, dairy machinery and general dairy educational exhibits. Dairyman can find no better place to study the conformation of dairy cattle than here. Over 1,000 herd of the very best milch cows in the country will be on exhibition; all the pure-bred associations will have booths, from which literature will be distributed regarding their respective breeds. Here the farmer and dairyman will be able to see and meet the world's leading dairy authorities. Lectures will be given on dairy products; object lessons will be presented showing how to care for and market dairy products with increased profits; a pure milk exposition will constitute a part of this division of the show. There will be entries to the milk, butter and cheese contests from all states in the Union. The latest inventions in the line of dairy machinery and supplies, together with farm lighting plants, automobiles and auto trucks, will be displayed for the benefit of the patrons.

The United States Government and Agricultural Colleges are planning to carry on demonstrations showing how to build barns and silos, plan crop rotations, balance rations and grow alfalfa. Here will be an opportunity to discover how feeds can be utilized more economically. Entertainment features of a very high class will add interest to the show. In all, it seems that the splendid program arranged should meet a general response from men and women concerned in the dairy business.

GUERNSEY CATTLE AWARDS AT STATE FAIR.

Following are the awards for Guernsey cattle which were not available for publication in our last issue with those for other dairy breeds:

Bull 3 years or over—First, W. F. Barbour, Birmingham, Mich.; 2nd and 4th, A. W. & F. E. Fox, Waukesha, Wis.; 3rd, W. S. Dixon, Brandon, Wis.
Bull 3 years old—First, A. W. & F. E. Fox; 2nd, M. T. Phillips, Pomeroy, Pa.
Yearling Bull—First, A. W. & F. E. Fox; 2nd, W. F. Barbour.
Senior Bull Calf—First, W. S. Dixon; 2nd, W. F. Barbour; 3rd and 4th, A. W. & F. E. Fox.
Junior Bull Calf—First, W. F. Barbour. Cow 4 years or over—First and 3rd, W. F. Barbour; 2nd and 4th, A. W. & F. E. Fox; 5th, W. S. Dixon.
Cow 3 years old—First, A. W. & F. E. Fox; 2nd, W. F. Barbour.
Heifer 2 years old—First and 5th, W. F. Barbour; 3rd and 4th, A. W. & F. E. Fox; 3rd, W. S. Dixon.
Yearling Heifer—First and 4th, A. W. & F. E. Fox; 2nd, W. S. Dixon; 3rd and 5th, W. F. Barbour.
Senior Heifer Calf—First and 2nd, W. S. Dixon; 3rd and 4th, A. W. & F. E. Fox.
Junior Heifer Calf—First and 5th, W. F. Barbour; 2nd, W. S. Dixon; 3rd, A. W. & F. E. Fox.
Exhibitor's Herd—First, W. F. Barbour; 2nd, A. W. & F. E. Fox; 3rd, W. S. Dixon.
Breeder's Herd—A. W. & F. E. Fox.
Calf Herd—A. W. & F. E. Fox.
Four get of sire—First, A. W. & F. E. Fox; 2nd, W. F. Barbour.
Two produce of Cow—First, A. W. & F. E. Fox; 2nd, W. F. Barbour; 3rd, W. S. Dixon.
Senior Champion Bull—Ribbon badge, W. F. Barbour.
Junior Champion Bull—Ribbon badge, A. W. & F. E. Fox.
Senior Champ. Female—Ribbon badge, W. F. Barbour.
Junior Champ. Female—Ribbon badge, W. F. Barbour.
Grand Champion Bull—Cup, W. F. Barbour.
Grand Champion Female—Cup, W. F. Barbour.

SAVE THE DIFFERENCE

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You can arrange with our local representative for a thorough, free trial of The World's Best without one cent of expense. Other separator taken in exchange. Write for catalog 152.

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Ask your dealer for Genasco mineral or smooth surface Roofings with Kant-leak Kleets packed in the roll. Guaranteed, of course. Write us for samples and the Good Roof Guide Book.

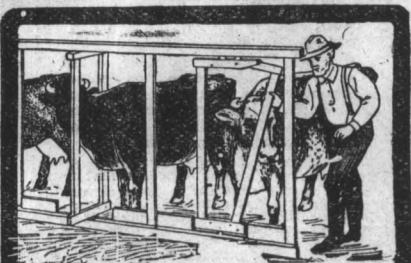


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AUTUMN DAIRY PROBLEMS.

At this season of the year it will pay every dairyman to take an inventory of his home-grown feeds and the number of cows he expects to feed during the winter. He knows approximately the amount of home-grown feeds he will have and whether his hay is good or indifferent. If it was cut early and properly cured it is good; but if it stood until too late it will not have nearly the feeding value of that cut at the proper time. He knows the amount of hay he has in his barns. He knows the amount of ensilage, fodder and straw he can profitably use. He knows the number of cows in his herd that are worth keeping over for another year.

The profits from his farming for the coming year will depend in a large measure upon how he begins the year, or in other words, how he balances his feeds and the kind of cows he keeps on his farm. If he has nothing but corn fodder and timothy hay for roughage, it will pay him to sell the timothy hay and buy some clover or alfalfa if he can; or, if not he had better use his corn fodder to the best possible advantage and buy supplemental protein feeds. Cows cannot do their best on timothy hay and corn fodder, as so many cows are fed. When these feeds make up the bulk of the roughage they should be fed with protein feeds that will make up the deficiency of milk-making elements. Protein is needed to build up the blood, bone and muscles. Every part of the body but the fat is made out of protein in combination with mineral matter and water. Corn fodder and timothy do not contain the needed amount of protein to enable the cow to give a satisfactory yield of milk. It is better to sell some of the cows than to try and keep the whole herd through the winter on corn fodder and timothy hay.

Dairy cows will maintain a good flesh condition and give some milk if fed plenty of corn ensilage and good clover hay. If we do not have clover, or alfalfa hay, we will have to buy some kind of supplementary protein feeds to furnish the necessary amount of that element. Young cattle will need practically the same kind of foods as milch cows. They are not laying on fat, but growing. They need the kinds of feed that will keep them growing and hardy and enable them to make a good growth the next summer when turned out to pasture. It will be better to sell some of the timothy hay and buy a little bran and oil meal for the young stock and milch cows. Feed is high but we must use it in proper combinations to maintain a suitable milk flow and keep young stock in a thrifty, growing condition.

Situated as I am in the business of producing milk for the city trade and depending upon purchased cows for use in my herd I have an opportunity to study the dairying conditions on many farms where I go to select my new cows. As a rule I buy new cows in the fall because we plan to make more milk during the winter and because it is possible to buy good cows for less money in the sections where I buy them than in the spring. Then again, we do not have enough pasture land to keep extra cows during the summer and autumn months.

It seems almost incredible in these days that so many dairymen will neglect their cows during this critical time of the year. There is no possibility of any man making a success of the dairy business if he allows his cows to fall away in milk yields and flesh condition during the fall months. By keeping dairy cows in a drouth-stricken pasture, in a state of famine and starvation, so that you can see the full number of ribs in their bodies, the very condition of the animal is changed before it goes into the stable for winter. Every time I have bought a bunch of these run down cows late in the fall and tried to bring them to life I have lost money. Looked at from every side of the question the fall care of the dairy herd is one of the most vital factors in determining the profits for the year. Any practical dairy farmer, who has good natural pastures, can buy cows that are in comparatively low flesh during the spring and get something out of them during the summer but the cow that goes into the stable at the beginning of the winter in a run down, emaciated condition is about as hopeless a proposition as I know of.

No cow is going to produce a satisfactory flow of milk when her system is run down and her circulation and skin are out of condition. No matter how good feeds you have or how well you propor-

tion them it requires four or five months time to get such cows in good working condition and that means a loss of time and many dollars worth of high priced grain foods before we can begin to get any profit out of them. We must have evenly balanced cows as well as evenly balanced rations to begin the winter with if we realize a profit from our business.

The question of handling new cows that are brought onto the farm in the fall and fed heavily for milk production in the winter needs study and attention. As a rule I prefer to buy new cows from dairy farmers who keep their cows in good condition and do not feed heavy rations of grain foods. These new cows all have an individuality of their own and we should study them and get acquainted with it as soon as possible. By making inquiries as to their subsequent care and food we can plan our management so as to get them settled down to the new conditions as quickly as possible. Then we can gradually change their rations until they can make a proper use of a full ration of grain and roughage without danger of upsetting their digestion.

The cow's habits and eccentricities depend a great deal upon how she has been treated and she should be watched at the start and given sensible treatment until she settles down to the new order of things. It requires patience and common sense to buy new cows and get them to start off well under new surroundings and conditions, but the little extra care and thoughtfulness pays big returns.

It requires skillful farm management to have plenty of available feeds to carry the cows through the autumn months in good condition. Grass does not grow rapidly after cold weather comes and what does grow contains but little nourishment. The dairy farmer who plans to have plenty of supplemental green foods available at this season is wise indeed, but wiser still is the farmer who grows enough ensilage so that he can open one silo and begin feeding his cows as soon as other fall feeds begin to deteriorate.

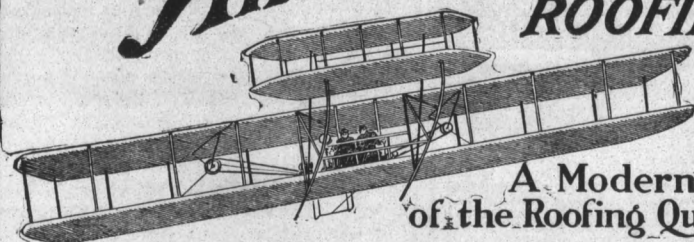
The next best feed after ensilage is oats and peas sowed during July and cut and hauled to the stable and fed. To make the best use of oats and peas they should be cut and fed when in the milk stage of the oats and this will require that we sow at various times so that one plot will be ready to feed as soon as it is needed for feeding. I generally sow one bushel of oats with one-half bushel of peas in each one-third acre plot. With the exception of alfalfa there is no kind of feed superior to this mixture to keep up the flow of milk and keep the cows in good condition.

For early fall feeding there is nothing that will be eaten with more relish and give better results than sweet corn. This may be put in with a grain drill by closing all but three holes and it will make a good growth and furnish many ears which will add to its value as a food for the cows. Sweet corn is a very palatable feed and cows will eat large quantities of it, in many cases enough to make up for the shortage of pasture grass.

Keeping the cows comfortable is another neglected point in the management of the herd during the fall months. As soon as the cold nights come the cows should be kept inside every night, but I think it best to allow them to run out whenever the weather is favorable in the day time. The extreme cold winter weather and the comparatively short season of pasture life makes it desirable for the cows to be out and get all the good air and sunshine possible during the year. If we allow the cows, more particularly the young heifers, to become dry early in the fall we are cultivating a habit that is very hard to overcome, for once a heifer or cow is allowed to go dry after being milked a few months it is very hard to make her continue the period for a longer time after she again freshens. Training as well as the methods of breeding and feeding influence the cow's usefulness. W. MILTON KELLY.

Dr. Harvey W. Wiley, of the Bureau of Animal Industry, says: "There has lately come again into vogue the old fraud of churning butter so as to hold more water, and people are going around the country today selling preparations and apparatus to innocent farmers who do not know that they are violating the law. They say, 'I will make you three pounds of butter where you are now making only two.' They do this either by adding to the cream some drug like enzyme, which incorporates a lot of casein and water into the butter, or by a process of churning which mechanically incorporates the water in the butter. We have been engaged in studying those methods and warning the farmers against them."

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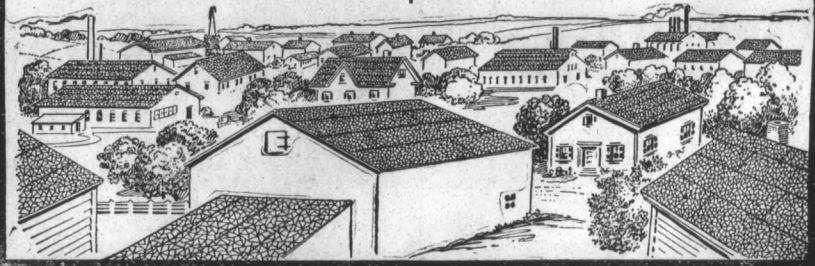
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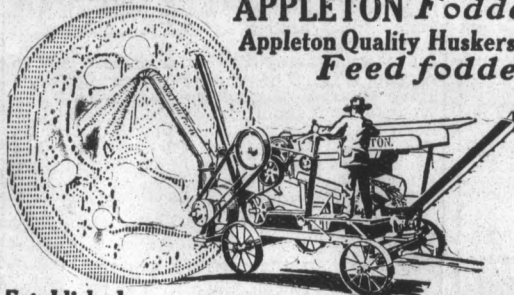
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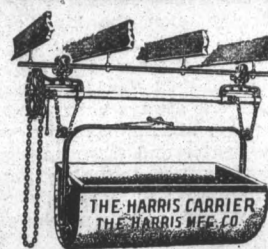
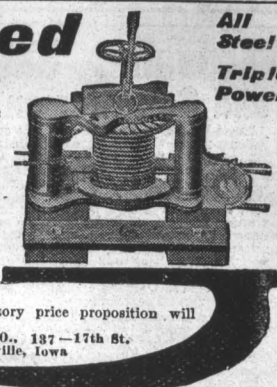
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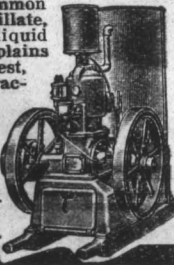
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POULTRY

SHAPING UP THE LAYING FLOCK.

If the culling out of old and undesirable hens has not yet been done this task should not be longer delayed. As a general rule it is best to do this culling before the moulting period begins, as many of the old fowls are in fair market condition at that time, but, after moulting, it will require considerable grain to bring them back to that condition in case it is thought inadvisable to risk their producing eggs at a profit during the coming winter. Losses can be traced directly to this failure to dispose of questionable hens at the right time. For some time old hens have been bringing 10@11c per lb., with a good demand, and, so long as there is a doubt about their ability to make good as winter layers, it does not pay to hold them over and fatten them, after the moult, on high-priced grain.

Another reason why many flocks fail to bring in greater returns to their owners is that many hens, too old to make a living, are kept year after year. It takes courage, to be sure, to dispose of so many likely looking hens, but it is necessary if we are to realize the greatest amount of profit. Farmers, usually, have no means of telling the very old hens from the yearlings or two-year-olds. This can be simplified if they will take the trouble to mark them each year. Leg bands are cheap and, if placed on the fowls' legs loosely, can be used over and over. An easy way to distinguish the age of hens is by changing the bands on the legs. The first year place the band on the left leg; the second year remove and place on the right leg; the third year one can be placed on each leg. This is as long as it is desirable to keep hens. Then when the hens are to be marketed they can be selected according to their age without the liability of unintentionally selling the yearlings. O. E. HACHMAN.

IN ANSWER TO INQUIRIES.

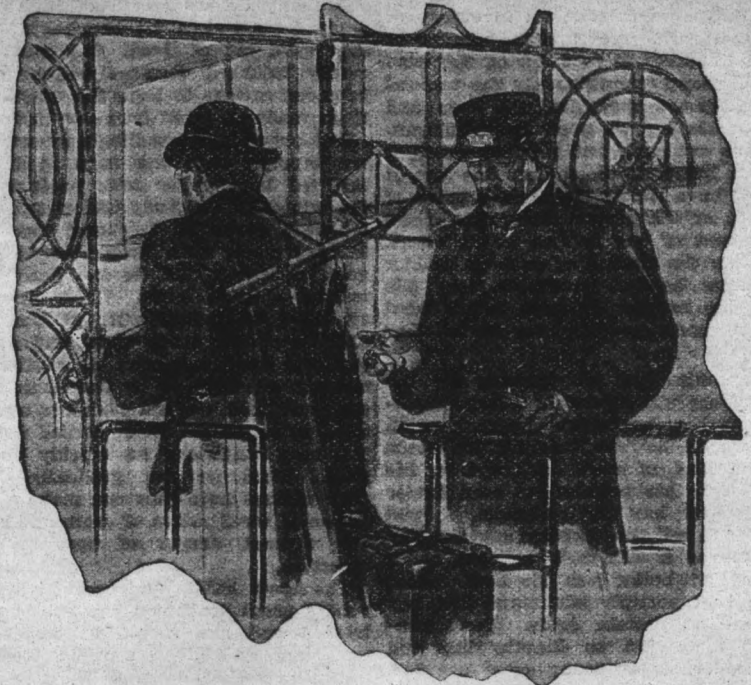
Dry Mash—Height of Perches.

Will someone who has had good results from keeping a dry mash before laying hens kindly advise as to the composition of the same?

I would also like information as to proper height of perches from floor. I have placed droppings platform 2 ft. from floor (which is of wood), and the lowest perch is 2 ft. above the platform, the highest being 2½ ft. I have been told that Plymouth Rock hens will injure themselves in jumping from this height. F. C. H.

It is hoped that readers who have adopted the hopper system of feeding a dry mash to their layers will respond to the above request. Meanwhile it may be said that this system of feeding appears to be giving general satisfaction wherever tried. At the Maine station hoppers or protected troughs containing a dry mash are constantly within reach of the layers. The mash used there is composed of the following products, mixed in the proportions stated by weight: Wheat bran, 2 parts; cornmeal, 1 part; middlings, 1 part; gluten meal, 1 part; linseed meal, 1 part; beef scrap, 1 part. Brewers' grains are sometimes substituted for gluten meal in this mash. Oyster shell, dry cracked bone, grit and charcoal form another mixture which is always before the hens in other hoppers. In addition to the dry mash, however, the hens receive various kinds of green or succulent food, chopped clover and some whole grain fed in the litter.

The average height recommended for perches is about 3 ft. The danger of injury depends largely upon the kind of fowls kept, and somewhat upon the nature of the floor and whether it is kept well covered with litter. Fowls of the meat breeds, which are always heavy and more or less clumsy, should have lower perches than the lighter and more active breeds. Four feet is not too high for Leghorns or Minorcas, and we believe there should be no trouble from perching Rocks at this height unless they are exceptionally heavy fowls. Better put the perches all on the same level, however, as the natural tendency among fowls to seek the highest perch is apt to result in crowding. It is not necessary that the roosts be placed on a slant to correspond with the droppings platform. Where it seems advisable to lower the roosts, or where an extra amount of space beneath the platform is desired, the perches and platform may be placed closer together than you have them. However, the arrangement should be such as to make frequent and thorough cleaning of the platform easy and convenient.



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HINTS ON BUYING COCKERELS.

At this time of year poultry breeders are advertising their surplus cockerels, and others are anticipating the purchase of "new blood" in the form of young males for next season's breeding. Therefore, a few hints to the novice may be of service.

Too much importance cannot be attached to the selection of males for the breeding pen. The selection of a wrong male bird is calculated to infuse into one's stock such faults as will take years of careful breeding to eliminate. Improvement of the stock should ever be the object aimed for by those desiring to turn poultry keeping to the most profitable account. Let us suppose that, unknowingly, a cockerel of an exhibition strain were bought and mated to laying stock; one can readily understand what a damaging effect the blood of such a fowl would have upon the laying qualities of the progeny. Exhibition fowls are generally inbred generation after generation to maintain certain characteristics in the future generations, and this inbreeding has the effect of lowering the vitality and consequently reducing their egg-producing capabilities. To produce strong, healthy laying stock, inbreeding must be avoided. Line breeding may be resorted to by experienced breeders of utility fowls, but inbreeding, such as the mating together of brothers and sisters, is not to be recommended.

Breeding for Utility.

In purchasing cockerels for the breeding of utility fowls care should be taken that they emanate from stock equaling or even surpassing, in merit the hens it is intended to mate to them. If one is in possession of females that have proved fairly good egg producers, the cockerel bought to mate to them should be the son of a hen that has been an extra good egg producer. Such a male can be secured from a breeder who specializes in pedigree-bred laying stock, and although he may cost double, or even treble, the amount of a chance bird, that is, a bird picked up at a low price irrespective of his parentage or strain, he will prove far the cheapest in the end.

Male is Half the Breeding Pen.

It has often been said that the male is half the breeding pen, and to a very great extent this is true. He has a good or bad influence upon the laying traits of his progeny, according to the good or bad egg-producing qualities of the stock from which he emanates. Too many novices imagine that because the hens alone are responsible for the production of eggs they alone are worthy of consideration when selecting the breeders, and therefore, males of an inferior strain are secured at a low price and bred from. A more ridiculous course could not be followed. A few extra dollars expended in the purchase of a well-bred male from a tip-top laying strain will be recovered 10 times over in the extra number of eggs laid by the progeny. One need not necessarily pay a fabulous price for a good cockerel. Many people annually invest money in sittings of eggs from those who breed high-class laying stock, and they generally hatch out more cockerels than they require for stock purposes. They advertise the surplus as being of such-and-such a strain, and at prices within the reach of most poultry keepers. These are the males to negotiate for, but the same should be seen before purchase is actually made to ascertain that they are strong and healthy and of a desirable type. The good stock cockerel is medium in length of leg, his thighs are muscular and firm, his eye bold and bright, and his comb blood red, denoting that he has been reared on a good range and has emanated from sound stock. If he has been reared in confinement he will, as likely as not, lack the good points indicated above, and he should, therefore, be returned to his owner. Although it is quite possible to rear breeding males on ungrazed runs, their progeny naturally lacks that vitality so marked in youngsters from males that have had full liberty on a good grass range during the growing period. The latter class of cockerel should, if possible, be chosen.

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DETROIT, OCT. 7, 1911.

CURRENT COMMENT.

Now that the fair Lessons from the season is practically closed, the exhibits seen at the various fairs which the reader may have attended will furnish much food for profitable thought. In the discussions of the marketing problem, which have been published in the Michigan Farmer during the past month, the fact was clearly brought out that the bulk of the products of the farm could be most profitably marketed through good live stock, since by this method not only can their whole value be secured in the returns received from the live stock product, but the plant food represented in the feeding stuffs can largely be retained upon the farm for the conservation of its fertility.

Every farmer who begins to study this proposition finds that it is a problem of progression, since the products of a farm can be more profitably fed to live stock of the best producing quality, and when one engages in the production of live stock of this class he sees the necessity of growing better crops to feed them, and the fact that the stock is maintained upon the farm will enable the growing of better crops. Also, the methods employed by the live stock farmer in the production of good crops are generally better planned and more efficiently carried out than is the case with other classes of farmers, which is an added inducement for every farmer to become interested in the growing of some kind of pure-bred live stock, and every reader should have received some inspirations and ideas to that end from attending his local, district or state fair.

The same will apply to other products of the farm, such as grains, vegetables, fruits, etc., and also applies to an even greater degree with regard to farm machinery and equipment, which is an important factor in the exhibits at our larger fairs. One who keeps pace with the improvements in this line is far better equipped for economic production upon his farm, as has recently been determined by an exhaustive investigation on this subject in whole townships, as well as by the experiences of individual farmers.

In panning out future farm campaigns, good ideas are as valuable as in any other kind of business and when once entertained or inspired they should be followed out to a successful culmination.

One cannot, of course, point in detail to the many lessons which may be derived from attending the fairs except by inadequate examples as above outlined, but the individual reader, when his thoughts are directed along that line, will be able to draw many lessons from the recent fairs which will accrue greatly to his personal benefit.

The Farmers were Not the Victims. It appears that the time will never come when get-rich-quick

schemes cannot be worked upon the American public, but the farmers are not always the victims. The Bohemian oat swindle which caused such a furore some years ago was mere child's play as compared with the latest swindle in circles of high finance as revealed in the operations of J. Flagg, Jr., of New York, who is alleged to have secured \$1,500,000 of easy money by an attractive offer of one per cent per week which he paid the investors in his concern, ostensibly from the profits made on their investment through a system of working the stock market, but which his accusers declare was paid from the rapidly increasing funds secured from new investors by a judicious use of personal advertising of the large dividends which were remitted to customers. A peculiar feature of this modern example of frenzied finance lies in the fact that almost none of the victims of the swindle appear willing to acknowledge their connections with this institution, naturally not caring to have it known that they had been attracted by such a scheme.

Apparently the time has gone by when the farmers of the country are considered the easiest marks by the get-rich-quick operators and the legerdemain of high finance, either within or without the indefinite pale of the law, is now employed by the get-rich-quick artists in more profitable fields. It is, however, still difficult for the average man to get something for nothing and the conservatism and intelligence of the average American farmer is becoming so well known to professional sharks that attempts to swindle him by the employment of get-rich-quick schemes are growing more rare, while the fleeing of the more self-confident and worldly-wise urban resident through methods of frenzied finance is becoming more common.

The Hunting Nuisance. With the advent of the open season for hunting wild game in Michigan the irresponsible hunter has again developed into a nuisance in the average community, and more farmers than ever have been driven to the action of posting their farms to exclude this class of hunters, as a consequence of which the true sportsman must also suffer. However, there is no question but that every farmer is justified in the forbidding of hunting upon his land when one takes into consideration the mean and small, not to mention the wantonly cruel acts of many irresponsible gun carriers who roam through the country at this season of the year, since not a few instances have been reported the present season in which live stock has been shot as a means of providing sport for a degenerate mind.

Apparently our laws are inadequate for the protection of the public against this class of hunters, and there remains no recourse for the farmers where they are troublesome except to prohibit hunters from roaming over their lands and enforce the prohibition to the best of their ability. The influential sportsmen of the state have strongly advocated a gun license as a means of correcting this evil, and if this will accomplish the desired end it doubtless will be welcomed by a large majority of the farmers of the state, even though it might prove a hardship to the farmer boys who derive pleasure from an occasional day's hunting, especially since, under present conditions the fields are not only tramped over, the gates left open and the fences either cut or shot to pieces, but the song birds, as well as the wild game, threatened with extermination by the irresponsible horde that go forth to shoot and kill indiscriminately, and that, without the first instinct of the true sportsman, with the coming of the open season.

Some investigations A New Application carried on the last of Conservation. year by the United States Department of Agriculture, co-operating with the lumber manufacturers in different sections of the country, resulted in a new application of the conservation idea, which has been taking hold of our people in recent years. This investigation showed

ed that a material saving in lumber was practicable by cutting it into odd lengths instead of the usual even lengths in which lumber has been heretofore marketed. In following the general custom of selling lumber in even lengths only, considerable loss from cutting off the ends of the odd lengths to make them even is sustained. A considerable percentage of the mill output consists of boards having knots, decayed spots or shaky ends, and in order to make them into merchantable boards of even lengths it is often necessary to cut off a foot or so of good lumber and this good lumber is thus wasted. A similar waste also often occurs in working lumber of even lengths in building operations.

As a result of this investigation an effort will be made to bring about the marketing of lumber in odd as well as even lengths for all purposes, as has for some time been the case with flooring. This will result in a considerable saving and is in line with the best meaning of the term conservation. There are a great many cases in which conservation may be applied to the business of the farm and instances of this kind should prove an inspiration to many farmers to note the opportunities for practicable conservation in the elimination of unnecessary waste upon the farm and then apply a practical remedy.

HAPPENINGS OF THE WEEK.

National.

It is estimated that the loss of life in the flood at Austin, Pa., which occurred last Saturday, will be between 150 and 300 persons. The property loss is estimated will exceed \$6,000,000. The flood was caused by the breaking of the dam belonging to the Bayliss Pulp Paper Co., which over-towered the small town. It is now generally believed that the collapse of the dam was due to neglect in keeping open notches the function of which was to relieve the high pressure upon the structure. These notches had become filled and the excessive water due to heavy rains, finally became so large that the dam could no longer hold out. The high wave swept before it houses, buildings, fences, and other structures. The debris formed a temporary dam in the city of Austin which so retarded and diverted the water that the western part of Costello, a village below Austin in the same valley, was saved from ruin. The eastern side of the village, however, was entirely destroyed which rendered fully 400 people homeless. Only three lives are known to have been lost in Costello, the people there having been warned of the danger before the water reached them.

Rain delayed President Taft's train 12 hours in his journey from Omaha to Kansas City. The rains were general over the western states and great damage has been done to crops that have not been secured, and in places the water has driven families from their homes to higher lands about.

Anticipating war between their country and Turkey, Greeks in the city of Detroit have raised money to buy uniforms and otherwise equip 400 men to aid in the struggle which they expect may begin any day.

The railroad statistics for the last fiscal year indicate that operating expenses have grown \$236 per mile and revenues decreased \$70 per mile. Increase in taxes and decrease in revenue make an average decrease in the net returns to railroads of the country to the amount of \$318 per mile. This means that the railroad income has been cut about \$75,000,000.

The fifteenth annual convention of the Grain Dealers' National Association will be held at Omaha, Neb., next week, at which time problems confronting the men who deal in grains will be considered by experts. One question to be considered is the proposition of buying grain on the basis of 100 pounds rather than by the bushel, such a system being successfully followed in European countries.

On Monday of this week the shopmen of the Harriman lines who are demanding recognition by the company of the newly organized federation, began a strike which they hope will bring the company to terms. Strike breakers are being imported by the company to offset the effects of the men "walking out."

Rear Admiral Winfield Scott Schley, U. S. Navy, retired, fell dead on West Forty-fourth street, New York City, Monday afternoon. His death was attributed to cerebral hemorrhage. Admiral Schley was one of the central figures in the controversy growing out of the destruction of the Spanish fleet in Santiago Harbor during the Spanish-American war. He was second to Rear Admiral Sampson, but the latter was some distance from the conflict while the fighting was going on, while Admiral Schley was present to give immediate orders, and as a consequence, he is generally credited with the victory by the American people. Schley was born in Maryland in 1839, he graduated from the naval academy at Annapolis in 1860. In 1861 he was promoted to the rank of Master and attached to the frigate O'Ptomac. In 1862 and 1863 he was on the steam gunboat Winona and had an engagement with a field battery near Port Hudson, La. In 1862 he was commissioned lieutenant. He distinguished himself in 1865 during the insurrection of the Chinese coolies on the Middle Chincha Islands, was made lieutenant-commander in 1866 and acted as instructor of languages at Annapolis from 1867 to 1869. He rescued Lieutenant

Greeley from the Arctic regions in 1884. From 1889 to 1891 he commanded the cruiser Baltimore during the difficulties with Chili. He was given command of the flying squadron at the outbreak of the Spanish-American war.

It is reported that the scourge of typhoid fever has been largely eliminated as a trouble in the army by the introduction of vaccine treatment which makes a large percentage of the soldiers immune. In experiments extending over 1,000 vaccinations, 94 per cent showed mild reactions, five per cent moderate reactions and one per cent severe reactions from the effect of the vaccinations.

The first step taken toward the holding of the National Republican Convention of 1912 was the call of a meeting of the National Republican committee which will meet in New York City, Dec. 12.

Foreign.

War has been declared between Italy and Turkey. Some fighting has already taken place. Italy is reported to have captured the cities of Tripoli and Benghazi. It is also asserted that a landing has been made at Preversa. A naval battle was fought off the coast of Epirus in which the Italians were victorious. Two of the Turkish ships were badly damaged by shells. In another conflict between the Turkish fleet and some Italian barges off the coast of Chios, two Italian barges were sunk. Italian troops have already invaded European Turkey and the war area is rapidly widening. Italy has now proclaimed a blockade of the coast of Tripoli.

Early returns are coming in of the election held in Mexico which shows that Francisco I. Madero will undoubtedly be elected chief executive of the country. The returns also show with considerable certainty that Pino Suarez of the same ticket, will be elected as vice-president. Election day was extremely quiet and it is asserted that no more than 60 per cent of the registered voters of Mexico City went to the polls.

It is reported that Americans have gained a foothold in Manchuria by leasing 50,000 acres of land which will be improved by American money.

In order to destroy as much as possible lawlessness in the southern part of the Philippine Islands, the authorities have decided to take away all arms from the Moros. It is expected that the execution of this measure will cause considerable strife in that portion of the Philippines but the authorities believe it is the best way to deal with the situation.

There is considerable apprehension on the part of the Japanese government regarding the concession secured by the United States interests in Manchuria. It is believed that once a foothold is gained in Chinese territory that large amounts of American capital will be invested there, much to the profit of this country and to the disadvantage of Japan and other nations.

The Italian-Turkey war has distracted attention from the controversy between France and Germany over the Moroccan interests. It appears, however, that France is quite satisfied with the present situation and believes she will ultimately gain her demands in the conflict with Germany.

CROP AND MARKET NOTES.

Gratiot Co., Sept. 30.—To date no killing frosts have occurred. Corn, even the latest, matured and the greater part of the crop is harvested. The weather has been very bad for bean harvest, as more or less rain has fallen at frequent intervals for three weeks. Scarcely any have been secured without being wet after pulling, though as a whole, they are not greatly damaged. A large acreage of wheat has been sown in the past two weeks. Apparently very few sowed without using some commercial fertilizer, unless they had an abundance of manure. Late potatoes have done well since the rains came on but are still selling at \$1 in the market.

Livingston Co., Sept. 23.—Bean harvest is progressing very slowly, owing to the wet weather, and while the crop has not been damaged materially it requires constant work to keep them from spoiling. Wheat seeding is about completed, with conditions ideal for the quick germination of the seed. Fruit of all kinds very plentiful. A large number of silos have been erected and filled this fall, showing that farmers are beginning to realize more than ever the importance of conserving all the feeding value of the corn plant. Dairying is becoming more and more popular, owing to the good prices paid for milk and also on account of the fertility returned to the soil.

Ogemaw Co., Sept. 30.—The numerous fine rains of the last few weeks have started the grass, and pasture is now excellent. Wheat is making a good showing. Most of the hay has been contracted for at \$15@16. Wheat brings 72c; butter, 20c; eggs, 18c; cream, 25c. Fall apples are plentiful at 50c per bushel and enough pears to supply home demand at \$1@1.50 per bushel. Potatoes are turning out better than expected, local stores paying 60c for them.

PICKLE GROWERS ORGANIZE.

The growers of pickles in the vicinity of McBrides, Montcalm county, met at the town hall Saturday evening, Sept. 23, and organized a pickle growers' association, the object of which is to get the farmers closer together, demand more for their product and have something to say about the contract they are asked to sign. Pickle picking is about the hardest work any one ever does and the growers feel that they do not get their share of the consumer's dollar. An effort is being made to reach the growers at all pickle growing points. At the meeting 50 growers were present. C. W. Crum was chosen president and S. F. Willis, secretary. C. W. Crum.

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION

MICHIGAN FARMER
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The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

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

OYSTER FARMING--An Important Industry of Texas.

By Louise E. Dew.

EVERY coastwise state from the Atlantic to the Pacific, and the maritime provinces, contain oyster fisheries. "Oyster culturists," the Chesapeake Bay and Long Island oystermen style themselves, while in the Lone Star state the industry is classed with other agricultural pursuits, and the oyster "farmer" talks as glibly of "seed oysters" and "oyster crops" as our northern and eastern farmer speaks of his seed corn and various grain crops. And why not, for he plants his seed oysters and harvests his crops just like the tiller of the soil.

To become an oyster farmer in Texas, one must assure Uncle Sam that he is a resident of the state, whereupon he is given the riparian right to locate as many as fifty acres of land, covered by water, for an oyster bed. He must then pay a surveying fee of ten dollars, and a rent of ten cents per acre for the first five years, after which his yearly rent is twenty-five cents per acre. So long as his rent is promptly paid, he is amply protected, and he is also permitted to gather seed oysters from certain reefs for planting. As the cost of transplanting is less than fifteen cents per barrel, and the market price of good oysters is from seventy-five cents to one dollar and twenty-five cents per barrel, a good margin is left for the expense of gathering and marketing.

Owing to the mildness of the climate, and the long growing season in Texas, the oyster is especially prolific, as the spawn or seed is less liable to injury from cold, and a good spat (supply of young oysters) for each year is more certain. Of the forty bays, lakes and coves along the coast of Texas, there are few if any without a natural oyster bed, hence there is no lack of seed oysters within easy reach of good grounds.

The most prolific farms are located at Palacios, Matagorda, and Port Lavaca, the latter being the center of the largest and oldest established oyster trade in this region. In March of their first year, Port Lavaca farmers planted ten thousand bushels of seed oysters and by November the crop was in fine condition and of a marketable size. Here in the market season the shell-strewn beach in the vicinity of the packing house is a remarkable sight, as there are literally millions of shells heaped in miniature mountains, ready to be hauled away and utilized for various commercial purposes, the manufacture of buttons being an important one. The shell road too, is preferred to macadam in the new southwest, and automobilists drive for miles over perfect roads, upon which oyster shells have been powdered to dust by heavy rollers.

The life of an oyster farmer is not one of ease, as so many suppose, for he has something to do after planting his seed. In the first place he must see that there is a suitable bottom for the cultivation of the oyster—which means a firm substratum, above which is a layer of soft mud, or a firm, sandy bottom. In the latter event the oysters do not grow as rapidly, however, as food conditions are more

favorable on muddy bottoms which are usually well stocked with the minute organisms upon which the oyster feeds. Oystermen usually determine the best growing and fattening grounds by actual experiment, which often entails the expenditure of much time and capital. For instance, the muddy bottom may be there, and yet the currents be such as to carry most of the food organisms away.

a picturesque group of sail boats from which fishermen are clearing the grounds—a slow and laborious process as can be imagined. Even in the case of soft muddy bottoms, it is necessary for the surface to be prepared in some way in order to prevent the oysters from becoming submerged, and suffocated in the soft deposit. Texas planters strew oyster and clam shells, gravel or sand over the bot-

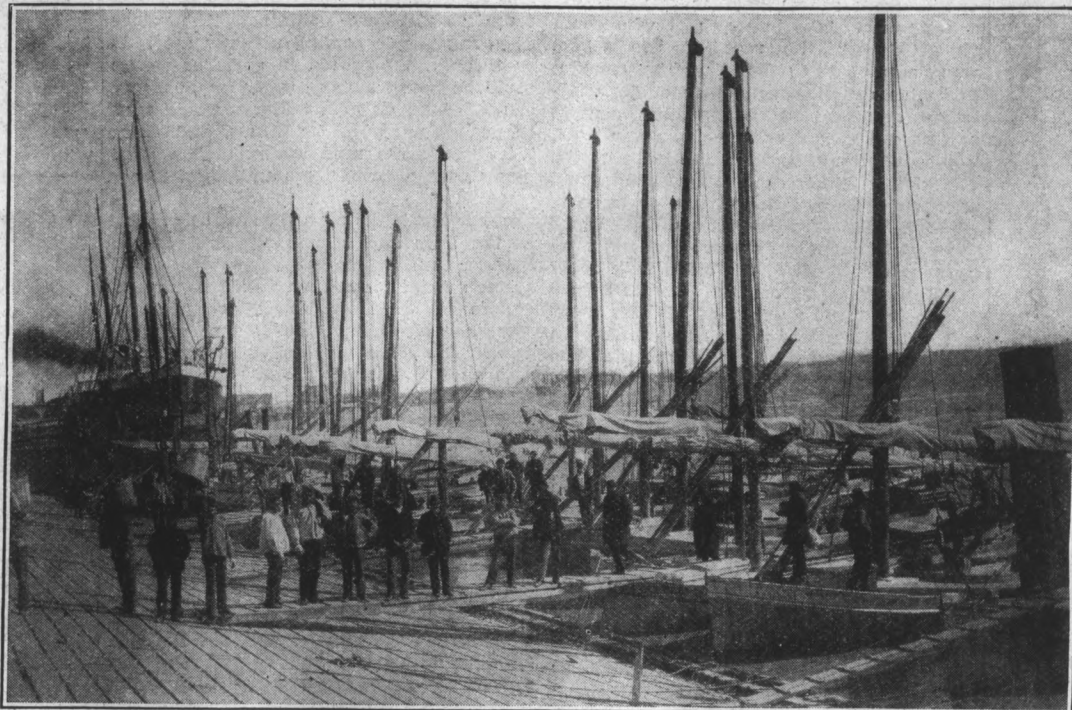
market six months after they are bedded. Port Lavaca farmers either collect the seed for themselves, or buy it from those who make a specialty of that branch of the industry. The price varies from ten cents to one dollar a bushel, according to the growth of the seed. Culled seed is, of course, the more desirable as it is free from rubbish and grows better oysters, which mature more rapidly and are less susceptible to the attacks of enemies.

It is an interesting sight to watch the sowing of the seed, which is usually scattered over the beds from boats or scows and is distributed as evenly as possible, for when thrown in heaps many are prevented from getting a proper supply of food. Then, too, the shells grow irregularly, which affects their market value. It is customary to mark out the bed in areas about 50 feet square into which the seed is scattered broadcast with shovels or scoops. Sometimes the boat is anchored on the bed while a gang of eight or ten men distribute the required amount. When the scow is emptied the place of the last deposit is marked with a buoy or stake. From three hundred to six hundred bushels of seed are used per acre.

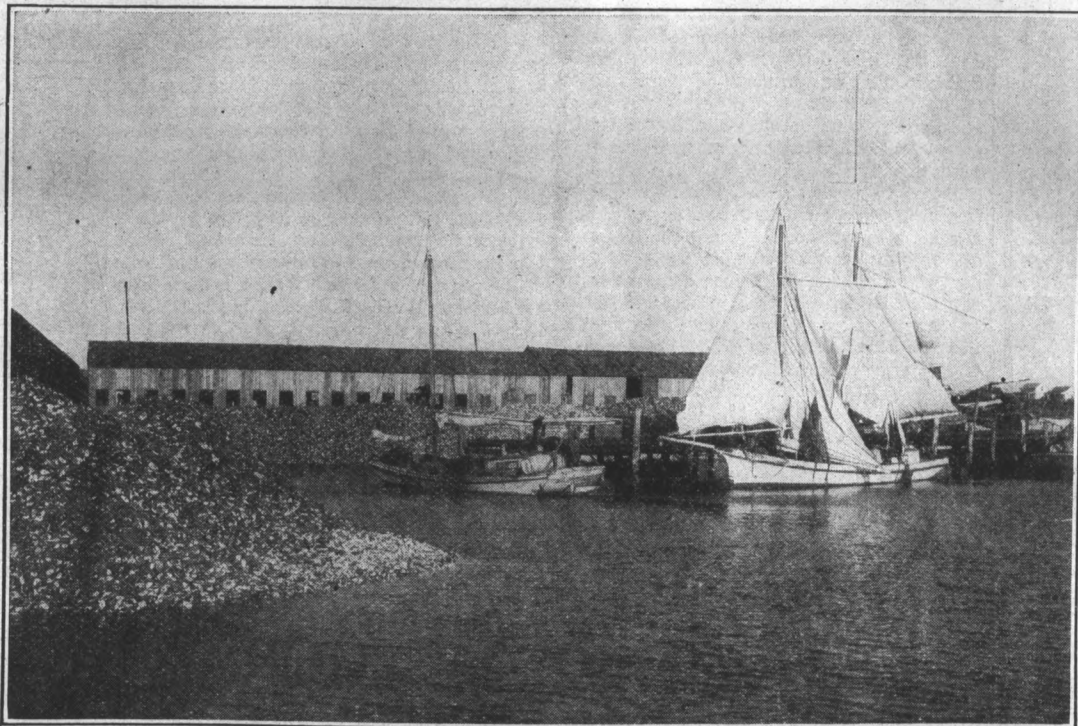
Many Texas oystermen transplant in the springtime from muddy beds to a hard bottom, in the bayous and coves, for several months before sending them to market, as they believe that this method of procedure improves their flavor and appearance owing to a better food supply. As the seed-producing power of the natural beds is becoming reduced, greater attention is being paid to planting with cultch or stool, to which Texas oystermen say we must doubtless look for future growth in this important industry.

Oyster shells are largely used as collectors in this locality. They are merely spread upon the bottom, being thrown broadcast from boats the same as when planting seed oysters. From 250 to 500 bushels of shells are used per acre. Old tin cans and scrap tin are utilized for the cultch, as tin has the advantage of becoming corroded, and gradually dissolving in the salt water, thus releasing the young oysters when they begin to crowd one another. Brush and fagots, too, make efficient collectors when thrust firmly into the mud in such a manner that the small branches are above the bottom. The current of the water keeps them clean, and in water well charged with the "mother oysters" will almost certainly yield a full set of spat. The brush is lifted at the proper time by means of a crane or windlass, with the seed intact. Shells of clams and related mollusks, broken stone, brick, gravel, bones, brush, and old tarred netting, are all employed in one place or another on Texas coasts.

The farmer who fights insect pests has but little anxiety compared with the oysterman whose "products" are all in deep water. The price he pays for being an oyster farmer is eternal vigilance in order to see that enemies do not attack his spatting bed. Vast schools of water crea-



Oyster Lugger Landing, at Port Lavaca, Texas.



An Oyster Packing House and Shell-strewn Beach.

Having located and marked the boundaries of his planting grounds with stakes in order to avoid disputes with other planters, the oyster farmer next prepares for planting. All debris and snags are cleared away, while mounds are leveled and hollows filled. If it is necessary to build stockades to protect the oysters from fish, this step is next in order. At Port Lavaca the clearing up of the grounds is done by means of steam dredges, although one occasionally sees

tom, thus serving the double purpose of preventing the submerging of the oyster, and also offering a place of attachment for the spat—a less expensive process than in France where they macadamize their oyster bottoms.

There are two ways of planting, either seed oysters being used or the spat which has been caught in a cultch (materials used for the spawning bed). The seed oysters may be mere "blisters" or good-sized oysters which are ready for

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tures and fish are ever on the alert for food, and the young fry if available, afford them a fine menu. In Texas the oyster has but few enemies compared with those of the east, the only one that is dreaded being the drum fish. There are not star fish and but few worms or conch. The thrifty oysterman surrounds his bed with palisades of stakes driven into the bottom at sufficiently close intervals to prevent the passage of fish be-

THE "SPELL" AT NUMBER SIX.

BY MRS. MARY E. UNDERWOOD.

There had always been a good deal of rivalry between school districts No. Five and No. Six. When No. Six built a schoolhouse a good deal more pretentious than the one in the other district, the "No. Fivers," as they were called, said tauntingly: "Fine schoolhouses aren't everything, and we can outspell you any day."

Great value was put upon correct spelling in those days. Grammar was regarded as a mere accomplishment and some there were who scoffed at the suggestion of pupils "wasting their time" studying physiology; but not to know how to spell was fatal to one's chances of success in life. One of the educational and social features of the long winter evenings was the spelling school held in the country schoolhouse. The boy or girl who could "spell down" the rest of the school was admitted to be "mighty smart." Sometimes one school would challenge another to a spelling contest and then the interest rose to fever heat. Loud and taunting were the cries of the victorious, while the vanquished would at once challenge the victors to another contest. Thus it was that spelling "bees" were of frequent occurrence and not even the singing school of the olden time could equal them in interest.

Mr. Bassford, teacher of No. Six, was about to dismiss school one evening in January when there came a knock at the door. Before the teacher could reach the door it opened and a severe looking old man, with piercing black eyes, came into the room. He nodded almost curtly to Mr. Bassford, who said: "How do you do, Judge Butler? I was about to close the school, but I am sure the boys and girls would be glad to remain later than usual if you will make a few remarks."

"It won't take me but a minute or two to say all I have to say," replied the judge. "I hear that No. Five has challenged No. Six to a spelling match next week. That so?"

"Yes; they have sent us a challenge."

"Of course you'll take it up?"

"Certainly judge. We're not afraid of them," replied the teacher, with a laugh.

"I sh'd be ashamed of you if you were," said the judge, tartly, and then he added: "I been thinking that I'd do something to kind o' stimulate our young folks to do their best. You know I put good spelling first in value when it comes to education. Nothing makes a worse impression than bad spelling when one has a letter to write. Neat, plain handwriting and correct spelling can carry a boy a good ways toward success in life, and a boy who can't write or spell well is sort o' handicapped. I just come over to say that I plan to give a prize to the best speller when you have your contest with the No. Fivers next week. I hope someone in our school will win it, but the best speller shall have it, no matter which district he or she lives in. The prize will be two hundred dollars in gold, and the one that wins it must use the money for two years of schooling at the academy over in Farmington. That's my offer, and I hope some of you youngsters will keep it from going into No. Five. You'll never hear the end of it if they get it. Good-night," and the somewhat eccentric old man departed as suddenly as he had arrived.

Intense interest in the forthcoming spelling contest was created by the offer of old Judge Butler, and the old, blue-covered spelling books in both districts were brought into immediate use. They were taken home at the close of school and pored over for hours. The long "jaw-breaking" words and those in which were so many senseless "silent" letters were studied and spelled over and over again. Interest in all other lessons waned, and the pupils spent most of the noon and recess intermissions in pronouncing words to each other.

It was generally conceded that if the golden prize remained in No. Six it would be won by Lucy Marks, Harry Venner or Tom Pryde, for they were the best spellers in the school and were always de-

tween. Tangles or mops are also used—devices long in use by naturalists for collecting spiny forms.

During the months which incorporate an "r" in their spelling, oyster consumers may be interested in knowing that the oyster feeds upon both animal and vegetable foods—primarily upon the plant life, about 90 per cent consisting of diatoms or minute plants, which disputes the idea that the oyster is filthy and unfit to eat.

pended upon to sustain the reputation of No. Six in any spelling contest.

Mary Warder and Paul Denley were the champion spellers in No. Five, but the prize offered by Judge Butler had acted as such a stimulus that had set all of the pupils to studying and some of them had shown such improvement in their spelling that it was doubtful as to who would win the prize, and it was predicted that some "dark horse" would probably appear to defeat those who were usually successful.

The No. Fivers were as much excited over the forthcoming contest as were the pupils of No. Six, and there was a good deal of boasting done by both schools.

It goes without saying that the little schoolhouse at No. Six was packed to the doors on the night of the contest. It was a clear, cold night in January and the sleighing was never better. The full moon rode high in the cloudless sky and countless stars were shining. The voices of young people coming up over the hills or through the woods in sleds or punks could be heard singing snatches of merry songs. A party of No. Fivers would seek to pass a party of No. Sixes, and there would be some mad racing and a good many good-natured jeers and jibes. There were horses hitched to all the trees around the little schoolhouse, and some of the boys had come long distances on foot.

Each family had been asked to send a candle to help light the house. Lamps were not in common use. There was but one in the schoolhouse that night, and it was on the teacher's desk. The big box stove in the center of the room was red hot.

Of course Judge Butler was there. He was a very prosperous man who lived alone in his big house on his fine farm. True, he had one or two hired men and a woman for a housekeeper, but he had none of his "own folks" around him. A sorrowful thing in the life of the judge was that he had long been estranged from his "own folks." His wife had been dead for a good many years, and his only child, a daughter, had so offended her father by marrying against his wishes that he had disowned her, although she had married a young man of excellent character and industrious habits. But the judge was a man who could not bear to be crossed in anything, and he was bitter in his resentments. People did him no injustice when they said that he was a hard man. Now and then some unexpected strain of kindness or generosity would become apparent and people would admit that the judge had his "good streaks" after all. The offering of the prize in the spelling contest had been regarded as one of the judge's "good streaks." His neighbors had said, when the judge disowned his daughter, that one of his "good streaks" would induce him to forgive her and seek a reconciliation but this had not come to pass at the end of nearly twenty years. The daughter had moved to another state and the judge had held no communication with her. Not even the coming of grandchildren had softened his heart, and his daughter's letters to him had been returned unopened.

Tom Bentley of District No. Five and Joe Hatton of No. Six headed their respective lines when it came time to begin the spelling match. The first contest was to be simply a "spelling down" contest. The two schools faced each other in two long parallel lines and the school that first "spelled down" the other would be the winner. This contest revealed the fact that there had been a good deal of hard studying done and it took nearly an hour for the No. Sixers to "spell down" the No. Fivers. Then came a brief intermission, and after that, the real contest of the evening. The spellers from the two schools faced each other again, and it was understood that the boy or girl from either school who stood up longest should be adjudged the winner of the prize which Judge Butler had held up to view in a small knitted purse, through the meshes of which the yellow gold coin was shining in a very tempting way that put the spellers on their mettle.

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pronounced the words, each pronouncing for fifteen minutes at a time. The spellers could have but a single "try" at a word, and no favoritism was shown by either teacher.

At the end of the first twenty minutes eight of the No. Fivers were standing and but five of the scholars from No. Six. Among the scholars from No. Five was a young fellow of perhaps fifteen years, who seemed to be a stranger to every one in No. Six. He had come to the schoolhouse with the Bensons, a family that had but recently come to No. Five to live. No names had been called in choosing those who were to take part in this contest. It had simply been announced that any pupil from either district who cared to enter the contest was at liberty to do so, and this boy had taken his place with the other boys from No. Five. It was evident that he was a "mighty good speller," and some of the older people nodded their heads approvingly when he spelled very glibly some of the long "jaw-breakers" with so many "silent" letters. He was smaller and apparently younger than any of the others when there were but three of the No. Fivers left standing and four of the No. Sixers.

The boy's spelling was evidently commanding the admiration of old Judge Butler. He even patted his palms together softly when the boy spelled a long word that two of the spellers from No. Five had been compelled to "sit down" on. At last there was no one left standing but Harry Venner of No. Six and the unknown boy from No. Five. There was a great clapping of hands when the contest had narrowed down to these two boys, who were apparently of about the same age. They faced each other with folded arms and the contest grew intensely interesting. Both boys were perfectly self-possessed. Some of those who had been compelled to sit down had "lost their heads" through excitement, but Harry Venner and his opponent were not likely to do this. They spelled each word very slowly and very distinctly with a certain little note of defiance in their voices. The silence in the room was so intense that each boy's voice penetrated to the most remote corner, and the least movement on the part of anyone was heard.

Harry Venner hesitated half a minute before spelling the word "pomaceous," but spelled it right, and his opponent reflected carefully for a moment before spelling the word "railleux," but he also spelled the unusual word correctly amid much applause on the part of the No. Fivers.

For nearly half an hour the two boys faced each other, spelling in a way that elicited many nods of approval and occasional applause. The interest was at fever pitch when the word "Sibylline" was given to Harry to spell. A little too over-confident as to his ability to spell the word, he did not hesitate a second but spelled the first syllable with a "y" instead of an "i."

"Next," said Mr. Bassford, who was pronouncing.

"What!" exclaimed Harry. "I spelled it right."

"No, Harry, you did not," said his teacher, with a note of regret in his voice. "Next."

The boy from No. Five spelled the word correctly and the No. Fivers "went wild." Hats were thrown up to the ceiling; feet in clumsy boots and shoes were pounded on the floor, and hands were clapped. In the midst of it all Harry Venner did a fine and manly thing. He reached out his right hand to his successful opponent, and they clasped hands heartily. This created another wild outburst of applause and did much to prevent any sneering jibes or taunts from either side. No one applauded louder than old Judge Butler, regardless of the fact that the prize had been won by No. Five, and he would much preferred to have had it gone to someone in his own district.

When the excitement had subsided Judge Butler requested the prize winner to come to the platform. With the purse of gold in his hand, he said: "You have spelled wonderfully well, my boy, and I am proud of you, even if you do not belong to our district. You have won the prize fairly and with great credit to yourself. I congratulate you and I—but I don't seem to know you. You must be a newcomer to No. Five. Will you tell me your name?"

"Horace Butler White."

The old man stepped back and looked at the boy curiously. Again there was dead silence in the room.

"My—my name is Horace Butler, too," said the judge.

"I know it, sir," replied the boy, quietly, as he stood before the judge, a slim, erect lad, with a handsome face and manly bearing. "I know it, and I—I was named for you—grandfather."

Judge Butler dropped into the chair from which he had risen. His arms fell limply to his sides and the ruddy color left his face for an instant. His lips opened and closed for a moment, but no sound came from them. Then he looked wistfully into the face of the boy who had drawn a little nearer to him. Suddenly the judge leaned forward and put forth his hand. Placing it upon the arm of the boy he drew him toward him and kissed him on his white brow. Then the applause broke out again, and some of the women put their handkerchiefs to their eyes. Indeed, the eyes of some of the men were suspiciously moist.

Then the judge stood erect, with his arm around the boy's shoulder, and said simply: "Good friends, I am sure that you will agree with me that the prize has been fairly won by my grandson, Horace Butler White, of whom I am very proud."

The explanations that followed a little later revealed the fact that Mrs. Benson was a relative of the father of Horace Butler White, and that the boy had come to stay several months with her and had become a pupil of No. Five school, and was, therefore, entitled to enter the contest.

A complete reconciliation between the judge and his daughter was the result of Horace winning the prize. Within a few weeks his big house was brightened by the presence of a half dozen healthy and sturdy grandchildren, of whom the judge became excessively fond. Sometimes he said to Horace: "I've always said that it was a mighty good thing for one to know how to spell, and I'm more than ever convinced of it now."

JOSHUA COFFIN; WHITTIER'S FIRST TEACHER.

BY RUBY BAUGHMAN.

Every American school lad and lassie remembers Whittier's picture, in his poem, "In School Days," of the country schoolhouse in which the poet received the greater part of his scanty school education. Whittier's brief school experience, although it began when he was seven or eight years old, covered only a few winter terms of three or four months each and two terms at Haverhill Academy, every day of it bought by personal sacrifice on the part of his family and himself. The little building which he knew in his early days as the farm boy, near Haverhill, has been destroyed long since by fire, but its indestructible memory still lives in

"Still sits the schoolhouse by the road,
A ragged beggar sunning;
Around it still the sumachs grow,
And blackberry vines are running.

Within, the master's desk is seen,
Deep-scarred by raps official;
The warping floor, the battered seats,
The jack-knife's carved initial;

The charcoal frescoes on the wall;
The door's worn sill, betraying
The feet that, creeping slow to school,
Went storming out at playing."

To a boy of such limited and secluded advantages, the contact with his teachers brought a tremendous mental stimulus. In a letter to Samuel Spalding on the occasion of the two-hundred-and-fiftieth anniversary of the founding of Newburyport, Mass., Whittier writes: "Its learned and genial historian, Joshua Coffin, was my first school teacher * * *

This pedagogue of the funeral cognomen later won somewhat of local fame for himself as an antiquarian as well as historian of his native town where he was born in 1792 and died in 1864. He was graduated from Dartmouth in 1817 and taught school for many years in the communities near his home town. An ardent leader in the Abolition movement, he was one of the founders of the New England Anti-Slavery Society in 1832, and was its first recording secretary. His picture still hangs on the wall of the Whittier Memorial House.

Of this teacher's great influence on Whittier's life and work, there can be no doubt. In the Spalding letter, written late in life, the poet pays this expression of gratitude: "Let me, in closing, pay something of the debt I have owed from boyhood, by expressing a sentiment in which I trust every son of the old town (Newburyport) will unite: Joshua Coffin, historian of Newbury, teacher, scholar, and antiquarian, and one of the earliest advocates of slave emancipation: May his memory be kept green, to use the words of Judge Sewall, 'so long as Plum

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And this is the story of the debt to which Whittier refers. The Whittier library, as was fitting for the household of a Quaker farmer, contained the Bible; a wearisome epic "The Davideis" written by an English Quaker friend of Milton; biographies of Penn, Franklin, Scott, Fox, Burroughs, and Tufts; Elias Smith's "Universalism," and a few others, numbering perhaps twenty altogether, of a similar sort. The deficiencies of this collection Whittier supplied by borrowing. In the poet's own words, "When I was fourteen years old, my first school teacher, Joshua Coffin, brought with him to our house a volume of Burns' poems, from which he read, greatly to my delight. I begged him to leave the book with me, and set myself at once to the task of mastering the glossary of the Scottish dialect at its close. This was about the first poetry I had ever read, with the exception of the Bible (of which I had been a close student), and it had a lasting influence upon me. I began to make rhymes myself, and to imagine stories and adventures."

Whittier, however, must have dabbled with rhymes before this time, for an old friend and schoolmate in Haverhill writes that he "instead of doing sums on his slate in school, was always writing verses, even when a little lad." At any rate, the poetry of Burns was the first strong external impulse to Whittier's native faculty and for that stimulus he was indebted to Joshua Coffin.

In his poem "To Burns," Whittier recalls his boyish delight in the Scottish poet to whom his teacher had thus opened the way for him.

"Wild heather-bells and Robert Burns!
The moorland flower and peasant!
How, at their mention, memory turns
Her pages old and pleasant!"

I call to mind the summer day,
The early harvest mowing,
The sky with sun and clouds at play,
And flowers with breezes blowing.

I hear the blackbird in the corn,
The locust in the haying;
And like the fabled hunter's horn,
Old tunes my heart is playing.

How oft that day, with fond delay,
I sought the maple's shadow;
And sang with Burns the hours away,
Forgetful of the meadow!"

An intimate account of Coffin's regime, Whittier gives in "To My Old School-master."

"I, the urchin unto whom,
In that smoked and dingy room,
Where the district gave thee rule
O'er its ragged winter school,
Thou didst teach the mysteries
Of those weary A B C's—"

The seasons of the district school were held, during Coffin's incumbency, in a room of a neighbor's home while the schoolhouse was in the process of building, whence the following allusions to domestic interruptions:

"Where to fill the every pause
Of thy wise and learned saws,
Through the cracked and crazy wall
Came the cradle rock and squall,
And the goodman's voice, at strife,
With his shrill and tipsy wife—"

That Coffin's methods of work were a bit more modern than those of many of his contemporaries appears in

"Luring us by stories old,
With a comic unctious told,
More than by the eloquence
Of tense birchen arguments
(Doubtful gain, I fear) to look
With complacency on a book!
Where the genial pedagogue
Half forgot his rogues to flog—"

The "Brisk wielder of the birch and rule," who was "master of the district school" in "Snow-bound," written when Whittier was close to sixty years old, is not this early instructor Coffin, but another young Dartmouth man who, like Coffin, bolstered up a limp pocketbook by teaching during the college vacations. His name was George Haskell. He became a physician and moved to Illinois, where he helped to found Shurtleff College. Later he removed to New Jersey where he had a share in the establishment of a model industrial school and a model communistic experiment. It seems that he never knew that his famous pupil had honored his instruction by immortalizing his teacher in verse. In fact, it was not till late in life, about the time he wrote "Snow-bound," that Whittier was able to recall Haskell's name. The poet had no trouble, however, in remembering the name of his first teacher, to whom he wrote,

"Old friend, kind friend! lightly down
Drop time's snowflakes on thy crown!
Never be thy shadow less,
Never fail thy cheerfulness;
I, the man of middle years,
In whose sable locks appears
Many a warning fleck of gray—
Looking back to that far day,
And thy primal lessons, feel,
Grateful smiles my lips unseal
As, remembering thee, I blend
Olden teacher, present friend."

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Woman and Her Needs

At Home and Elsewhere

THE EVERYDAY APRON—By Catharine A. Grimes.

NEVER feel dressed without an apron on, when I am around home," laughed a neat little housewife, tying on a pretty affair of ordinary gingham. "I like to wear them, and I just love those little ribbony, lacy things they put in the papers; but I don't have time for frills when it comes to washing and ironing, so I just make my gingham ones as pretty as I can, and let it go at that."

Many a busy housewife echoes the same sentiments. Although she may be much interested in the dainty, fancy accessories, she finds herself most nearly concerned with the utilitarian articles of dress. If she can combine use with good taste, she is doubly happy, for she has solved her problem and satisfied her longing at the same time.

Some one has called the gingham apron "the universal badge of woman's sufferings," and when one notices the awkward, graceless things too often made to do kitchen duty, the expression seems apt enough. It is just as easy to study the esthetic possibilities of gingham and calico as those of silk and fine linen, and the ordinary housekeeper will find more satisfaction in doing so.

In selecting goods for kitchen aprons, the wearing qualities must be first considered. Calicoes are largely tabooed because they are lacking in this respect, yet their use may be excusable, because there are many pretty colorings and designs among the prints not found elsewhere. One tires of the endless "apron checks" shown in gingham, and wants a change. Many of the pretty dress gingham, in plain colors, may be utilized for aprons, without sacrificing serviceability, and one occasionally finds a good stout piece of chambray that is suitable for the purpose.

The colorings should be chosen so as to harmonize with the gowns to be worn about the house. The plain, dark dress so much liked can be worn with almost any pretty, bright color, but the gown of pronounced tint must be aproned harmoniously, or its effect is spoiled. It is a good plan to buy enough material like the gown for two or three aprons, making and trimming them differently for the sake of variety. A plain house-dress of cadet blue was very attractive with an apron of the same goods, trimmed with narrow bands of black sateen. The bands were used to outline the shaped pockets, and as a heading for the wide ruffle across the bottom. Another apron of the same goods was made with a pretty, ruffled "bib," and trimmed in blue and white finishing braid. The whole effect was very dainty and tasteful, while if the gown had been worn with the ordinary checked brown-and-white apron, its appearance would have been spoiled.

Children are especially fond of brightness, and the mother of a family will do well not to wear too many somber colors. The dark dress saves washing, and is always a favorite with the woman who has a great deal of work to do. If it is brightened up with colored aprons, the greatest objection is overcome. Children dearly love to see mother "blossom out," and the touch of color secured in this way gratifies them without adding to the burdens of laundering.

At least one big, long-sleeved apron should be kept on hand, to slip on over a good gown when one comes in from town or church, and does not wish to change. Two or three large ones without sleeves will be found useful to wear when one is cleaning house, canning, making sausage, or doing other unusually "dirty" work. For ordinary purposes, however, the short, waistless apron is ample protection, and may be made in a variety of pretty shapes, none of them taking over two yards of goods. They are easy to make and easy to launder.

One especially pretty and easily made apron is a simple square, edged with a two and one-half inch ruffle. The square is held cornerwise, and the needed fullness and shape at the waist line are secured by several small tucks running up

and down. The upper corner may be cut off, or left to make a tiny bib. Another attractive style is made with a graduated flounce, plain and narrow over the hips, and wide and full at the bottom. The edge of the apron is rounded. The flounce is headed with a band of some contrasting material, as are also the shaped pockets.

Speaking of pockets, it should be remembered that every apron should be supplied with them. The old-fashioned "patch pocket" is chiefly a nuisance, as it is always catching on something and tearing down at the corners. The shaped pocket that runs up into the belt at the front edge is far better, as well as more graceful.

A handy little apron to wear while sewing is made with a rounded lower edge, plainly hemmed, and having small brass rings sewed on about three inches apart all around the sides and bottom. Through these is run a stout tape, or a stitched fold of the goods. When one has to get up to see to something else, the thread, pieces, etc., may be caught up in the apron, the tape looped over the arm, and both hands left free. Another little square sewing apron has a strip of washable linen tape measure stitched to the lower edge, on the wrong side. It saves a great deal of time looking for that useful article, which is never at hand when it is needed.

For afternoon wear about the house, a pretty, colored gingham or calico apron is as good as an elaborate white one. It is a good plan for the busy mother, who likes to "dress up" a little before the children come home from school, to keep her newest aprons for afternoon wear, and, when they have lost their freshness, relegate them to the kitchen. In this way the aprons are all utilized, and there are no half-worn, stringy light garments, "too good to throw away, too light to work in, and too worn to look attractive," lying around in the way. A new apron costs only a few cents, and three or four may be made in an afternoon, so it is by no means extravagant to have all one wants of them.

RECIPES.

Cracker Pie.

Four common crackers broken up, one and one-half cups of water, one cup of sugar, a little vinegar to give it a tart taste, a pinch of salt and a grated nutmeg. Bake with upper and under crusts. I sometimes add a little fruit juice. This makes one pie.—Mrs. E. K.

Kidney Beans with Brown Sauce.

Put one pound of red kidney beans and one pound of round beef, cut into small pieces, into a saucepan, cover with boiling water and cook half an hour, then add a teaspoonful of salt and cook till tender. Put two tablespoonfuls of butter into a frying pan and when brown add two tablespoonfuls of flour. Rub smooth and add one pint of the water in which the beans were cooked, a little salt, pepper and one-fourth of an onion chopped very fine. Drain the beans and let them simmer in the sauce for ten minutes. Delicious.—A. E. L., Dundee.

Cranberry Pie.

One cup of cranberries and one-half cup of raisins cut in two. One cup of sugar, one cup of cold water, one tablespoonful of flour. Stir flour and sugar together, add the water and then cranberries and raisins. Bake between two crusts.—V. W., Spring Creek, Pa.

String Beans a New Way.

String the beans and cut in two lengths. Cook in salt water. Slice two or three onions in a tureen. When the beans are cooked tender lift them from the water, place in the tureen, add two tablespoons of butter or pork fat if you are frying pork, a half cup of vinegar and pepper to taste.—L. T. F.

Scones.

Take a pint of flour and sift in two teaspoonfuls of baking powder. Mix in enough lard to make it as short as you would biscuit. Add enough sweet milk

to enable you to roll out and cut as biscuit. Place a skillet over a medium fire, but do not put in grease or water. Place the biscuits in the skillet, cover them and allow them to remain 15 minutes. When they are of a delicate brown, they are ready to serve. Cover with sugar, butter and cream for dessert or eat with butter as biscuit. They are delicious with honey.

Fried Carrots.

Cook carrots in salted water until tender, remove the skins, cut in slices crosswise, dip in beaten egg, then cracker crumbs and fry a nice brown.—R. R.

Eggless Cake.

One cup brown sugar, one cup raisins, chopped, one scant cup lard or butter, one cup buttermilk, one tablespoonful of molasses, one level teaspoonful soda, two cups flour, spices of all kinds to suit the taste. Bake in slow oven.—Mrs. D. S., Breckenridge.

A Carpet Bug Destroyer.

As a thank offering for the many helps that I have received from you, I will send my way of killing carpet bugs. Take three corrosive sublimate antiseptic tablets and one ounce of sugar of lead; dissolve in one quart of water and spray the carpet where the bugs are troublesome. I did that three years ago and have had no trouble since and I am using the same carpet.—A Reader, North Star.

We do not pay for recipes. If you wish a recipe write and ask for it, and send your favorite recipe in exchange.

Coloring Bear Skin Coats.

I colored a white bearskin coat successfully. I used black walnut shucks, as our grandmothers used to do. I filled a small copper wash boiler two-thirds full of shucks and boiled them an hour, then strained them and to the liquor added five cents worth of copperas. Then I put in the coat and boiled it two hours, stirring often, rinsed it well and dried in the wind. It looked as good as new, and although worn almost threadbare now the color is still good.—Mrs. S. B., Charlotte.

Uncooked Chili Sauce for Mrs. G. W. E. Half peck ripe solid tomatoes chopped, half cup of salt, half cup sugar, two cups celery chopped fine, two cups finely chopped onions, two small red peppers chopped, one cup white mustard seed, one tablespoon each black pepper and ground cinnamon, one quart vinegar. Mix all together, put in a stone crock and cover with cloth only.—Mrs. G. R.

Appetizing Dish from Left-overs.

Take cold roast beef, or beef and pork mixed, and the gravy that may be left over, and season to taste with salt, pepper and a little onion, or any favorite seasoning. Use deep baking dish, line sides with rich biscuit dough; place in center of dish a teacup upside down, which prevents gravy from boiling through crust. Put in the meat mixture and cover over with biscuit dough. The dish is then placed in a quick oven and baked until crust is nicely browned. Many people enjoy potatoes with the meat as given above.—K. S., Wayne Co.

Women Who Are Doing Things.

Mrs. Geo. O. Robinson.

NEW YORK has formed such a habit of claiming every man and woman of prominence in the country that when a Michigan woman heads a nation-wide movement, every other woman in the state feels almost as much pride in the fact as though the achievement had been hers.

Mrs. George O. Robinson, of Detroit, is the chief promoter of an organization which has spread over the country in the quiet manner of every great movement and with the powerful influence for good which belongs to all great and silent movements. The Deaconess work of the Methodist church in the United States owes its present growth and influence to Mrs. Robinson and that its work has been for good the poor of the cities will testify. For it is among the poor of the slums that the black bonneted, white-tied women work.

Those women who are sighing to do something great might learn from a glimpse into Mrs. Robinson's life that

SOUND SLEEP

Can Easily Be Secured.

"Up to 2 years ago," a woman writes, "I was in the habit of using both tea and coffee regularly."

"I found that my health was beginning to fail, strange nervous attacks would come suddenly upon me, making me tremble so excessively that I could not do my work while they lasted; my sleep left me and I passed long nights in restless discomfort. I was filled with a nervous dread as to the future."

"A friend suggested that possibly tea and coffee were to blame, and I decided to give them up, and in casting about for a hot table beverage, which I felt was an absolute necessity, I was led by good fortune to try Postum."

"For more than a year I have used it three times a day and expect, so much good has it done me, to continue its use during the rest of my life."

"Soon after beginning the use of Postum, I found, to my surprise, that, instead of tossing on a sleepless bed through the long, dreary nights, I dropped into a sound, dreamless sleep the moment my head touched the pillow."

"Then I suddenly realized that all my nervousness had left me, and my appetite, which had fallen off before, had all at once been restored so that I ate my food with a keen relish."

"All the nervous dread has gone. I walk a mile and a half each way to my work every day and enjoy it. I find an interest in everything that goes on about me that makes life a pleasure. All this I owe to leaving off tea and coffee and the use of Postum, for I have taken no medicine." Name given by Postum Co., Battle Creek, Mich.

"There's a reason," and it is explained in the little book, "The Road to Wellville," in pkgs.

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

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is on every yard of the selvedge. If the dealer offers you a substitute, don't even think of accepting it.

These substitutes for SUESINE may be weighed down with tin, glue and iron dust, which at first might make the fabric pretty, but after a little wear it becomes shabby, rough, and develops holes and defects.

Do not accept these substitutes, which invariably give dissatisfaction.

Instead, tell your dealer you want Suesine and ask him to get it for you. Then write to us and

We will send you, absolutely free, forty-two samples of Suesine Silk—more than 255 square inches altogether.

We ask only, that, when writing for these free samples, you will mention the name of your regular dry goods dealer, and say whether he sells Suesine Silk or not. Please be sure to give that information in writing to us.

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We do not sell Suesine Silk except through regular retail merchants. But if we cannot send you the name and address of a Dealer in your vicinity who has Suesine Silk, we will see that your order is filled at the same price, and just as conveniently, by a reliable retail house, if you enclose color sample and price, 35c. per yard. The prices of Suesine Silk in CANADA is 50c. per yard.

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greatness comes only after years of hard work and preparation. There were years devoted to study in the Troy Female Seminary, the State Normal School of Albany, N. Y., and the Syracuse University, from all of which schools she was graduated. Then for seven years Mrs. Robinson, who was at that time Miss Jane Bancroft, held the position of Dean of the Woman's College of the Northwestern University of Evanston, Ill., and professor of the French Language and Literature in that institution. In 1885 she went to Bryn Mawr to take up historical studies and the following year went to Europe where she entered the University of Zurich to study political and constitutional history. Here she became interested in the Deaconess movement and when the following year she entered the University of France in Paris, she continued her study of the deaconess work in that city.

Leaving the University of France, she studied this branch of charitable work in London and all over the continent of Europe, with a view to returning home and starting the work here. Interest in the movement was just taking form upon her return and with her wide knowledge of the subject she was looked upon as the right woman to take charge. The work was first started in Chicago, with Mrs. R. S. Rust, of Cincinnati, and Mrs. Rutherford B. Hayes, wife of the late President Hayes, as sponsors. From the small beginning there it has spread over the country until every city where poverty is known knows also of the deaconesses who work among the needy.

Training schools where young women may prepare for the work have been es-

and literary work. Her book on "Deaconesses in Europe and Their Lessons for America," has gone through three editions and is the accepted authority on the subject.

Between times Mrs. Robinson is a housekeeper and looks after two homes, the family residence in Detroit and a summer home on Grosse Isle.

THE LETTER BOX.

Are Women Ready for the Ballot?

In spite of the fact that legislatures seem powerless to relieve the prevailing conditions, would it better matters to give woman the ballot and simply double the number of votes? Is it not doubtful if woman, untried and untrained in political matters, could vote intelligently when man has failed so signally? Woman is very human. Would she do better than man has done, even if thoroughly competent to vote?

Men's opinions differ radically as to what produces these high prices and what remedy should be applied. The more thoughtful women will agree that woman, as a class, is far from being ready for the ballot. But it is also very plain that present conditions are quite stimulating to the mental powers of even the dullest, and no one accuses woman of dullness.

As woman becomes more and more a wage-earner, taking her place daily side by side with man in the business world and constantly becoming more and more identified with the industrial interests of the country, will not her enfranchisement follow in the natural course of events, an advance for which both she and society will be fully prepared? When she has proved herself capable, man will be ready to own her as his political equal, for the American man, whatever his faults, is the best in the world, the most liberal and just. And the American woman, whether she possesses her full rights or not, is the most blessed among women.

Just now woman's vote is not needed. Ten to one, at present, she would vote as her family always had or her husband told her to. Woman must learn to think independently and man will have to learn to recognize and respect her individuality before her enfranchisement will ever be successful.

In spite of the difference of opinion as to the cause of the prevailing high prices, one thing is certain. Whatever benefit the farmer derives from them is more than counterbalanced by the exorbitant prices he must pay for what he buys. These powers which now seem to govern our land are ever watchful and swift to return an attack. Some time ago several newspapers and magazines of large circulation undertook to explain the situation to the people. They must have come somewhere near the truth for the price of paper took a sudden leap, then postage rates on periodicals were raised so that an increase in the subscription price of the publications was necessary. No increase in postal receipts must be expected for the better class of reading matter will simply be beyond the reach of many families.

Though men have been trying for years to solve this problem which has constantly become more complicated, would the enfranchising of women simplify the situation? What we need is an aroused people, an informed and organized people, who will know what they want and where and how to get it.

By all means let the women investigate, organize and co-operate with other societies. Knowledge always helps. But give the men a chance to set things right before overwhelming the ballot box with floods of votes directed by no better knowledge than that already possessed. Women hold a tremendous force in their hands and they will use it to better advantage in organizing for the enlightenment and advancement of their sex than in demanding the ballot box or leading a mob, as our sisters across the water are doing.

Don't think that women could not play the political game. Dear me, they were training for that while the men were still slaying wild animals with wooden clubs. True, Barak had his Deborah, Charles VII his Joan of Arc and the modern man wants to take notice. If these be idle words, forget them.—E. E. L., Mason.

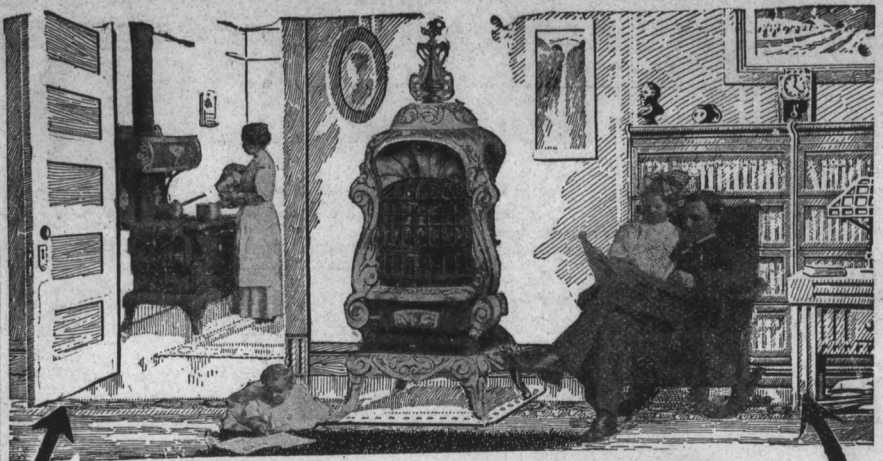
Pretty jabots may be quickly made from dainty handkerchiefs by ironing them into folds that turn either toward or away from the center and run either lengthwise or cornerwise. Fold one end over, thus making two tabs.—E. B.



Mrs. Geo. O. Robinson.

established through Mrs. Robinson's efforts. The first of these was the Lucy Webb Hayes National Training School in Washington, D. C., which was started in 1890, and now has property worth a quarter of a million dollars. Connected with it are Sibley Hospital, where there is opportunity for 30 young women to receive training in hospital work, and Rust Hall, the dormitory. A new hall which is to be erected at a cost of \$100,000 will be known as Robinson Hall, in honor of Mrs. Robinson and her husband who has assisted her in all her work. In addition to this national training school are two other national schools, one in Kansas City and one in San Francisco, and conference training schools in Grand Rapids and in Des Moines, Ia. The organization holds property values at about \$800,000 and expends \$200,000 yearly in carrying on its work. There are 500 women working in the institutions and stations, the whole movement managed by five bureaus, of which Miss Henrietta Bancroft, Mrs. Robinson's sister, is general superintendent. Mrs. Robinson is chairman of the committee on National Training Schools.

Mrs. Robinson is well known to many Michigan women as a platform speaker. Her splendid education, which, by the way, has earned her the title of Ph.D., combined with a ready flow of language, make her an entertaining and convincing lecturer. As an example of the strenuous life, Mrs. Robinson has few peers. In addition to her work in the deaconess movement she is a member of the American Economic Association, the American Historical Society, and various other societies, and keeps two or three stenographers busy with her correspondence



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Bluefield, Col.—I received my stove and have tried it thoroughly. I am perfectly satisfied with it. I use about one-half the coal and get about one-third more heat than I did with my old stove. I don't see how you can put the material used and the excellent workmanship on your stoves and sell them for the price you do. I could not duplicate mine in my town for \$60.00. I have saved \$20.00 on my stove. SAML. L. WADE, Prof. English.

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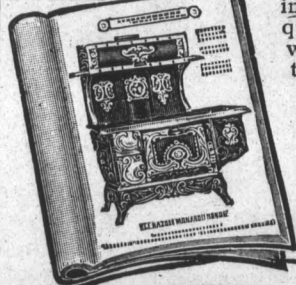
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KEEPING CHILDREN IN SCHOOL.

BY ELLA E. ROCKWOOD.

Now that school has begun again parents ought to see that children are regular in attendance and do not stay at home whenever the fit takes them to do so. Children are not supposed to know what is best for them and it is up to the fathers and mothers to enforce certain rules.

One of these should be that no child stays home from school save for good and sufficient reasons. Illness, of course, comes in as one of these legitimate reasons, but even then there are times when the indisposition is more in the imagination than anything else. Putting the child to bed often dissipates this difficulty, as he would far rather go to school than to bed, and speedily finds that he is not so sick as he thought he was.

To permit staying away from school because company is expected or to go visiting, is entirely unnecessary, yet it is customary in many homes.

School means so much in every life and the years which can be devoted to it are so few that every possible effort ought to be bent toward making the most of them. If parents would co-operate with teachers in securing regular attendance results would be more gratifying than they are at present. This matter of attendance is, however, making headway, for absence from school is now far less prevalent than it used to be.

Let me urge upon parents the importance of keeping boys and girls in school every day. Let nothing interfere with this program, and in the years to come you will receive their thanks for so doing.

MICHIGAN FARMER PATTERNS.

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



No. 5519, Ladies' Norfolk Outing Waist. Closed at Front. Cut in 6 sizes, 32 to 42 inches bust measure. Size 36 requires 4 1/2 yards of 36-inch material; 1/4 yard of 27-inch contrasting goods. Price, 10 cents.

No. 5518, Ladies' 28-inch Length Double-Breasted Coat. Cut in 6 sizes, 32 to 42 inches, bust measure. Size 36 requires 3 yards of 50-inch material. Price, 10 cents.

No. 5541, Girls' Sailor Dress. Cut in sizes, 6, 8, 10 and 12 years. Age 8 requires 3 1/2 yards of 36-inch material with 1/2 yard of 27-inch contrasting goods; 2 1/2 yards of braid. Price, 10 cents.

No. 5552, Ladies' Six-Gored Skirt. Cut in 5 sizes, 22 to 30 inches, waist measure. Size 24 measures 3 1/4 yards around the lower edge and requires 4 1/2 yards of 36-inch material. Price, 10 cents.

No. 5524, Boys' Double-Breasted Coat. Cut in 6 sizes, 2, 4 and 6 years. Age 4 requires 2 1/2 yards of 36-inch material; 1 1/2 yards of braid. Price, 10 cents.

When canning sausage use fruit cans. Fry the sausage, then put in cans and put about two inches of grease in can, seal and turn upside down until cool. This saves using so much grease and the sausage keeps just as nice.—N. H.

To get rid of ants try cleanliness. Keep everything covered and ants will leave. This is my experience.—L. F.

Fruit cooked in a stone crock, keeps whole. There is no danger of burning it.—A. B.

ECONOMIZE

A THOUSAND DOLLARS, we will say, is your yearly income. Maybe it's \$600 or \$800 or \$2000—but \$1000 will do for an example. Now suppose that out of this \$1000 you spend \$600 in a year and put \$400 in the bank. That means \$400 saved, doesn't it? But suppose you start buying the necessities of life in an economical way like 2,000,000 other people are doing. Suppose that this year you cut your expenses down to \$400 and put \$600 in the bank. That means \$600 saved, doesn't it? You can do it, you can cut one-third off of your living expenses and it's the easiest, most agreeable thing to do that there is. Send to us for one or more of these books which contain the articles you are going to buy this winter. You will find as all of our 2,000,000 satisfied customers have, that our prices are the very lowest and the quality of our merchandise is the very highest. The reason our prices are low is this—we buy in tremendous quantities and trim down the price on each article to the lowest possible figure. We give you the advantage of these extensive and economical business methods.

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PRACTICAL SCIENCE.

CHEMICAL CONSTITUENTS OF SOILS. No. 3.

BY FLOYD W. ROBISON.

In our studies throughout this course we shall be making continual use of chemical terms. We shall therefore at this point make the acquaintance of the chemical factors most largely involved in agriculture.

The changes which the earth has undergone have been to a great degree physical in character, but the chemical changes have been likewise of very great importance. Physical change may be sufficient to reduce rock to soil but life is impossible without the intervention of the factors of chemical energy.

The rusting of a nail is a typical example of the effect of chemical forces. A nail may bend or it may be cut in two by the action purely of physical and mechanical agencies but the rusting process is an evidence of chemical activity. This rusting process is a type of a process with which we shall deal with much frequency in our studies in practical science. It is perhaps the most common of all chemical operations.

Matter of all kinds may be divided into parts so small as to be unmeasurable by our ordinary mechanical devices. The composite structure of the soil, or of plants, etc., may be divided into almost indefinitely small divisions and the relations of the constituents therein remain the same. There must come a point, however, ultimately, at which it is impossible to further divide without destroying some of the characteristics by which that material has been commonly recognized. A grain of corn is composed of starch, oil, albumen, etc. By various mechanical and physical means the individual constituents of the grain of corn may be separated and gathered together. It is possible to separate the starch by methods which are purely mechanical and in this way alter the structure of the grain of corn. We may, in analogous ways, separate likewise the oil and the albumen of which the grain of starch is composed. We may now find that these different components may in turn be divided almost indefinitely without altering their specific structure. We may imagine, for example, a particle so small that it can with difficulty be seen with the aid of a powerful microscope and yet we may be certain that it is possible for such a particle of starch, having all of the characteristics of the large mass of starch, to exist and have a definite structure. If we could imagine a point at which it would be impossible to further divide a particle without destroying its structure, that is, without destroying the characteristics by which we recognize it to be starch, we would then have the smallest possible division of the substance starch, which division we may conveniently refer to as a molecule. We have now reached the limit of division by physical or mechanical forces. We would find that if to this particle was applied heat, for example, it would be changed further, and so we recognize that when we have reached the extrem limit of divisibility, physically and mechanically that product is still capable of further division chemically. Were we to analyze this molecule of starch we would find it consisted of several different constituents. For example, we would find Carbon; we would find Hydrogen, and we would find Oxygen.

We now find by comparing the substances Carbon, Hydrogen, and Oxygen, all of which together go to make up the molecule of starch, that they are essentially different in most of their characteristics. The molecule of starch is very large for it is made up of many molecules of Carbon, Hydrogen and Oxygen. Each of these individual molecules may be resolved in turn into their constituent atoms. Just how far this division may go is purely the realm of theory. The fact is that below the point of divisibility into what we call molecules and atoms, a form of energy still manifests itself, has given rise to the electron theory of matter.

Just in the same way that Carbon, Hydrogen and Oxygen grouped together in one case might make a molecule of starch and in another case might make a molecule of sugar, or again might make a molecule of oil, all of which products differ essentially in many of their characteristics, we may for the sake of clearness consider the electrons grouped to-

gether in a certain manner and in a certain number in one instance to form an atom of the element of Carbon, another to form an atom of the element of Hydrogen, and still another to form an atom of the element of Oxygen, etc., all of which elements while formed from this common source are found to differ materially in their several characteristics.

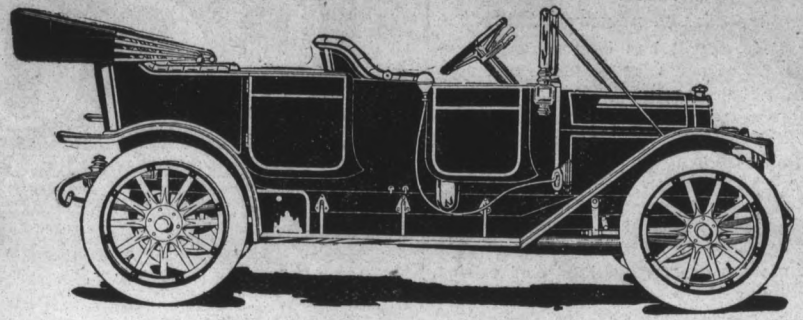
An element, then, is the simplest possible division of matter. There have been discovered about eighty of these different elements in the universe. In agriculture we deal with comparatively few. There are perhaps 14 which in varying quantities make up the structure of soils and plants, and animal tissue. In reality there are but four or five with which we are intimately interested. We will mention these different elements so that we may become somewhat familiar with them. They are Potassium (symbol K), Phosphorus (symbol P), Calcium (Ca), Carbon (C), Sodium (Na), Iron (Fe), Aluminum (Al), Magnesium (Mg), Silicon (Si), Chlorine (Cl), Sulphur (S), Nitrogen (N), Oxygen (O), and Hydrogen (H). Of these Nitrogen, Oxygen, Hydrogen and Chlorine are gases, the others in their natural state are solids. With very few of them do we deal in their elemental state. Carbon is met with frequently in the elemental state as Carbon. Charcoal and the diamond are typical examples of the element Carbon. Nitrogen and Oxygen—both gases—are most commonly met with in their free, or elemental, state, in the air we breathe. Chlorine is at times observed in its free gaseous condition. Sulphur exists in solid form and very frequently without being in combination with any other substance. Iron is met with in the free condition at times. But to obtain the others in their elemental condition, free from combinations with other elements, it is necessary to resort to manufacturing processes of separating, as they are not known in their free condition in their relation to agriculture. Nitrogen and Oxygen are the two gases which in the main make up the atmosphere. For animal and plant life it is commonly understood that an abundance of Oxygen in the air is necessary. Just what office Nitrogen fulfills, more than acting as a reserve supply for the Nitrogen in soils and plants is not known. Mixing mechanically as it does with the Oxygen in the air, it becomes of service as a diluent of the Oxygen, which condition is very favorable for the highest development of plant and animal life.

When the particle of starch is disintegrated by heat, then the constituent elements of which it is composed, that is, Carbon, Hydrogen and Oxygen, change their relationship to each other. The solid Carbon combined with the gaseous Oxygen, forming another gas which consists of both Carbon and Oxygen. This gas is called Carbon Dioxide (CO_2), or sometimes Carbonic Acid Gas, which has played such an important role in the dissolving of rock and the formation of soil. This combination of Carbon with Oxygen is exactly analogous to the change which takes place when the iron nail is rusting. When the nail rusts, the element Iron combines with the element Oxygen and gives the compound known as Iron Oxide. When the Carbon is burned it is united with the element Oxygen and forms a compound known as Carbon Dioxide (CO_2). The oxide of Iron, or the rust, is a solid. The oxide of Carbon is a gas, at ordinary temperatures.

Again, when the starch is burned the Hydrogen and the Oxygen combine together and form a compound known as Water (H_2O). These two elements in this combination have had an exceedingly important influence in the history of the world.

So we see that each of the elements which have gone to make up the molecule of starch have in an entirely different form and in different combinations exercised highly important functions previous to the time when they began the fulfillment of their mission in the building up of the compounds of starch.

The compound of Carbon and Oxygen occurring as CO_2 , that is in the proportion of one part of Carbon and two parts of Oxygen, is a factor of prime importance in agriculture. In solution in water it has been the great agent causing the breaking down of the rock and its influence within the soil today is very



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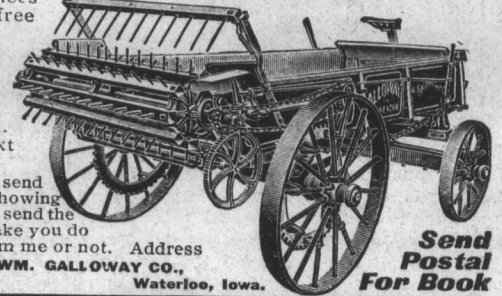


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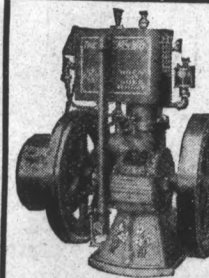
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important as assisting in making available the insoluble plant food.

The Hydrogen and Oxygen in the form of water—two parts Hydrogen and one part Oxygen—is the medium through which the plant and the animal secures its food.

Sulphur in its free form is of no significance to agriculture but combined with Oxygen as SO₃ it bears an important relationship to soil fertility and plant growth. Iron occurs in the soil mostly as the oxide of Iron, and together with Aluminum and Magnesium compounds is an important constituent of clays. Chlorine occurs freely in the water and especially so in the ocean and salt lakes. Sodium is apparently of no special significance although it is very abundant in the soil and in all vegetation. Silicon—its most familiar condition, ordinary sand—is very abundant in the soil as Silica (SiO₂). In the form of Silicic Acid it is freely soluble in the drainage water and is therefore transported wherever the demand becomes apparent. Certain rushes in streams are very gritty in their stems and it is found that their stems have been beautifully strengthened by the silicic acid deposited therein.

The above elements and their various combinations are of great interest and importance to agriculture. They are, however, so abundant that it is unnecessary to give economic consideration to them. The remaining elements—Nitrogen, Phosphorus, Potassium and Calcium have important functions to perform and we shall discuss them in some detail in our next paper.

SOME GOOD MICHIGAN FAIRS.

Benton Harbor Fair.

The show of fruit, vegetables, poultry, and horses was fine, the races were good and everything was done by the officers of the fair that could be done to make it a success, but the weather was somewhat unfavorable. Fred Felton, the secretary, was so overworked in looking after the interests of the association that the second day he completely collapsed and was removed to his home in a critical condition.—C. E. S.

Oceana County Fair.

The 40th annual county fair was held at the association's grounds in Hart, September 19-22 inclusive. The show was a decided success. The association has made many improvements in the grounds during the past year. All departments were well filled with exhibits of good quality, especially the fruit, which scarcely could have been better. An untimely rain spoiled what would have been otherwise the big day on Thursday, but on Friday the attendance was large, aggregating nearly 10,000.—L. F. P.

Cass County Fair.

The Cass County Fair which was held at Cassopolis, September 19-22, again demonstrated the fact that Cass county knows how to put up a good fair. There was a fine show of stock, grain, vegetables, etc., in fact, no other county in southern Michigan could surpass the fine collection of exhibits gathered for this fair. The races were fine and the "Bird-man" made three beautiful flights. The fair was clean in every respect and the officers are deserving of great praise for their efforts. Rain interfered on Tuesday and also on Thursday, but there was a good attendance on Wednesday and Friday.—C. E. S.

Ogemaw County Fair.

The Ogemaw County Fair held at West Branch, closed its gates Friday, September 29, after a very successful three days' meeting, the first held on the grounds for ten years. The show of farm crops, especially in the line of roots, was an excellent one, while the display of fruit and corn was a surprise to most people. The live stock shown was not what it should have been, although there were some very creditable animals, especially among the pigs. The racing on Thursday was good, the 2:40 race in which there were seven entries, was won by Nellie H., a West Branch entry, in three straight heats. Time, 2:33, 2:33 and 2:35. Dollie Dimple, of Standish, was second. Financially, the fair was a success, the receipts being enough to pay all expenses and the prospects are that another year will see a much better showing all around. More than 2,000 people were on the grounds on Thursday.—A. W. S.

The Calhoun County Fair.

The Calhoun County Fair held at Marshall, September 19-23, was in every way a great success. The fair grounds are nicely located on the outskirts of the city on the bank of the Kalamazoo river, about two-thirds of the ground being covered with a natural growth of oak trees. An unusual feature is an artificial lake which, during the fair was covered with a variety of ducks and geese which seemed to enjoy the occasion hugely. The floral hall was largely taken up with a large school exhibit, in which agriculture as taught in the common schools was prominently illustrated. The exhibit of fruit and vegetables was rather light, but the live stock exhibit was very good, being pronounced by the patrons as the best ever shown at this fair. While all the departments were good, the exhibits of Brown Swiss, Guernsey and Jersey cattle were especially fine. The poultry exhibit was unusually large for a county fair and attracted much attention from the visitors present. Much credit is due to the management, who leave nothing undone to entertain the large crowds who visit this fair each year.

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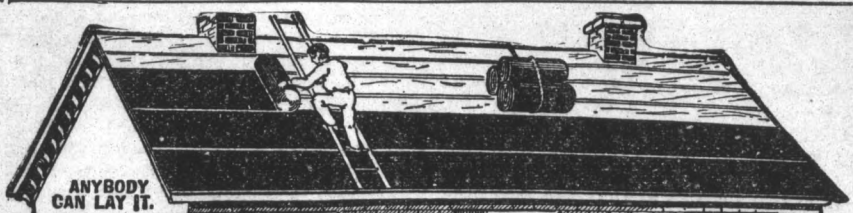
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FRUIT EXHIBIT AT THE STATE FAIR.

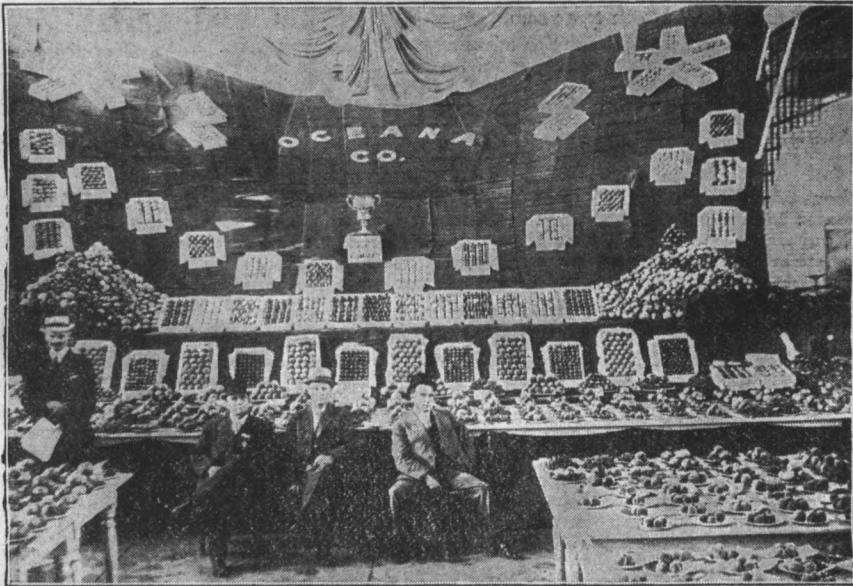
As usual, the display of Michigan fruit at the recent exposition of the Michigan Agricultural Society, was one of the attractive features of the great show. The large Horticultural building was practically filled with fruit, there being besides a small display of cut flowers and potted plants and the educational exhibit of the Michigan Agricultural College. All the fruit tables were filled as in former years, and in the mind of experienced fruit judges there was no question as to the quality of this year's entries—they were superior to what has been shown at former shows. This can be accounted for in part at least, by the earliness of the season and possibly by the drier weather which developed fruit of more attractive appearance since there was less damage resulting from fungus and insect attacks.

For the third season in succession Oceana county won the silver cup donated

it frequently remains for weeks at a time in the spring. Labor, too, is generally more plentiful in the fall, and as other work is not so pressing, the planting is performed with greater care.

Before the advantages of fall planting can be fully appreciated, one must realize that the growing season of trees is comparatively short. Most of the growth is or should be, produced before the first or middle of July. It becomes very essential then, especially the first season, that the trees enjoy as much of this period as possible. Frequently in the spring, the soil remains wet, work is pressing or the trees do not arrive from the nursery, so they are not planted until the middle or latter part of July. The growing season is then half over and as it takes the trees a little time to send out their roots and to take hold, they make little growth the first season. By fall planting, the trees frequently start their growth a week or two before the soil is dry enough to plow or handle, thus enjoying the full benefit of the entire growing season. This frequently results in a growth almost as great as of a two-year spring planted tree.

Whether or not one should practice spring or fall planting will depend upon



Oceana County's Fruit Display at State Fair. Awarded First Place in County Exhibits.

by the Agricultural Society for the best country exhibit. This entitles Oceana county to retain permanent possession of this beautifully designed piece. We present herewith an illustration of this exhibit showing the cup mounted in the centre. Other counties had good displays which went to prove to the general public that the adaptability of this state to the culture of fruit is more general than has been heretofore understood.

There were only two outside fruit exhibitors and these were from Ohio. It is, therefore, most complimentary to Michigan that from her own soil she can place before the public such evidence of her natural adaptability to the production of fruit; and since this general knowledge and conviction is what makes the industry profitable, we believe that the display at the recent fair will be of large direct and indirect value to our state, and especially to our fruit growers. Much credit is due Mr. Dow and his corps of workers who brought together and arranged this attractive exhibit of fruit.

ADVANTAGES OF FALL PLANTING.

As a rule, in transplanting, it may be said that the ideal time is while the tree is dormant and the soil and weather conditions favorable. With a few exceptions, as in the case of tree like the peach that are subject to winter killing, this rule holds good. The fall and spring, then, are the two seasons of the year that possess these conditions. As to just which is preferable, however, for planting, depends largely upon one's own local conditions.

The first advantage of fall planting is that it induces the grower to get his nursery stock earlier than if planting in the spring. He is, therefore, not apt to receive left-overs in the nursery but rather the pick of the stock. The nurseries, too, are not so busy in the fall and naturally give more care and attention to stock delivered at this time. The fruit growers, therefore, by planting at this season, has a better choice of stock to start his young orchard.

The weather in the fall is frequently ideal for planting. The soil is moist enough and is not too wet to handle, as

the kinds of trees to be planted. Apples, pears, currants and gooseberries are all hardy kinds that do well by fall planting, while peaches, Japanese plums and other less hardy fruits may be seriously winter killed by planting at this time if followed by a severe winter.

When planting in the fall, the trees should be mounded with soil to a height of about 18 inches and the pruning of the tree should be deferred until spring.

Agri. Col., Mich. C. P. HALLIGAN.

FARMERS HAVE BEEN GOLD-BRICKED.

During the past summer parties claiming to be agents for an Indiana nursery have been taking orders in a number of counties in western Michigan for peach and catalpa seedlings and have made preposterous claims for their trees.

The peach trees are to be four-year-old seedlings and will be entirely hardy and free from yellows and all other diseases. It is claimed that they will bear every year after planting and the third year will produce a bushel of large peaches.

The catalpa seedlings are said to be entirely hardy and to reach a size large enough for posts the third year and that they will make four posts the sixth year.

The facts are that the peach (called Friday) has never been fruited in Michigan and there is no reason for thinking that it has any of the merits claimed for it. Really, it is likely to be less valuable than almost any of the standard varieties which can be obtained for one-half the price, or less.

The hardy catalpa is not quite hardy in Michigan and, with ordinary care, not one tree in ten is likely to ever make a post and it will take three to five times as long as claimed. The price also is nearly ten times as much as it should be.

Many of the parties who have given the orders have countermanded them and will refuse to take the trees.

It is understood that the agents referred to have been repudiated by the Indiana nursery and, as they had not taken out licenses as dealers in nursery stock, they had no authority to sell trees in Michigan.

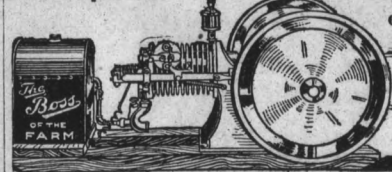
L. R. TAFT,
State Inspector of Nurseries.

"EVERYBODY"

Can Afford a Gasoline Engine With Galloway's New Low Prices

You've never before heard of such startling values—I've never offered anything like them and you know full well that no one else has ever come anywhere near my regular prices. But this time I've a startling reason—I want 10 men in every township in the county to own and operate a Galloway Engine—I've decided to double my factory capacity by increasing the sales twice and sell two where I formerly sold one—this calls for unusual values—hence, the greatest offer I have ever made. I can save you from \$25 to \$300 on an engine according to the H. P. needed. It doesn't matter what sized engine you want I've got the one to fit your wants and do more work and better work at less actual cost than any other engine in the world. Write at once for full information of the Greatest Offer Ever Made To American Farmers—don't delay but send me your name and address now, before you do another thing. Let me prove to you in cold facts why I can put \$25 to \$300 in your pocket.

Other Prices In Proportion



No Such Quality in any engine—no matter what price you pay—the Galloway price saves you \$25 to \$300



30 Days FREE Trial

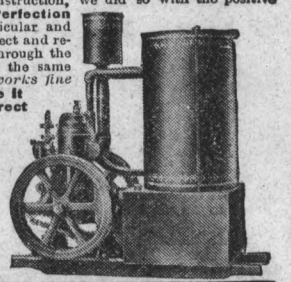
Pump Jack \$3.95

WM. GALLOWAY COMPANY
Wm. Galloway, Pres.
645 Galloway St., Waterloo, Ia.

Be A Power Owner Talk It Over With Your Wife

When we adopted our present design of engine construction, we did so with the positive knowledge that we were right in all our convictions—the Perfection kerosene portable engine is standard in every particular and detail. In theory and practice, this engine is absolutely correct and reliable. The Perfection draws the kerosene in a light mist through the carburetor, discharges it into the cylinder vaporized, and having the same energy as gasoline. Kerosene will start in a cold cylinder and works fine in a hot one. Try this Perfection engine FREE for 15 days—see it work with your own eyes—call on your dealer today or write us direct and receive our big Free Engine Book.

Free Information Bureau If you are in doubt about the kind of engine to buy, or the quantity of power you require for the amount of work to be done, simply write your questions on a postcard and mail it to our Chief Consulting Engineer, and your questions will all be answered absolutely free. Our staff of mechanical, marine and stationary engineers and designers will tell you everything you wish to know about any engine made. Before you buy any make of engine, write for free information. Let our engineers tell you how to make a cheap transmission lay-out that will help you to run several machines at one time with a single engine. Address your postal like this:—
**CHIEF CONSULTING ENGINEER, 224 Second Ave.,
CAILLE PERFECTION MOTOR COMPANY, Detroit, Mich.**



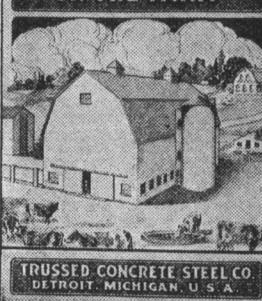
\$225 an Acre from Potatoes

Early potatoes are one of the best-paying crops raised in Southern Alabama, Western Florida, Tennessee and along the Gulf Coast. Good prices are always obtainable and demand for same beyond the supply. Read what a farmer at Summerdale, Ala., has to say on this crop:

"My yield of salable potatoes this year, per acre, was 150 bushels, which sold readily at \$1.50 per bushel, this being the first crop on the land. I followed this crop with sweet potatoes and sweet corn and then planted cow peas. I raised three crops on the land in one year, all of which brought good prices."

Sweet potatoes produce big returns and are usually planted after Irish potatoes have been dug. Two to three hundred bushels an acre are produced and bring from 50 cents to \$1.75 per bushel. Let me send you our illustrated booklets and learn what can be done in a country where fertile land can be purchased cheaply and where there are 312 working days a year. Low round-trip fares 1st and 3rd Tuesdays each month.
G. A. PARK, Gen'l Imm. and Ind'l Agt., Louisville & Nashville R. R., Room 256 Louisville, Ky.

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Complete designs of modern concrete silos; dairy, sheep and hog barns; farm houses, garages; ice, milk and hen houses; root, fruit and vegetable cellars; fences, tanks, cisterns, troughs, culverts, etc. Sent free, if you will write us about your proposed buildings.

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Write us about your building plans and ask for free book "Hy-Rib and Concrete on the farm."

**TRUSSED CONCRETE STEEL COMPANY,
688 Trussed Concrete Building. Detroit, Michigan.**

600,000 HOMES



36 Tulips 5 Cts.
A RARE BARGAIN.

I got these splendid Tulips in Holland at a big sacrifice, and may not be able to repeat the offer. Now is the time to buy and plant. Send 30c today for Magazine and 36 bulbs, or \$1.50 for 6 lots. Club with friends. Money back if not pleased.
GEO. W. PARK, Box 8 LaParc, Pa.

are made happier the year 'round by Park's Floral Magazine. Oldest and best floral monthly in the world. 41st year. Illustrated. Bright and Marigold.

SEND 25c TO-DAY for the Magazine 3 years on trial. Add 5c (30c in all), and I'll mail you 36 Fine Hardy Tulips, worth 75 cents; single and double, all colors; also culture. Plant now for a glorious big bed of Early Spring flowers to brighten your home and to surprise your neighbors. Last for years.

It is understood that the agents referred to have been repudiated by the Indiana nursery and, as they had not taken out licenses as dealers in nursery stock, they had no authority to sell trees in Michigan.

875,000 FRUIT TREES

At Wholesale Prices. Every tree our own growing, fresh dug, true to name, the best trees money can buy, grown from bearing orchards. No scale. Personal attention given each order. Everybody write for free illustrated catalogue. Established 28 years. **2 APPLE TREES, 1 McIntosh and 1 Bannan, sent postpaid, for 25 cts.**
MALONEY BROS. & WELLS CO., Box 12 Dansville, N. Y.

Time to Plant will soon be here. We sell direct to planter at lowest prices for the best stock. Apple and Cherry Trees 8c. Peach 4c and up. Send for Catalogue, its valuable to you. **ERNST NURSERIES, Box 2, Moscow, O.**

APPLE TREES—ALL KINDS Trees and Plants. Prices reasonable. Salesmen wanted. **MITCHELL'S NURSERY, Beverly, O.**

CHOICE SEED WHEAT.

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

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

MARKETS

DETROIT WHOLESALE MARKET.

October 6, 1911.

Grains and Seeds.

Wheat.—Wheat prices have experienced many fluctuations during the past week, the range, however, being slightly above that of the previous week. Traders appear to be somewhat confused as to the real condition of the market. Receipts are piling up in Chicago and Minneapolis and also in Winnipeg. The rains early this week delayed marketing and was a slight bullish influence in the deal. In the Canadian northwest bad weather is doing damage to the unthreshed fields. The war situation in Europe has had a bullish influence but this news will not affect the trade as much as if Russia had a large crop. Frosts are reported in the Argentine. Mills are using a considerable amount of cash grain to be manufactured into flour and there is a brisk demand for the manufactured product. The strength in corn is one of the leading bullish factors of the trade at the present time. No. 2 red wheat was selling on Detroit markets a year ago at 98c per bu. Quotations for the past week are:

	No. 2	No. 1		
	Red.	White.	Dec.	May.
Thursday	93 1/2	90 1/2	99 1/2	\$1.04 1/2
Friday	94	91	1.00	1.05
Saturday	93 1/2	90 1/2	99 1/2	1.04 1/2
Monday	94	91	99 1/2	1.04 1/2
Tuesday	93 1/2	90 1/2	99 1/2	1.04 1/2
Wednesday	93 1/2	90 1/2	99 1/2	1.04 1/2

Corn.—This grain continues to advance and with the unfavorable weather conditions in the corn belt, there is no reason why the cereal will not only maintain its present position, but will also advance to a higher level. Floods in many of the western states are reported to be spoiling the ears in the shock which will greatly decrease the amount of No. 1 corn. In the local market there is a good demand for corn and nobody desires to sell. One year ago No. 3 corn was quoted at 53c per bu. Quotations for the past week are as follows:

	No. 2	No. 3		
	Red.	White.	Dec.	May.
Thursday	70 1/2	71 1/2	71 1/2	71 1/2
Friday	70 1/2	71 1/2	71 1/2	71 1/2
Saturday	70 1/2	71 1/2	71 1/2	71 1/2
Monday	70 1/2	71 1/2	71 1/2	71 1/2
Tuesday	71	72	71 1/2	71 1/2
Wednesday	71 1/2	72 1/2	71 1/2	71 1/2

Oats.—This trade continues firm with quotations slightly advanced over those of last week. There is a good demand on the local market which appears to be true all over the country. Dealers do not think that prices, much lower than the present basis, will be seen the coming winter. One year ago the price for standard oats was 35 1/2c per bu. Quotations for the week are:

	Standard	No. 3		
		White.	Dec.	May.
Thursday	49	48 1/2	49 1/2	49 1/2
Friday	49 1/2	49	49 1/2	49 1/2
Saturday	49 1/2	49	49 1/2	49 1/2
Monday	49 1/2	49	49 1/2	49 1/2
Tuesday	49 1/2	49	49 1/2	49 1/2
Wednesday	49 1/2	49 1/2	49 1/2	49 1/2

Beans.—Prompt beans are ruling on the same basis as a week ago while October option has advanced. Unfavorable weather in harvesting the bean crop should be an influence for higher values since a large percentage of the crop will be damaged, thus reducing the supply. Quotations for the week are:

	Oct.	Nov.		
Thursday	\$2.12	\$2.10	Oct.	Nov.
Friday	2.12	2.10	2.12	2.10
Saturday	2.12	2.10	2.12	2.10
Monday	2.12	2.10	2.12	2.10
Tuesday	2.17	2.15	2.17	2.15
Wednesday	2.20	2.18	2.20	2.18

Clover Seed.—There is no change in quotations from a week ago, the market ruling firm with a fair amount of activity, considering, of course, the small offerings from farmers. Quotations are as follows:

	Oct.	Alsike.		
Thursday	\$12.00	\$10.50	Oct.	Alsike.
Friday	12.00	10.50	12.00	10.50
Saturday	12.00	10.50	12.00	10.50
Monday	12.00	10.50	12.00	10.50
Tuesday	12.00	10.50	12.00	10.50
Wednesday	12.00	10.50	12.00	10.50

Rye.—Another advance of 4c is noted in the rye deal. The grain is scarce with a fair demand. Cash No. 2 is quoted at 99c per bu.

Timothy Seed.—The present price for this seed is the highest known in the history of the market. Prime spot sold in the Detroit market Tuesday at \$7 per bushel.

Flour, Feed, Potatoes, Etc.

Flour.—There is a brisk demand for flour, with prices unchanged.

Clear \$3.90

Straight 4.10

Patent Michigan 4.75

Ordinary Patent 4.40

Feed.—Bran has advanced another dollar this week. Other feeds are steady. Carlot prices on track are: Bran, \$27 per ton; coarse middlings, \$29; fine middlings, \$32; cracked corn, \$30; coarse corn meal, \$30; corn and oat chop, \$28 per ton.

Hay and Straw.—The market continues steady for all grades of hay, while straw is higher. Quotations: No. 1 timothy, \$20@20.50; No. 2 timothy, \$18.50@19; clover, mixed, \$18@19; rye straw, \$8@8.25; wheat and oat straw, \$7.50@8 per ton.

Potatoes.—There has been general improvement in the late potato crop and prices are declining. The deal is easy. Average receipts are selling around 60c per bu. in car lots on track. Last week quotations were 90c.

Provisions.—Family pork, \$19@20; mess

pork, \$17.50; medium clear, \$18@19; smoked hams, 15c; shoulders, 10c; picnic hams 9c; bacon, 13@14 1/2c; pure lard in tierces, 10 1/4c; kettle rendered lard, 11 1/4c per lb.

Dairy and Poultry Products.

Butter.—Both creamery and dairy butter advanced a cent since last week. Demand continues steady and supplies are decreasing. The market is firm at the new figures. Quotations: Extra creamery, 27 1/2c; firsts, do., 26 1/2c; dairy, 19c; packing stock, 18c per lb.

Eggs.—There is no change in quotations but demand brisk and offerings are limited. Fresh receipts, case count, cases included, are now quoted at 21c per doz.

Poultry.—Broilers are a shade lower. Other kinds steady. The market is easy owing to the liberal supply. Prices are: Live—Hens, 11@12c; old roosters, 8c; turkeys, 14@15c; geese, 8@9c; ducks, 12@13c; young ducks, 14@15c; broilers, 12 1/2@12c per lb.

Cheese.—Michigan, old, 17c; Michigan, late, 15 1/2@16c; York state, new, 16@16 1/2c; Swiss, domestic block, 19@21c; cream brick, 15@16c.

Veal.—Market steady. Fancy, 11@12c; choice, 8@9c per lb.

Fruits and Vegetables.

Cabbage.—Lower. Selling at \$1.75 per bbl. for home-grown.

Pears.—75c@1 per bu for average offerings.

Peaches.—Market is about steady with last week. Quotations: A. A., \$2; A., \$1.50@1.75; B., 90c@1 per bu.

Apples.—Growers are still holding the market down by marketing their poor stock. Average offerings are going at 50@75c per bu.; Snows are selling at \$2.50 per bbl.

From Farmers' Wagons on Detroit Eastern Market.

There were fewer wagons on the market Wednesday morning than usual, which was probably accounted for in part by the storm on the day previous. The fruit and produce as a consequence sold more briskly than when the offerings were more plentiful. Potatoes have taken a decided drop and are now selling at 80c per bu. Cabbage is coming in quite plentifully and quoted at 40c; egg plant, 30@40c; onions are selling around \$1 per bu; string beans, 50c; turnips, 35c; celery, 20@25c per bunch; watermelons, 5@10c each. Grapes are offered moderately and quoted at 20c per 8-lb. basket and 75@85c per bushel basket. Peaches were scarce and quotations ranged from \$1 for the poorest to \$2.50 for the best; pears were quoted at 50c@ \$1 per bu; apples were not offered very plentifully and were quoted at from 75c @1.40 per bu. Hay is quoted at from \$20 @25, according to quality. There were more loads of hay on the market Tuesday morning than has been seen any morning this fall.

OTHER MARKETS.

Grand Rapids.

Dealers report a quiet potato market with prices to farmers ranging from 40 @45c, and they are looking for the market to go 5c lower. Late potatoes are turning out better than was expected. Not many apples are moving as yet and the price offered for good winter varieties is around \$1.50 per barrel for the fruit. The egg market is steady at 20c. Dairy butter at 21c. Live chickens range from 9@10c. White beans, machine screened, are quoted at \$1.90, hand-picked at \$2.10. Beans that remained unharvested in the fields have been badly damaged by wet weather.

Chicago.

Wheat.—No. 2 red, 95 1/2@98c; Dec., 97 1/2c; May, \$1.03 1/2 per bu.

Corn.—No. 2, 69 1/2@70c; Dec., 64 1/2c; May, 65 1/2c per bu.

Oats.—No. 2 white, 48 1/2c; Dec., 47 1/2c; May, 50 1/2c.

Barley.—Malting grades, \$1.05@1.25 per bu; feeding, 75@95c.

Butter.—With supplies running lighter than had been anticipated, and a continuance of a rather brisk demand, the market has developed considerable strength. Creameries have advanced a full cent since this time last week, while dairies are quoted 1 1/2c higher. Creameries, 22 1/2@27 1/2c; dairies, 20 1/2@25 1/2c per lb.

Eggs.—No change in conditions surrounding this market. Ordinary qualities are plentiful and barely steady at former values. Fancy stock in limited supply and very firm. Quotations: Prime firsts, 20 1/2c; firsts, 19c; at mark, cases included, 15@18c per dozen.

Potatoes.—This week opened with offerings showing a decrease of over 80 cars from the corresponding days of last week, producing an undertone of firmness which resulted in Michigan and Wisconsin stock recovering a small part of last week's heavy decline. Michigan stock is now quoted at 63@65c per bu; Wisconsin, 60@62c; Minnesota, 68@70c.

Beans.—Choice pea beans have made another good advance. Prices on all grades are being well maintained. Choice hand-picked pea beans are quoted at \$2.28@2.35 per bu; prime, \$2.17@2.21; red kidneys, \$2.75@3 per bu.

Hay and Straw.—Hay is firm at an advance of \$1 per ton on all grades except straight clover. Straw firm at unchanged figures. Quotations: Choice timothy, \$23.50@24.50 per ton; do., No. 1, \$21.50@22.50; do., No. 2 and No. 1 mixed, \$19.50@20.50; do., No. 3 and No. 2 mixed, \$14 @18; clover, \$10@14; do., No. 2 and no grade, \$5@12; rye straw, \$8.50@9; oat straw, \$7@7.50 per ton; wheat straw, \$5 @5.50 per ton.

New York.

Butter.—Creamery specials are 1 1/2c higher, while other grades have advanced proportionately. Market firm. Creamery specials are quoted at 30c per lb; extras, 29c; firsts, 25 1/2@27 1/2c; seconds, 23 1/2@25c; thirds, 21 1/2@23c.

Eggs.—Firm, with prices generally

showing a 1c gain. Fresh gathered extras, 27@29c; extra, firsts, 24@26c; seconds, 18@20c; western gathered whites, 23@28c per dozen.

Poultry.—Dressed. Quiet; young turkeys and broilers quoted lower. Turkeys 10@18c; do., young, 25c; fowls, 10@17c; western broilers, 12@19c. Alive—Quiet and slightly lower except on turkeys. Western spring chickens, 14c; fowls, 13 1/2 @15c; turkeys, 15c per lb.

Boston.

Wool.—There has been a slight revival of activity in wool during the past week. Demand for territory stock was good, with prices remaining steady. A slight falling off is noted in the sale of fleece wools. Trade conditions among clothing dealers is improving. Following are the leading domestic quotations for the week: Ohio and Pennsylvania fleeces—Delaine washed, 30c; XX, 28c; fine unmerchantable, 22@23c; 1/2-blood combing, 25 1/2@26c; 3/4-blood combing, 25c; 1/4-blood combing, 24@24 1/2c; delaine unwashed, 25c; fine unwashed, 21c. Michigan, Wisconsin, New York fleeces—Fine unwashed 19@20c; delaine unwashed, 23@24c; 1/2-blood unwashed, 24 1/2@25c. Kentucky, Indiana and Missouri—3/4-blood, 25c; 1/4-blood, 23 1/2@24c.

Elgin.

Butter.—Market firm at 27 1/2c per lb., which is 1c above last week's quotation. Output for the week, 720,300 lbs., as compared with 739,300 lbs. for the previous week.

THE LIVE STOCK MARKETS.

Buffalo.

October 2, 1911.

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

Receipts of stock here today as follows: Cattle, 190 cars; hogs, 100 double decks; sheep and lambs, 80 double decks; calves, 1,400 head.

With 190 loads of cattle on the market here today, and 30,000 reported in Chicago, and being Hebrew holiday, known as Yom Kippur, our market on all grades of cattle, except the extreme tops, sold strong 15@25c per cwt. lower, and in many instances 25@40c lower. A few loads of top cattle sold steady with last week. There was not a single Hebrew buyer on the market here today, and the market was slow and draggy from start to finish.

We quote: Best 1,400 to 1,600-lb. steers \$7.60@7.75; good prime 1,300 to 1,400-lb. do., \$7@7.25; do. 1,200 to 1,300-lb. steers, \$6.50@7.25; best 1,100 to 1,200-lb. shipping steers, \$5.85@6.25; medium butcher steers 1,000 to 1,100, \$5.10@5.60; light butcher steers, \$4.50@5; best fat cows, \$4.25@4.75; fair to good do., \$3.50@4; common to medium do., \$2.50@3; trimmers, \$1.75 @2.50; best fat heifers, \$5.25@5.75; good do., \$4.75@5.25; fair to good do., \$4@4.75; stock heifers, \$3@3.25; best feeding steers, dehorned, \$4.50@4.75; common feeding steers, dehorned, \$3.50@4; stockers, all grades, \$3.25@3.50; prime export bulls, \$5@5.25; best butcher bulls, \$4.25@4.75; bologna bulls, \$3.25@3.75; stock bulls \$3.25@3.75; best milkers and springers, \$5@6; common to good do., \$2.50@3.5.

Today's hog market ruled fairly active at the prices; the good quality yorkers, mixed and mediums going mostly at \$7 @7.05, with the common grades in these weights ranging on down to around \$6.75. The market was stronger on pigs; the bulk of the good kind going around \$6.40 with a few strong weights up to \$6.50. The light weight pigs sold around 5c per pound. The good kind of rough sows sold mostly at \$5.75; stags, \$5@5.50. Trade is ruling slow on the commoner grades, and we advise a good margin, as a good many of these are showing heavy shrinkage.

The sheep and lamb market was active today at the prices. Most of the choice lambs sold from \$6.65@6.75. Wethers from \$4.10@4.35. Look for a shade lower prices for the balance of the week; everything about sold tonight.

We quote: Best spring lambs, \$6.65@6.75; wethers, \$4.10@4.35; cull sheep, \$1.50 @2.50; bucks, \$2.50@2.75; yearlings, \$4.50 @4.75; handy ewes, \$3.75@4; heavy ewes, \$3.50@3.75; veals, choice to extra, \$10 @10.25; fair to good do., \$8.50@9.50; heavy calves, \$4@6.

Chicago.

October 2, 1911.

Cattle. Hogs. Sheep.

Received today 30,000 23,000 45,000

Same day last year.....30,346 24,451 66,160

Received last week.....58,937 124,146 157,677

Same week last year.....70,316 84,037 203,193

The close of last week found the poorer classes of cattle selling 10@15c lower than a week earlier, while the choice class were largely 15c higher. Receipts of western range cattle this season to the close of the week were 106,700 head, compared with 171,900 a year ago, and except the better lots of westerns, the market averaged last week 15 to 20c lower than a week earlier. The cattle market today was depressed for the cheaper kinds by the arrival of around 13,000 western rangers, the largest run of the year. Fat beefs were good sellers, but others were slow and reported 10@15c lower. A late sale was made of 44 head of fancy 1,532-lb. branded Hereford steers that were fed in Missouri at \$8.35. Hogs are 5@10c higher today, with a small supply and an active demand, sales ranging at \$5.80@6.90, the largest rise being in prime lots. Pigs are numerous, and last week's hog receipts averaged only 215 lbs., this comparing with 241 lbs. three weeks earlier and 264 lbs. a year ago. A week ago hogs sold at \$6.35@7.10. Pigs weighing 110 lbs. and under go at \$4.20@5.30 and selected lots weighing 100 to 130 lbs. at \$5.40@6.30. Sheep and lambs are steady for the better class, others ruling slow. Lambs declined last week largely 25c and sheep 25@50c. Lambs are selling

at \$4@6; wethers at \$3.75@4.25; ewes at \$2@3.75; bucks at \$2.50@3 and yearlings at \$3.90@4.60. Feeders pay \$5.30@5.40 for most of their lamb purchases, extreme sales being at \$4.50@5.50. Feeding wethers go at \$3.25@3.70 and feeder yearlings at \$3.85@4.50.

Cattle were marketed much too unevenly last week, country shippers crowding 31,551 head in the stock yards Monday, while on other days supplies were quite moderate. The natural result was a break of 10@15c in the great bulk of the Monday offerings, followed by quick recoveries later in the week, although by Thursday plain cattle sold slowly at weak values. On Wednesday a sale was made of 15 prime 1,584-lb. Shorthorns at \$8.25, which was a dime higher than any transaction the preceding week, and choice beefs were strong at \$7.70@8.15, with only moderate offerings. The aggregate receipts of cattle for the week were smaller than a week earlier or a year ago, and even the fair to middling class sold well, despite the restricted consumption of beef due to its dearthness. Desirable yearlings went at \$7@8, and no really good steers were bought under \$7, export steers being quoted at \$6.50@7.10, while the lower class of grass-fed native steers went for \$4.75@5.75. A large share of the steers offered brought \$5.75@7.75, there being a good trade on Wednesday in fat lots at \$7.80@8.15. Local packers have been large buyers at \$6@7, and butchering lots of cows and heifers had a free outlet at \$3.30@7, with not many offerings good enough to sell above \$6. Cutters went at \$2.75@3.25, canners at \$1.75@2.70 and bulls at \$2.75@5.75, while calves sold at \$3.50@9.65, the best vealers being active. The stocker and feeder trade showed a good deal of life, although scarcity of the best class of these cattle and their dearthness checked trade considerably. Stockers sold at \$3.50@5.25 and feeders at \$4.50@5.75, and a sale was effected of 147 prime stock calves that averaged 370 lbs. at \$6. Western range cattle were in fairly large supply and in good demand, steers selling at \$3.75@7.15 and cows and heifers at \$3@6, with stock and feeding steers going at \$3.75@5.25. Milk and springers were purchased at \$30@70 per head, the demand centering in good to choice forward springers and top-py milch cows. The beef cattle market promises well for the better class for some months.

Hogs have been marketed freely for another week, with an extremely large showing of pigs, especially little ones, these coming from sections where sickness prevails among the pigs. Numerous sick pigs arrived, and many well ones came, too, farmers fearing that they would be affected if held longer. The packers were as bearish in sentiment as ever, and prices reached the lowest levels touched since last June, with pigs going at an enormous discount from prices prevailing for matured hogs. About the only noteworthy change in the market was the larger eastern shipping demand at times, this being regarded as an indication that the east has fewer hogs in the home territory to market. Doves of hogs averaging 180 to 250 lbs. were usually the highest sellers, and heavy old sows sold lowest of anything except little pigs. On different days hogs were allowed to accumulate extensively in the hands of sellers, and nearly 9,000 were carried over Tuesday night, thereby swelling the next day's offerings to uncomfortably large numbers. The large numbers of pigs marketed has caused the average weight of the hogs to fall to the lightest since March, 1910. A year ago the proportion of pigs received was very small.

Sheep and lambs have been marketed liberally for another week, causing declines in prices, despite a very good general demand, including large buying of feeders from the ranges. Lambs continued the favorite sellers and brought the usual large premium over yearlings and sheep, with liberal supplies of mutton and feeding lambs from Idaho. The percentage of native sheep and lambs offered continued very small, and many of them failed to show sufficient fat, causing unsatisfactory prices. There was a good call for breeding ewes, and more could have been sold than were offered, buyers paying \$4@4.50 per 100 lbs. Reports from various quarters say that farmers in sections where there is a short hay crop have bought a good many feeders and that these will come back on the market after being warmed up. This is done every year, usually with very unsatisfactory results to the men who carry on the business. Many Michigan men are staying out because of their losses last winter.

Horses must be attractive in appearance to attract favorable attention from buyers at the present time, and others are neglected and hard to sell, even after concessions are made in prices. The demand runs mainly on business horses, although the call for feeders has started up, these horses being wanted at \$140@265 per head. Wagoners are selling on the basis of \$160@200, a few extra ones selling all the way up to \$250. Choice, heavy drafters are in demand at \$225@325, with not many prime enough to sell as high as \$275, while light weight ones are taken at \$175@220.

Pastures in southwestern Wisconsin are reported in fine condition, while farmers have good corn and other crops, as well as plenty of steers and fair numbers of hogs, most of the hogs being young and healthy. They also own fair numbers of native lambs.

Texas cattle feeders are deliberating the question whether to feed or not the coming winter season, many of them looking upon ruling prices for feeder cattle as unreasonably high. They also regard feed prices as too high, and after last year's painful experience in cattle feeding operations they are slow about trying it again. The mills are holding meal and hulls very high.

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.
October 5, 1911.

Cattle.

Receipts, 984. Market steady at last week's prices.

We quote: Best steers and heifers \$5.75@6.15; steers and heifers, 1,000 to 1,200, \$5@5.50; steers and heifers, 800 to 1,000, \$4.50@5; grass steers and heifers that are fat, 800 to 1,000, \$4.50@5; do. 500 to 700, \$3.75@4.50; choice fat cows, \$4@4.50; good fat cows, \$3.75@4; common cows \$3@3.25; canners, \$1.50@2.75; choice heavy bulls, \$3.75; fair to good bolognas, bulls, \$3@3.50; stock bulls, \$3@3.50; choice feeding steers, 800 to 1,000, \$4.50@4.75; fair do. 800 to 1,000, \$4.25@4.50; choice stockers, 500 to 700, \$4@4.40; fair stockers, 500 to 700, \$3.50@3.75; stock heifers, \$3@3.50; milkers, large, young, medium age, \$4@6; common milkers, \$2.50@3.50.

Roe Com. Co. sold Parker, W. & Co. 9 butchers av 586 at \$3.85; to Goose 6 do av 425 at \$3.50; to Hammond, S. & Co. 3 bulls av 1,133 at \$3.85, 1 do weighing 730 at \$3.25, 1 cow weighing 1,050 at \$4, 1 do weighing 870 at \$3, 1 do weighing 750 at \$2.25; to Regan 4 heifers av 535 at \$3.75; to Fry 5 butchers av 744 at \$4.50, 4 do av 745 at \$4.50, 1 do weighing 630 at \$4; to Parker, W. & Co. 4 cows av 837 at \$2.75, 10 butchers av 980 at \$3.75; to Goose 9 do av 480 at \$3.50, 36 do av 600 at \$3.90; to Sullivan P. Co. 6 cows av 1,063 at \$4, 2 do av 925 at \$4.

Haley & M. sold Hammond, S. & Co. 2 cows av 1,060 at \$3.90, 1 heifer weighing 580 at \$4.25, 1 cow weighing 950 at \$2.75, 1 do weighing 1,050 at \$3; to Sullivan P. Co. 3 steers av 973 at \$4.90, 6 butchers av 636 at \$4.15, 1 cow weighing 1,050 at \$3.50, 2 heifers av 355 at \$3, 3 butchers av 525 at \$4; to Parker, W. & Co. 3 do av 416 at \$3.40, 7 do av 541 at \$3.90; to Breitenbeck 3 steers av 850 at \$4.65, 1 cow weighing 810 at \$3.50; to Mich. B. Co. 1 bull weighing 790 at \$3.50; to Goose 7 butchers av 611 at \$3.65, 2 do av 750 at \$3.25, 2 heifers av 750 at \$4; to Bresnahan 3 cows av 910 at \$2.75, 7 cows av 891 at \$2.75; to Applebaum 4 butchers av 785 at \$3.75; to Parker, W. & Co. 8 do av 506 at \$3.65, 7 do av 585 at \$4; to Marx 2 cows av 910 at \$3.65, 5 steers and heifers av 670 at \$4.60; to Rattkowsky 2 cows av 1,005 at \$4; to Lachalt 8 steers av 850 at \$4.85.

Bishop, B. & H. sold Hammond, S. & Co. 1 bull weighing 1,300 at \$3.75, 2 do av 875 at \$3.50, 5 canners av 834 at \$2.60, 1 do weighing 1,000 at \$3.25, 1 cow weighing 940 at \$4; to Gerisch 21 steers av 1,188 at \$6; to Parker, W. & Co. 1 cow weighing 1,280 at \$4.75, 4 do av 775 at \$3; to Heinrich 27 steers av 1,030 at \$5.25; to Sullivan P. Co. 9 heifers av 611 at \$3.75, 2 cows av 650 at \$2.50, 2 do av 780 at \$2.85; to Thompson Bros. 4 butchers av 762 at \$4.40, 6 do av 570 at \$3.70, 11 do av 1,071 at \$5; to Sullivan P. Co. 1 bull weighing 1,180 at \$4, 3 do av 957 at \$3.75, 5 heifers av 600 at \$3.15, 9 butchers av 770 at \$4.50, 4 cows av 910 at \$3.75, 1 bull weighing 670 at \$3.75, 1 cow weighing 900 at \$3; to Parker, W. & Co. 4 cows av 770 at \$2.75, 1 do weighing 720 at \$3.50, 1 bull weighing 820 at \$3.50; to Mich. B. Co. 11 steers av 1,072 at \$5; to Regan 6 heifers av 521 at \$3.25; to Hammond, S. & Co. 1 bull weighing 940 at \$3.60, 6 cows av 1,033 at \$3.60, 6 steers av 866 at \$5.25, 2 do av 740 at \$4.50, 8 cows av 963 at \$3.25, 5 do av 940 at \$2.75; to Sullivan P. Co. 9 butchers av 794 at \$4.40; to Austin 8 feeders av 780 at \$4.35; to Sullivan P. Co. 4 cows av 1,017 at \$3.75, 2 canners av 775 at \$2.50; to Thompson Bros. 2 bulls av 1,100 at \$3.75; to Parker, W. & Co. 4 cows av 875 at \$2.75, 2 do av 990 at \$3.75, 1 bull weighing 880 at \$3.75, 2 cows av 775 at \$2.75, 1 heifer weighing 840 at \$5, 10 butchers av 670 at \$3.75; to Hammond, S. & Co. 16 do av 790 at \$4.30.

Spicer & R. sold Breitenbeck 14 cows av 965 at \$3.65, 30 steers and heifers av 809 at \$4.75; to Bresnahan 9 heifers av 573 at \$3.50, 1 cow weighing 880 at \$3.25, 1 do weighing 930 at \$2.25, 11 butchers av 561 at \$3.40, 2 canners av 825 at \$2.75, 2 do av 925 at \$2.75, 3 heifers av 607 at \$3.40; to Heinrich 9 butchers av 655 at \$4.25, 2 cow and bull av 905 at \$4; to Hammond, S. & Co. 4 cows av 962 at \$3; to Goose 6 bulls av 777 at \$3.50; to Otter 2 feeders av 805 at \$4, 27 stockers av 620 at \$3.75, 3 feeders av 837 at \$4; to Mich. B. Co. 2 bulls av 1,180 at \$4, 3 cows av 1,083 at \$4; to Kull 4 bulls av 655 at \$3.50, 1 steer weighing 870 at \$4.25; to Thompson Bros. 7 heifers av 494 at \$3.60; to Sullivan P. Co. 1 bull weighing 1,300 at \$4; to Mich. B. Co. 1 steer weighing 1,200 at \$5.50, 14 butchers av 843 at \$4.25.

Rosenheim sold Mich. B. Co. 1 cow weighing 850 at \$3, 1 do weighing 1,360 at \$5, 1 do weighing 1,020 at \$4.

Veal Calves.

Receipts, 552. Market strong at last week's prices. Best, \$9@9.50; others, \$4@8.75; milch cows and springers steady. Bishop, B. & H. sold Nagle P. Co. 20 av 160 at \$9, 12 av 160 at \$9, 4 av 190 at \$5, 6 av 210 at \$4.50, 6 av 150 at \$8.50; to Goose 3 av 130 at \$9; to Friedman 3 av 130 at \$8.50, 4 av 155 at \$8; to McGuire 3 av 180 at \$9.50, 2 av 135 at \$7, 6 av 150 at \$9.50, 7 av 140 at \$9.25, 2 av 140 at \$8.50, 3 av 155 at \$9.50, 2 av 140 at \$9.50, 6 av 145 at \$9.50, 1 weighing 170 at \$9.50; to Hammond, S. & Co. 6 av 165 at \$9.50, 1 weighing 130 at \$7, 2 av 200 at \$6, 26 av 150 at \$9; to Burnstone 8 av 145 at \$9.50, 7 av 150 at \$9.25.

Spicer & R. sold Mich. B. Co. 6 av 165 at \$9.25, 5 av 145 at \$8.50, 17 av 125 at \$8.50; to Thompson Bros. 4 av 95 at \$5.50, 5 av 120 at \$5.50; to Rattkowsky 3 av 180 at \$6; to Goose 4 av 250 at \$4.50; to Kull 4 av 150 at \$8, 3 av 155 at \$9, 4 av 115 at \$8.50; to Mich. B. Co. 26 av 160 at \$8.75.

Roe Com. Co. sold Mich. B. Co. 6 av 150 at \$9.

Sheep and Lambs.

Receipts, 5,507. Market steady at last week's prices. Nagle Packing Co. started buying again this week. Best lambs, \$6; fair lambs, \$5.50@5.75; light to common lambs, \$4@4.50; fair to good sheep, \$3@3.25; culled and common, \$1.50@3.

Haley & M. sold Barlage 7 sheep av 80 at \$2, 32 do av 100 at \$3.25, 15 lambs av 70 at \$5.75; to Mich. B. Co. 60 lambs av 70 at \$6; to Sullivan P. Co. 20 do av 50 at \$4.50; to Youngs 182 do av 75 at \$5.55; to Eschrich 10 sheep av 96 at \$2.75, 31 lambs av 50 at \$4.25, 7 do av 60 at \$4.25, 12 sheep av 90 at \$3, 22 do av 70 at \$2.25.

Spicer & R. sold Mich. B. Co. 15 lambs av 65 at \$5.75, 53 do av 75 at \$5.65, 33 do av 70 at \$5.75, 52 do av 75 at \$5.80; to Newton B. Co. 198 do av 68 at \$5.75; to Sullivan P. Co. 15 do av 45 at \$4.40, 41 sheep av 65 at \$2.75, 20 do av 90 at \$2.65, 19 lambs av 50 at \$4.25, 45 do av 65 at \$5.65, 41 sheep av 110 at \$3, 37 do av 90 at \$2.90, 75 lambs av 65 at \$5.25; to Saunich 8 do av 105 at \$5; to Hammond, S. & Co. 88 do av 68 at \$5.35, 30 do av 65 at \$5.25, 27 sheep av 90 at \$2.25; to Breitenbeck 113 lambs av 58 at \$5.20; to Kull 19 do av 65 at \$5.75, 10 yearlings av 80 at \$4.25, 7 sheep av 100 at \$3.

Bishop, B. & H. sold Nagle P. Co. 11 sheep av 85 at \$2, 13 do av 105 at \$2.50, 23 lambs av 60 at \$4.50, 141 do av 75 at \$5.85, 6 sheep av 73 at \$2.50, 18 do av 107 at \$3, 17 do av 85 at \$2, 8 do av 100 at \$2.75, 4 do av 88 at \$2.75, 15 do av 55 at \$3.25, 21 lambs av 65 at \$5.75, 14 do av 72 at \$5.75, 61 do av 65 at \$5.40, 65 do av 78 at \$6, 25 do av 65 at \$4.25, 5 sheep av 108 at \$3, 40 do av 80 at \$3; to Newton B. Co. 74 lambs av 55 at \$5.25, 5 sheep av 90 at \$2, 22 do av 90 at \$3.25; to Hammond, S. & Co. 37 lambs av 65 at \$5.75, 59 do av 75 at \$5.90, 56 do av 56 at \$4.75, 13 do av 45 at \$4.50, 37 do av 73 at \$5.75, 7 sheep av 125 at \$3; to Sullivan P. Co. 20 lambs av 45 at \$3.75, 13 do av 47 at \$4, 49 do av 70 at \$6, 7 do av 80 at \$6, 9 sheep av 115 at \$3; to Mich. B. Co. 23 lambs av 55 at \$5.25, 77 do av 54 at \$4.60, 178 do av 70 at \$5.75; to Hammond, S. & Co. 24 do av 75 at \$5.75, 52 do av 55 at \$4.85; to Fitzpatrick Bros. 29 do av 70 at \$6; to Nagle P. Co. 35 lambs av 80 at \$6, 31 do av 56 at \$5, 10 do av 66 at \$5, 11 sheep av 120 at \$3.25, 28 do av 80 at \$3, 127 lambs av 75 at \$5.85, 52 do av 75 at \$5.85, 166 do av 75 at \$5.85; to Fitzpatrick Bros. 23 sheep av 115 at \$3.50; to Thompson Bros. 74 lambs av 55 at \$4.75; to Sullivan P. Co. 20 do av 55 at \$4.50, 4 sheep av 135 at \$3.

Sharp sold Sullivan P. Co. 27 lambs av 65 at \$5.35.

McLaughlin sold Newton B. Co. 18 lambs av 75 at \$5.25.

Hogs.

Receipts, 4,599. Pigs 35@40c higher than last week; others 10@15c higher. Steady with Wednesday.

Range of prices: Light to good butchers, \$6.50@6.65; pigs, \$6@6.25; light yorkers, \$6.50@6.65; heavy, \$6.50@6.60.

Bishop, B. & H. sold Parker, W. & Co. 1,715 av 170 at \$6.50, 1,520 av 180 at \$6.55. Sundry shippers sold same 510 av 175 at \$6.50.

Roe Com. Co. sold Sullivan P. Co. 47 av 200 at \$6.55, 310 av 190 at \$6.50, 24 av 140 at \$6.35.

Sundry shippers sold same 160 av 180 at \$6.50.

Haley & M. sold Hammond, S. & Co. 210 av 185 at \$6.55.

Spicer & R. sold same 360 av 180 at \$6.55, 213 av 170 at \$6.50.

VETERINARY

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

Chronic Cough—Stocking—Bone Spavin—Sweeney.—We have a five-year-old mare that has been troubled with a hacking cough for some time and her legs stock when she is kept in stable. She also has some blotches on shoulder and they must cause itching for she rubs. I have another gelding that limps behind when starting, but seems to grow less lame after he has traveled one-half mile. His hip is sweated. W. W. D., Honor, Mich.—Mix together equal parts fluid extract of buchu, fluid extract opium and fluid extract belladonna and give a tablespoonful at a dose in feed three times a day. Dissolve ½ lb. cooking soda in 1 gal. of water and apply to itchy parts of shoulder twice a day. Blister hock by using one part red iodine mercury and eight parts cerate of cantharides. These applications should be made three times a month. Apply equal parts turpentine, aqua ammonia and sweet oil to hip muscles every day or two.

Scirrhus Cord.—I have a six-year-old gelding that was castrated three years ago; lately a swelling has come in scrotum which makes him now resemble a stallion. When felt there is a hard substance very much like the cord of a stallion but much thicker. He must suffer considerable pain when bunch is pressed, or when he is driven. I also have a cow that split one of her teats by getting tangled up with a barbed wire fence. After she was hurt I managed the case as well as I could, but the end of teat closed and milk came from opening near udder. C. H. F., Marion, Mich.—Call a competent veterinary surgeon and ask him to remove tumor in scrotum and your horse will soon get well. This is not a difficult operation and unless the cord is diseased high up, he will soon get well. Your cow will never get well, unless you can stop milk coming from wound. The

wound should be stitched and artificial opening made through teat and a tube left in. These are difficult cases to cure.

Sidebone.—Have a horse that suffers from sidebone, but was always sound before June last. I would like to know if there is a remedy for such an ailment. M. W. J., Henderson, Mich.—Improper shoeing, keeping the heel high, and fast driving on hard roads is perhaps the most common causes of sidebone. Lower heels and blister sidebone by using one part red iodine mercury and eight parts lard every few days. In some cases a bar shoe applied properly relieves the horse of pain. In some cases a three-quarter shoe gives relief. Standing the horse in wet clay an hour or two a day, will make him more comfortable.

Weakness.—My four-year-old horse had a bad attack of distemper last June and when he urinates water does not come free enough; besides, he urinates too often. C. F. M., Shelby, Mich.—Give him 2 drs. iodine potassium at a dose in feed twice a day, for one week; then give ¼ oz. doses fluid extract buchu twice a day for two weeks.

Periodic Ophthalmia.—My eight-year-old mare has been troubled with sore eyes all summer, her eyes are not always sore at the same time, but alternately and both eyes are usually inflamed. Our local Vet. has been treating her with poor results. E. D. S., Charlotte, Mich.—Apply one part adrenalin and 5,000 parts water once a day; also apply a saturated solution of boric acid once a day. Give a dessertspoonful of Donovan's solution at a dose three times a day.

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SAVE-THE-HORSE



415 Dickson Bldg., Norfolk, Va., June 1, 1911. Troy Chemical Co., Binghamton, N. Y. I have used your "Save-the-Horse" on three occasions for Bone Spavin, Hog Spavin and Side Bone and have cured every case. I have not had to ask for my money back, so I want to use it again. Enclosed find check for \$5. K. F. Grant. \$5 a bottle, with binding contract to refund money. Send for COPY, BOOKLET and LETTERS from Bankers, Farmers and Business men on every kind of case. Permanently Cures Bone and Hog Spavin, Thoroughpins, Ringbone (except low), Curb, Splint, Capped Hock, Windpuff, Shoe Bull, Injured Tendons and all Lameness. No scar or loss of hair. Horse works as usual. Dealers or Express prepaid. Troy Chemical Co., 20 Commercial Ave., Binghamton, N. Y.

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Ref. to Washington Trust Company, or any bank in city

WANTED—LUMBER—1 in. to 2 in. Walnut, 1 in. to 4 in. Elm, Geo. I. McClure, 724 Chamber of Commerce, Detroit, Mich.

SHEEP.

I am in the market for a car of Breeding Ewes. J. D. S. HANSON, Hart, Michigan.

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SHADY LANE HAMPSHIRE—Magnificent lot one and 2-year old rams. Come and take your pick for \$15.00. None better. Comfort, Tyler, Coldwater, Mich.

Registered Lincoln Rams For Sale—Yearlings and lambs. also a few ewes. FRED BOURNS, Milford, Mich. 2

LEICESTER RAMS FOR SALE at reasonable prices. BRID L. ROGERS, Eaton Rapids, Mich.

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