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THE extension of the principles utilized in the automobile to fields of industrial pursuit is well known. Naturally, the greatest progress along this line has been made in cities where streets are paved and a large amount of traffic carried on. However, the progressiveness of the farmer has quickly discerned the utility of these machines for transporting the products of his farm to the town or cities.

Within a radius of 30 or 40 miles of the city of Detroit, farmers have found it profitable to deliver fruit and vegetables upon the city market, since the increased prices secured more than pays for the expense and trouble of toting the products to the city. The expense of doing this, however, is no small item in the year's account, it being a common practice of the farmers living near the 30 mile route to pay \$10 per load to have their produce delivered in Detroit. As a result of this high expense, these farmers have turned their attention to the utility of the auto truck. At the present time there are 11 machines, including automobiles fixed over so as to fit them for carrying products, doing service on the Detroit eastern market.

It was the pleasure of the writer to accompany a party on a trip from the market to a farm over 30 miles distant and back again, on a one-ton auto truck. The accompanying illustrations and the following facts were secured on this trip and from parties who have had a season's experience with the trucks. We submit them to the reader for what they are worth, knowing that many are considering the question of securing similar machines for use upon the farm, and will be interested.

The car employed had been in use on the Eastern Market throughout the present season. It had traveled about 12,000 miles. It is a double cylinder, 20 horsepower, measured according to the American League Automobile Manufacturers' rating, and 24 horsepower according to the break test. The platform was about 5½ ft. by 10 ft. and of the stake-body type. The capacity of the truck was rated at one ton. The price of this car was \$1,300 when fitted with patent cushioned tires and \$1,150 when fitted with pneumatic or solid tires.

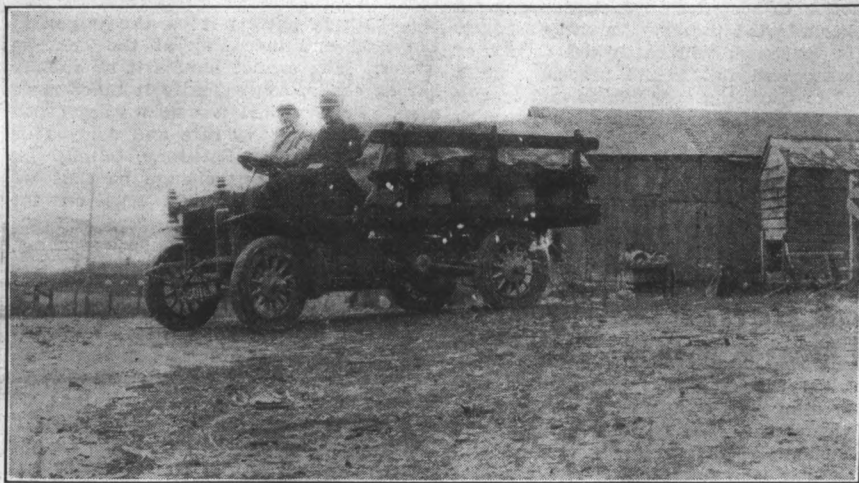
The trip in question was 64.3 miles according to the cyclometer. The actual traveling time from Detroit Eastern Market to the farm, which lies among the hills about five miles to the northwest of

THE AUTO TRUCK ON THE FARM.

the city of Rochester in Oakland county, was actually two hours and five minutes, no time was lost on the outgoing trip on account of the car. A considerable portion of the road was very good, consisting of city pavements until the city limits was reached, cement road for a few miles, six miles of Royal Oak sand, then possibly 12 or 14 miles of gravel road which was in first-class condition. The remainder was largely ordinary dirt road, much of it of a sandy nature, which, on this particular day, was wet, a condition not altogether suited to power traffic. The last six or seven miles of the journey were among the hills where steep grades were encountered, steeper, probably, than

as discovered later. Inquiry of a party who had been using the machine the past year showed that he had not failed to reach the market on a single trip this season.

The truck was loaded with fruit, consisting of 38 bushels of pears, 11½ bushels of grapes and four bushels of apples at the farm of Jacob Perry, who lives near Goodison and who has been delivering fruit on the Detroit market for the past twenty years. The truck weighed alone 3,060 pounds and with the load of fruit 6,190 pounds, making the fruit weigh 3,130 pounds, or over 50 per cent more than the rating of the car. Three persons were carried on the car besides the load,



Ready for the Trip of Thirty Miles Back to the City.

would be found in most parts of our state. In climbing these hills the truck was compelled to go over long stretches of very stony road.

The test was made on October 5, and for two weeks previous excessive rains had fallen. The dirt roads were wet and mud holes of considerable length and depth were found. We give an illustration showing the machine in one of these.

The journey back to the city took two hours and 35 minutes actual running time. We stopped once on account of the car, the supply of gasoline having become exhausted through an oversight. The tank of the machine was supposed to have been filled, when it actually had not been,

Mr. Perry, Mr. E. P. Telotte, who has been using the machine on the Detroit Eastern Market for the past season, and the writer. Our combined weights were about 500 pounds. The truck appeared to carry this load very nicely. There was apparently no shifting of the load whatever on the trip. While making the outgoing journey bundles were laid on the center of the platform and in traveling over rough places it was seldom that they would be jarred from their position, thus indicating the steadiness with which the vehicle held its load.

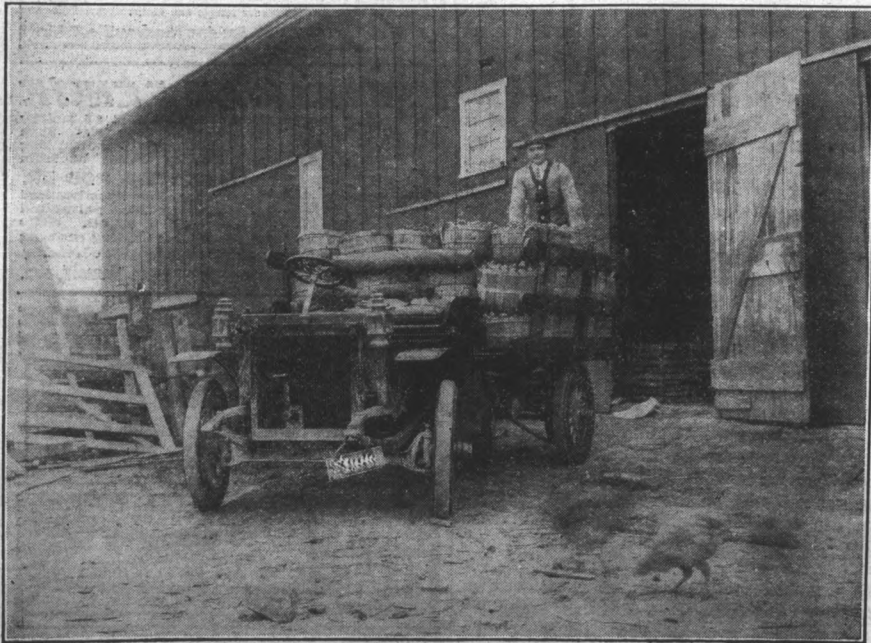
From observation on this occasion and the experience of those who have used the machine during the past year, one is

convinced with the fact that the fruit arrived in a better condition than when delivered on wagons. A little consideration will show this to be reasonable. In the first place, the fruit is on the road a much shorter time. It takes a good team eight or nine hours to cover this route, where the auto truck delivers it in two hours and thirty-five minutes. So, instead of the fruit being jarred for eight or nine hours, it is jarred in this case less than one-third the time. Then again, the rapid movement of the fruit through the air cools it. Anyone who has ridden in an auto, even on a still, warm day, knows that with a machine traveling at fifteen miles an hour, there is a stiff breeze and one feels like buttoning his coat. This breeze has the same effect upon the fruit. It has been the experience of growers that strawberries delivered on the truck, when sold beside those from the same field and of the same grade and picking, delivered on a wagon, brought higher prices, thus testifying to the condition of the fruit delivered.

An advantage which is often overlooked when considering this proposition of getting fruit to market with the auto truck, is that the farmer is enabled to watch both ends of the business. That is, he can have supervisory control over the harvesting of his fruit crops and at the same time attend to the selling side. With the auto truck he leaves the farm in the evening after supper, arriving on the market in good time to retire in the evening, sells his load early in the morning and is back home again between 9:30 and 12:00 o'clock. This enables him to look after the pickers, watch the packing of the fruit and do such other work as befalls the owner of a fruit plantation. With teams, the owner must apply his efforts to practically one end of the business alone, either that of harvesting the crop or disposing of it upon the market, leaving the other end to some subordinate.

The final question to which all propositions of this kind are put is the cost, and the question, "Can I deliver my fruit more cheaply by use of an auto truck than by the old system of using horses?" is the one most interesting to the majority of men. By as extensive an inquiry as it was possible to make, we find that an auto will regularly do the work of three teams on the route above mentioned, since a team cannot stand making

(Continued on page 432).



Putting on a 3,130-lb. Load at Fruit Farm of Mr. Perry.



There were Stretches of Muddy Roads but they Caused no Difficulty.

FARM NOTES.

A Water Supply for the House.

Is there any better way to store rain water for the kitchen sink and bathtub than in a tank in the attic? How can we have a well-water supply for closet?

SUBSCRIBER.

There is no cheaper way, which will afford fair satisfaction in use, to supply rain water to a kitchen sink and bath tub than to have a large tank in the attic. The writer has seen such a tank arranged instead of using a cistern, a galvanized steel tank being used in this case, which has a capacity of 30 barrels. The water runs into this tank automatically from the roof of the house and is discharged when the tank is full through an artificial wastepipe which prevents the water overflowing the tank. Service pipes deliver the soft water to the sink and elsewhere, as desired in the house.

For a supply of well-water under pressure, one can also use the gravity system, although what is known as the pressure system is generally considered a better way. In the pressure system, the tank is placed in the cellar or buried in the ground as desired, and the water is forced into it under air pressure which is sufficient to drive it to any part of the house desired. Many of these systems have been installed in Michigan and give universal satisfaction wherever they are installed, and while a little more expensive than the gravity system, are generally considered more satisfactory.

Preparing for the Alfalfa Crop.

I have a piece of sandy loam ground that I want to sow to alfalfa. Would it help any to get a good catch if I sowed the land to sweet clover first? Is sweet clover hay any good to feed and is it any good as a fertilizer to plow under?

B. C.

It would undoubtedly be easier to get a catch of clover on land that had first grown sweet clover, but it would not, in the writer's opinion, be profitable to sow sweet clover as a preparation for alfalfa for several reasons. First, unless the soil contained the bacteria peculiar to these plants, which are said to be identical on these legumes, the sweet clover would not succeed much better than the alfalfa without first inoculating the ground. Consequently one might as well fit the ground for alfalfa and inoculate with soil from an old alfalfa field or from a sweet clover patch, which would provide the bacteria quite as well as growing the sweet clover on the land, previous to sowing the alfalfa. Of course, if the sweet clover or any other plant were grown and plowed down as a crop for green manure, the land would be improved for alfalfa or any other crop, but if the sweet clover were to be cut for hay, as suggested, this benefit would not be derived from it.

There is considerable difference of opinion regarding the value of sweet clover hay. If it is cut early the stalks contain too much fibre, stock will be well nourished by it and will learn to like it, as attested by many who have had experience with it, especially in the south. It, however, has a peculiar odor and flavor which is not liked by stock as well as alfalfa or clover hay.

Quite a necessary preparation for alfalfa on much of our Michigan soil, is the application of lime, and wherever the crop has not been demonstrated to do well without applying lime, it would be profitable to use lime upon at least a portion of the area sown, as an experiment and determine whether the crop is benefited by it or not. The writer was unable to get a successful catch of alfalfa without the use of lime, but has apparently secured a very good stand this year on ground that was limed last year, both by sowing alone with a nurse crop and by seeding with oats. Notwithstanding the dry weather which completely burned out the clover seeded in the oats, there is a good stand of alfalfa which is making a good fall growth.

Lime and inoculation on a good dry, fertile soil are evidently the essentials required for success with the alfalfa crop in Michigan. The source of seed is also, doubtless, an important factor for success and northern grown seed should be secured if possible, especial care being taken that no weeds are brought on to the farm with it, and especially dodder, which is destructive to the crop itself. The season to sow is dependent upon the weather conditions to some extent, although, other conditions being equal, most successful alfalfa growers believe medium early spring sowing better than sowing at any other season, although good stands have been secured by mid-summer, and even by late summer seedings. With the demonstration that alfalfa

can be successfully grown in Michigan, it will be made a factor in the cropping systems of more farms than ever before, and even where it is not tried on a large scale it should be tried in an experimental way at least, since there is no other forage crop which compares with it, either in producing power or in the quality of the forage produced.

A Blower Attachment for Cutting Box.

Can you give me an idea or plan for making a small blower to put on a cutting box? My cutting box is made with knives on the shaft.

St. Clair Co.

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It would, in the writer's opinion, hardly be profitable to attempt to build such an attachment on a cutting box. If it is desired to have some arrangement which will deliver the cut fodder at a little distance from the box it would be better to arrange a mechanical carrier, something like a straw carrier, which any man of ordinary ingenuity could easily do. The blowers necessarily have to run at high speed and it takes considerable power to drive them and where the cutting box is not designed for this sort of an arrangement, it would be difficult to make one which would do satisfactory work. There are several cutting boxes and ensilage cutters of this description on the market which are advertised in the Michigan Farmer in season, and their cost is not so high but that one might better purchase a new one than to build a makeshift device of this character.

THE BEAN CROP.

Of all the crops severely tried by the peculiar weather conditions of the past season, beans have been the hardest hit, incurring not a little loss. When is the best time to plant beans? This is an open question, variously answered in practice to accord with one's convenience or his adopted theory. An early seeding, it is reasoned, will catch the drouth of summer and fail to fill properly, while the late maturing crop stands in jeopardy of prolonged autumn rains. Some years one practice proves its wisdom, then vice versa; again both or neither may give satisfaction.

In my own case the early plan was followed last spring, when a newly set cherry orchard was planted to red kidneys the last of May to give time for the crop to ripen in season to seed to rye and vetch. Though the drouth tried its destructive best, frequent cultivation saved the situation till the later rains finished the crop in fine condition and harvesting was completed the third week of September. Some beans in the neighborhood, planted late in June, were still in the ripening process when the wet weather came. Others were submerged after pulling before they could be properly secured.

A drive through the county the last days of October showed large fields of beans still standing, cultivated clean as a market garden, vines loaded with well filled pods.

The red kidney variety, on account of its greater market value, is raised greatly in excess of the white varieties in this section of the state. The color of the kidney is a matter of commercial importance as the hull is used for dyeing. Well matured and cured seed has the desired dark shade. Those gathered before the pods are dry, while the bean is still pink; never later acquire the proper tone and give the mass a mottled appearance not pleasing to the trade. There is a tendency in this variety to revert to original types and sports creep in which must be watched for and rejected. These are easily detected in the field, borne as they are on long, trailing vines, and may be discarded in pulling. Buyers look sharply for the little purple intruders, showing their disfavor by docking the price. The writer this year took special pains to select seed of fine appearance. Already hand-picked beans were resorted, looking to uniformity of shape, size, and color. The result has justified the pains by giving a very even yield with few culls, eliminating much of the tedious task of hand-picking.

Close planting, so that the growing vines form continuous rows, shading the ground, secures the largest yield and, if weeds are not present, little hoeing is necessary. But where weeds are a force to reckon with, or in an orchard, it is desirable to plant in checks for cultivation both ways.

Bean growing on a commercial basis has made such rapid strides in the county the last few years as to rival the potato in importance. Implement dealers now carry all the up-to-date machinery and the flail has given place to the steam

bean thresher. Some popular features of the crop are the ease of raising, the abundant yield, its non-perishable character, and its ever welcome and good price in market. Its presence in the farmer's storehouse represents the possibility of cash; furthermore it has added an accumulation of nitrogen to the soil, while the straw and culls are still waiting for an accounting as stock feed eventually to contribute their substance to the enrichment of the earth.

Oceana Co.

M. A. HOYT.

LILLIE FARMSTEAD NOTES.

Not in my experience in farming, nor in my remembrance, have we had so much rain during one fall as we have had this year. The weather bureau at Grand Rapids about two weeks ago reported 10 inches of rainfall since the 26th of September, and we have had three heavy rains and a snow storm since then, so there must be between a foot and 15 inches of rainfall since our first rain of September 26. The consequences are that we have made practically no progress in farming operations. My ensilage corn was planted late, and I tried out two new varieties of corn for ensilage which are later than the kind I usually grow. Consequently, I put off cutting the ensilage corn so as to catch this late variety at good advantage and at the same time not lose very much upon the earlier variety. The corn was ready to go into the silo the first week in October. That was just the time to get the largest per cent of digestible nutrients out of the crop, taking both varieties of corn into consideration. But we had so much rain that we couldn't cut the corn with a corn binder. It costs more to cut by hand, and more time is required in handling loose corn for the silo, both in putting it on the wagon in the field and unloading at the ensilage cutter. Men cannot handle it as rapidly nor as easily, consequently it takes more men. So I waited a whole week, then came another heavy rain and delayed us again. Finally, on Saturday, October 14, the ground got dry enough so that we could, by having heavy lugs on the wheels, run the corn binder, and we started it. The next Monday morning, the 16th, we began filling the silo. We had a fine day and put in a nice lot of it. Everything was working nicely but that night it rained again. An inch and one-third of water fell during one rain. We didn't cut any more corn that week. Then the soil dried enough so that we cut another day and one-half, when it rained again. We worked that way and finally finished cutting on November 2.

My acreage of ensilage corn was a little bit short this year, and then, owing to the extremely dry weather during the summer, I didn't get the growth that I ought to have had and so my silos are not quite full; still I have a good crop, probably 350 tons and it is in fairly good condition even though some of it is late. On one portion of one field I experimented in planting a smaller amount of seed to the acre. On this plot the ears got pretty ripe and were large and well developed. I husked out the better part of the corn; besides, when we couldn't work on the land at all, we husked some of the regular field corn and hauled the stalks and cut them into the silo. In this way I have the silos nearly full. We have quite a start on the corn husking now and if I can get the men I am going to finish husking the entire 30 acres by hand and then later on run the stalks into the silo and wet them as we put them in. I'll have the room in the silo to do it this year if I hold off until December and I am sure that I will get a greater feeding value out of them by handling in this way than by shredding or feeding them whole. There has been so much wet weather that the cornstalks haven't dried out very well and probably wouldn't keep well in the mow.

I have five acres of potatoes out and not a hill dug. The ground at this writing is so soft that you can hardly walk across it, not only that, but it is covered with snow. I bargained for a brand new potato digger this year but we haven't set it up yet and I don't think I can use it at all. Of course, one never can tell what the weather will be. It may be that November will be a nice month and the ground will be dry enough so that we can dig a portion or all of these potatoes with the machinery digger, but if we can't I don't know what we will do. We will try and get enough of them out of the mud so that we will have what we want to eat, and let the rest go. The potatoes have commenced rotting in

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places and many of them will not be fit to dig at all.

We haven't started to harvest the sugar beets. I have a fine crop, about 15 acres and an immense amount of tops to feed the cows. At this time it doesn't look as if we would ever be able to harvest them, yet I have hopes that we can save the crop. There hasn't been a November in the last ten years but what we could harvest the beets.

It has been my practice for the last few years to fall plow for sugar beets and some of the fields for corn, because by leaving till spring we have so much work that we have to work the horses too hard. We haven't plowed a furrow this fall and I do not see that we will be able to, the ground is so wet, and we probably will lack time because we have beets and potatoes to take care of. If we can't do any fall plowing it looks as if we might need a traction engine in the spring to hustle up the spring work.

COLON C. LILLIE.

CORN HUSKING BY POWER.

It is seldom that one extreme is not followed by the other. The severe drouth of last summer, when farm work came nearly to a standstill, has been followed by a period of long continued rains. During this wet autumn, farmers throughout the state have been hindered greatly with their fall work. In many instances the corn will not be husked when cold north winds begin sweeping across the hills and through the vales, unless outside help of some form is secured.

Right here the labor problem confronts the farmer with brain-racking perplexity. In many sections of the state it is a serious one, good farm out-of-door help being secured only at an enormous price, while the securing of men to husk corn by hand at a fair wage is almost impossible. But on the farm where brains have the right of way over brawn, the farmer will prove that he is bigger than his work and will solve the problem. If, however, the farmer has placed his trust in brawn instead of brains, then the snow may fly and old Jack Frost may be troublesome before his corn is half husked and the score of endless odd jobs are completed.

But to the farmer's rescue comes the corn shredder. The husking of corn by power under favorable conditions has everything in its favor over hand husking. However, conditions cannot always be expected to be most favorable, but the master farmer does not let unfavorable conditions prove stumbling blocks. His progress is not stopped, for he rides over the difficulty of securing a corn shredder, the scarcity of labor and the wet weather, and has his corn husked and stover shredded at the same time by power, while his hard-working neighbor works the entire day on the damp ground, in a chilly air, with cracking fingers, aching legs and the ever-increasing possibility of a disagreeable doctor's bill of no small proportions for some future day.

The husking of corn by power eliminates the loss of fodder experienced in hand-husking. Frequently the corn shocks become badly damaged from the fall storms while still in the field. Prior to being husked the shocks become weather beaten; then, frequently the bundles of stalks are left after husking, exposed to the elements for a long period. With the shredder the corn crop is harvested and stored without this double weather exposure, and thus the feeding value cannot help but be increased.

And not alone is the feeding value of the corn stover increased by saving the very best part uninjured from the weather, but the shredding of the long stalks and mixing them with the leaves and husks adds to the feeding value of the stover. The writer has seen the faithful cow and the thrifty yearling chewing a long stalk, only to finally give up from jaw fatigue before it was consumed. There is feeding value in a portion of that stalk, and the corn husker shreds it into shape for the live stock to easily devour.

Shredded corn stover makes an ideal feed for indoor feeding. Indoor feeding is very desirable during cold and stormy days, as live stock, especially cows, do better if thus fed. The high price of hay makes hay feeding unprofitable and a substitute that may be given in the manger very desirable. The farmer without silage will find shredded corn stover of more value this year than ever before. What the animals do not eat of the stover may be easily cleaned from the

mangers and used for bedding, as it is a good absorbent and easily handled. No more will the farmer who has his corn shredded be pestered by having to remove the butts of cornstalks from mangers and place them where they are always of more or less bother. Instead of all this work and future bother, the uneaten refuse goes for bedding and finally out to the fields with the manure to help increase the soil fertility.

The expense and labor of husking by power is surprisingly small. This is especially true where several farmers exchange work in husking. One man can pitch from the shock, onto wagons, all the corn that a medium-sized machine will husk, provided it is in bundles. Two or three teams will draw it, from a reasonable distance, fast enough, and each man can unload his load, although a boy or man to cut the bands lightens the work. With a larger sized husker, of course, more help will be needed, but more corn is husked and the job more quickly completed.

Sometimes it happens that the corn is unbound. Under such conditions the labor of drawing to the machine is greater. The proper way to load loose corn so it will unload to the best advantage is to place the butts all one way. A high standard should be placed at the rear of the rack to hold the corn on and against which the corn should be piled. The man on the wagon always remains upon the rack-bottom and piles the unhusked corn up high, working from the rear end toward the front. Loose corn loaded in this way will always unload easily and rapidly. However, only small, light loads can be put on, which means more wagons and teams being required.

The shredded fodder should not be packed in the mow by tramping unless very dry. By adjusting the blow-pipe occasionally, a man is not needed in the mow. Care should be taken to fill the side farthest from the outlet first. If the nearer side is filled first the stover will not come out of the mow without binding. By running the husked corn directly into a wagon-box as husked, to be shoveled out later, one man can attend to both stover and corn.

The corn crop husked by power will be harvested and stored cheaper, quicker, with less waste, and will have a greater feeding value than the hand-husked crop. The farmer without a silo, but with shredded corn stover in the mow, may practice indoor feeding without the tiresome work of carrying out cornstalk butts, or the expense of heavy hay feeding. All in all, the farmer's winter chores will be lighter and pleasanter, while his stock will thrive better and his pocketbook be fuller.

Oakland Co.

E. S. C.

FALL PLOWING.

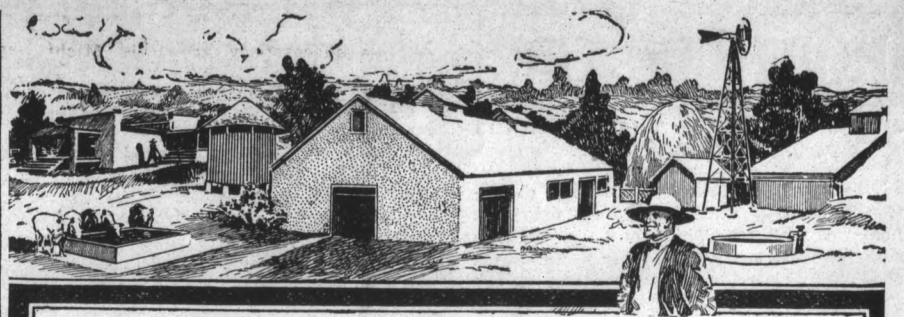
The soil on my farm is what is known as clay loam. In spots the clay crops out on top, but as a general thing the loam is from six to 12 inches thick above the clay sub-soil. It has been my custom to fall-plow my corn ground which is to be sown to oats in the spring, and to plow to a good depth, so the frosts of winter could pulverize and mix the sub-soil that was turned up. This process of deep plowing in the fall seemed to renew, and to a certain extent, maintain the fertility of the soil, so that in most seasons when the weather was at all favorable, I have been able to raise a good paying crop of oats without the use of commercial fertilizers. As my fields are a little higher in the center than at the sides, when fall-plowed they quickly drain off in the spring, so I am able to work the ground and sow oats quite early.

Last spring when oats were sown in this vicinity, the ground was in excellent shape, and like my neighbors, I looked forward to a bumper crop. But our hopes were soon blasted; because, in a couple of days a flood came which washed and so saturated the soil that a large quantity of the oats never came up. And where oats did not grow, weeds grew and flourished.

There will be no fall plowing here this season, unless the weather conditions change soon. For the past two months it has rained more or less every week and at this writing (Nov. 6.), a heavy rain is falling, making the corn fields again very wet and muddy. As nearly one-third of the corn is still standing in the fields unhusked, the prospect is not very encouraging for those who are caught in this way. The corn that is unhusked is not only considerably damaged, but the fodder is much more so.

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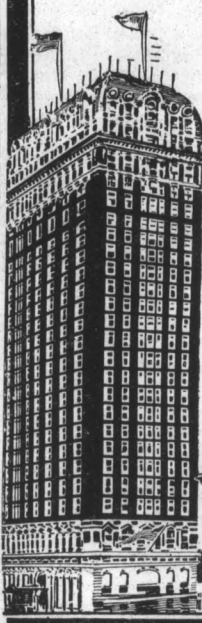
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11 mills—11,000,000 barrels yearly capacity.

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\$2,275 From 100 Acres

Dear Sir:

Three Forks, Mont., March, 1910.

Your letter of recent date regarding my experience as a dry land homesteader in Montana received, and in reply will say: That I located 160 acres three miles south of Three Forks, Mont., on February 1, 1908, and commenced improving in the spring of that year. I built a two-room house, a rough shed for a barn, and broke 85 acres of the land, which I seeded with Turkey Red winter wheat the following fall.

During the winter of 1908-1909, I cut fence posts and commenced fencing the land, which I completed in the spring.

With practically no experience as a farmer I harvested from about 100 acres 2,540 bushels of wheat which I marketed for \$2,275. I understand that some of this wheat is now on display in the Chicago, Milwaukee & St. Paul Railway exhibit car.

My first year's crop will considerably more than pay for the improvements, although I cannot give you the exact figures, as I am sorry to say that I did not keep a close record of the cost.

If I had this same crop to handle over again, with the experience I have gained from last season, I am satisfied that I could easily have gotten an increase of 25 per cent by better cultivation.

Hope this will give you the information desired; however, I shall be glad to give you any further data I may have if this does not cover what you wanted.

Yours truly,

WM. L. IRVINE

What This Man Did You Can Do

Secure a Government Homestead in Montana—where farming pays. In Dawson County and Musselshell Valley are thousands of acres of land open to settlement under the Homestead Act. These homesteads, some of which are 160 acres and others 320 acres each, are extremely fertile, producing large crops of all grains, potatoes and small fruits. Low Round Trip Fares are in effect every Tuesday during October and first and third Tuesdays thereafter, via the

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TRAUGOTT SCHMIDT & SONS, Detroit, Mich.



HORTICULTURE

SHALL WE PRUNE THE ORCHARDS NOW?

Why not? Practically the only objection offered is that the wound may not heal as readily. This may be true to some extent, but experiments have shown that wounds made at all seasons of the year were as variable in healing, some healing well, others poorly, but that the manner of making the cut was more responsible for poor healing than the season in which it was made. If the branch is cut close to the parent branch or trunk and nearly parallel to it and the cut is made with a sharp saw or shears, it is quite likely to heal well no matter when made. If it is large it is well to put white lead on the wound after the sap has dried down. This will fill up the checks and assist in preventing the entrance of moisture and fungi which cause rot. On young trees which require little pruning, and on tender trees like peach and plum, I would prefer to do the pruning in the spring as it will not take long anyway, and can be done after the buds swell so one can tell what branches are killed back.

But on old neglected apple trees I do not believe it is at all necessary to follow this rule in pruning, but to prune at any time between the falling and starting of the leaves, at least at any time when the wood is not frozen. We like to get considerable pruning done in the fall so it will not interfere too much with the spraying and planting in the spring. This reasoning is true of the general farmer also, for there is sometimes a little slack between the time the fall work is cleaned up and the winter when one can do pruning. If this time is utilized in trimming and thinning out the old orchard it will be well spent.

Without going too much into the details of pruning I will say that our method of treating old, high, and thick trees is briefly, this: We use a short ladder or step ladder to get into the tree and prune about overhanging branches which can not be well reached from the ground or the tree. We get into the center of the tree first and cut upwards and outwards, getting the dead branches and those which do not seem to be needed because others will take all the room they occupy. There is considerable to think of in pruning a tree. We should be able to see how the tree will look with the limb out before we make the cut, also whether it would not be better to leave this limb and cut another instead. The vitality of the limb is a factor, also its direction of growth if it is near the top, as there we like to leave the more horizontal branches so the tree will not continue to grow taller. If the tree is taller than it is profitable to have it the more vertical limbs are cut off, taking care to make the cut just above a horizontal limb so this will take the growth and help to heal over the wound, otherwise there will be stubs to die back. If the tree can be cut back to the new growth some of the top, cutting it back somewhat, until new growth can start beneath the high top. After a few years more of the top can be removed, and in time the tree can be cut back to the new growth which started beneath the high top. Of course, we can not expect much fruit on a tree of this kind for a few years until the new growth begins to bear, but we will get some from the top which is left.

But to return to the thick tree, we cut out the dead and surplus branches from the lower part of the tree first so it will be easier to get the branches down from the top. The branches are generally dropped down as cut or pushed to the outside of the tree, from where they are pulled down with a pole and hook. On thick trees it is sometimes necessary to get down several times and pull down the branches to enable one to see where to cut to advantage. We seldom cut large branches unless they are too high, but rather go out farther on the limb and cut small branches. In this way few large wounds are made and few large gaps opened in the tree. Our aim is to leave no large "holes" in the tree and no places where the branches are too thick to let in the light and air, but to get an even distribution throughout the tree and give as large a bearing surface as the tree will permit and still let in sufficient light and air. Crossed limbs are avoided whenever possible, the aim being to keep the main branches radiating from the trunk to the circumference in as straight a line as possible.

As to the manner of making the cut,

we try to get quite near the parent branch and nearly parallel to it. It is allowable to cut a half inch to an inch back on the lower side on large branches to escape part of the bulge which is quite common on the under side of many branches, especially with certain varieties. However, I would rather have a wound a little larger than to go to far from the crotch. If the branch is dead it will saw better at its base where the green wood surrounds it.

We use the Paragon saw almost exclusively for the main part of the pruning of old trees. This has a slightly curved blade with teeth on both sides, set to cut with a push cut on the convex side and a draw cut on the concave one. This enables one to cut branches which could not be cut easily with the push cut alone. For small trees or taking out water sprouts and thinning out the lower branches at the outside we use pruning shears with handles two to three feet long, and usually have a long handled (pole) shears to get at outside branches too high to reach from the ground. This pruning is done after the center and tops are thinned out, otherwise one might trim up branches which would be removed later upon getting into the tree.

From three to six old neglected trees can be pruned in a day, depending upon their thickness and size. I have worked a half day on one, but this is not common. Some trees will prune quite easily, others are more difficult. Much depends upon whether the branches grow horizontally or upright, and whether they are finely divided at the outside like the Spy, or more coarsely, like the Greening. The trees with many small limbs to be removed and those with much dead wood require more time to put them into shape than others.

Finally the brush should be taken to a safe distance from the trees and burned, and should not be left all next summer to harbor insects and be in the way of orchard operations.

Calhoun Co. S. B. HARTMAN.

CHANGE IN METHODS OF HARVESTING.

We do things differently from what we did in the old days. I can recall that, when a boy, we piled the apples in the wagon box and hauled them to town, where the buyer sorted them and barreled them in his rooms, and we brought back the culls, and his check for those he took. This practice continued for many years, even after my boyhood was a thing of the past. Next we picked the apples and put them in piles in the orchard, and if it was a good fruit year the piles were apt to be large and the apples would sweat and ripen rapidly, so that it often happened that the fruit was damaged to quite an extent before it was taken from the piles. Big loads of empty barrels were hauled out to the farm, and then along came several men to pack the fruit and they had to be fed until the job was completed, after which we had to load the full barrels on the wagon and haul them to town, all together it was quite a job, with the three to five hundred trees.

Now days we do things differently. The wagon, with the adjustable rack on, is loaded with crates and driven into the orchard where the fruit is placed in the crates and loaded on the wagon. When a load is ready it is hauled to the buyer's rooms in the city, where his men look it over and pack right from the crates, and the culls are purchased for drying or cider, and the farmer brings back his check only, or puts it in the bank and comes home with a light load. This year another change has come. The finest fruit is packed in barrels in the usual way, and paid for by the barrel, and the best prices received for large, fine, nicely colored Spy and Baldwin has been only \$1.50 per barrel, fruit that would grade as "fancy," and bring fancy prices in the cities of the east. Of a few other kinds the best were put in barrels and brought the grower \$1.25, and all others, even nice Roxbury Russets, were piled right in the car and the farmer had to be content with 75, 60 and 40 cents per 100 lbs., according to quality, and they had to be hand-picked, too, otherwise they graded as "cider" and brought the grower 25 cents per 100 lbs. I should like very much to know what this hand-picked fruit which was shipped to the big cities in bulk, cost the ultimate consumer, I think it would make interesting reading, and cause the grower to try to think up some plan to gather in a larger share of the consumer's dollar.

Of course, the new way of marketing the fruit is better than the old, better

for the seller as well as the buyer. Where fruit was piled in the wagon box and hauled to town over the rough roads, much of it was bruised, and so to a great extent damaged as to keeping qualities. Now, being placed in crates, with only a bushel in each compartment there is little pressure, and little chance to be rubbed and damaged, the farmer is not bothered with the men who pack, and the buyer has his business all under his eye.

Eaton Co.

APOLLOS LONG.

THE AUTO TRUCK ON THE FARM.

(Continued from first page.)

the distance one way every day. Figuring on this basis, we deduce the following table, which we believe to be very near the exact cost, both as to original investment and the upkeep of the two different systems.

Cost.

Original investment with horse system:
Six horses at \$150\$ 900.00
Two wagons, complete at \$125..... 250.00
Two sets harness at \$40..... 80.00

Total\$1,230.00

Operating expenses, depreciation and up-keep required to a single day:

Two drivers at \$1.50\$3.00
Two teams to stable and hay at \$1.15 2.30
Grain for three teams 1.50
Shoeing bills43
Repair bills30
Depreciation40

Total\$7.93

Original investment with Auto Truck:
One Auto Truck, one ton\$1,300

Operating expenses, depreciation and up-keep reduced to a single day:

One man\$1.50
Repair bills, (average)30
Depreciation 1.25
Oil, gasoline, 8 gals. at 9½c..... .76
Cylinder oil, 1 qt. at 44c gal..... .11

Total\$3.92

These figures show that the initial cost of equipment is a little more for the auto truck, providing the patent tires are used but a little less fitted with the solid rubber or pneumatic tires. The operating and upkeep expense show a daily advantage of \$3.99 in favor of the auto truck.

Some of the items in the above table should be explained. A wagon fitted for transporting fruit costs more than an ordinary farm wagon with a single box; the above price is what fruit growers actually have to pay. The grain item for the teams may be questioned by some. The teams used for transporting fruit are fed four times per day with a feed consisting of from five to six quarts of good oats. The shoeing bill may seem large to an ordinary person, but the man who has driven teams on the road day after day will appreciate its reasonableness; the figures were taken from the books of a farmer drawing fruit to the Detroit Eastern Market and are the results of actual experience. The repair bills for the wagon are also from actual accounts; tires and spindles need to be repaired quite frequently and make up the largest part of the repair bills. The depreciation is figured on the basis of a rig lasting ten years, which appears to be about the average for this kind of work.

We have had our attention brought to the fact that the auto, when not working, is of no expense to the owner, except the interest of the money which is invested, whereas horses require to be fed whether they are working or not. This is a matter which cannot be shown on the table, but nevertheless is a real one and one that would work out in favor of the machine.

The repair bills for the auto truck was an average of the expense of the truck on the market during last summer. The depreciation was calculated on the basis of the truck lasting five years. The amount of gasoline used, and also of cylinder oil, was an average struck from 30 trips made to the market. It is found that a one-ton truck requires but one gallon of oil for eight miles of travel.

The writer was somewhat skeptical regarding the utility of an auto truck for this service when he had his attention first introduced to the subject. But his observations on the Eastern Market and the trip mentioned above, supplemented by the experience of those in whom he has the utmost confidence, has convinced him that these machines offer a chance for reducing the cost of placing produce on the market, especially where it must be brought from a distance. Comparatively speaking, the longer the haul the greater will be the margin between the cost of delivering with the auto truck and with horses. It is estimated that another season from 30 to 40 machines will be in service drawing produce for farmers who patronize the Eastern Market.



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Thousands of testimonials of growers from windy Texas to Washington state, tell of having overcome from ONE to FIFTEEN degrees of Frost in their orchards with the

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No other heater even claims ONE of these superior points:

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Draw the cover and control the fire. Protection of the right kind and oil consumption just in proportion to the demands—true economy.

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No night refilling and plenty of oil for a large fire if needed. No extra labor required.

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Only heater that has record of having overcome 10 degrees of Frost with a 10-mile wind. Our REGULATED FIRE heater has met this and more severe conditions. Plenty of proof.

New literature now ready, containing much scientific information and expert advice on this subject. It is Free.

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New Agents Wanted Everywhere

Kill the Scale

with the one most reliable remedy against the SAN JOSE SCALE.

Spray NOW with BOWKER'S LIME-SULPHUR

Write for Book and Price List to BOWKER INSECTICIDE CO. BOSTON, MASS.

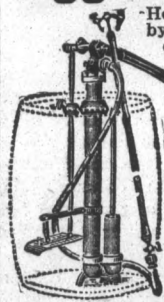
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Here is a spray pump invented by fruit growers. It was our endeavor to secure the best spray pump to use on our 300 acre fruit farm that produced the

ECLIPSE SPRAY PUMP

It overcomes every defect found in other makes—it has proved itself best in actual work. Put an Eclipse to work on your trees and earn bigger profits. Write for our fully illustrated catalogue. It tells why you should spray—and why you should do it with an Eclipse. It's free. Write to-day.



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HAS VARIED SUCCESS WITH AUGUST SPRAY.

Being in the apple business myself, I believe I can add a little to Brother Hartman's article in The Farmer of November 4. He says his success in controlling worms was variable, so, also, was mine. He did not give the July-August spray and laid his trouble to that, or rather inferred that the trouble might have been there. Now I did give the late summer spray and thoroughly, too. And I had worms that I could not account for, especially in the Kings, Baldwins, Russets and Rambo. The Spy, Greening, Wagener, Maiden's Blush, Hubbardston, St. Lawrence, Stark, and Winter Sweets were exceptionally free from worms, not more than one per cent were affected. All varieties were given exactly the same treatment and the results differed widely, the first mentioned varieties were at least 50 per cent wormy.

I may be wrong but my theory is this: Last spring it warmed up very suddenly just as the petals were falling, and, if growers will put on their thinking caps and go back to that time they will remember that the time between the falling of the petals and the closing of the calyx was limited to but a few days. And I, for one, realized that the apples were pretty far along, for effective work with the codlin moth, before that spray was completed. It seems to me that the apples which developed the fastest during that warm spell were the wormiest.

Berrien Co.

R. G. THOMAS.

STRAWBERRIES FAILED FOR LACK OF WATER.

At the present time I am considering quite strongly of discarding the strawberry crop if I cannot get some better way of growing them. This makes the third season that my berries have only been about one-third of a crop. Failure has been due principally to lack of rain. My farm is quite rolling. I have one field which is 11 to 20 rods wide and contains nearly seven acres, which I have been using for strawberries. I have used most all the manure made from six head of stock on my strawberry beds. Last year I applied the manure at the rate of 50 loads per acre, and that part of the field yielded the poorest. I have had in ten years not exceeding 15 bushels per acre. The soil is quite sandy, and the manure was all fine. It was applied as top-dressing and thoroughly dragged in. Where there was no manure they did much better. The berries were set three rows of Warfields, one Pocko, and one Dunlap mostly. Where I fertilized with Bederwood and Early Mitchell the crop was very poor. The bulk of what I set this year (3½ acres) I set two Dunlap and two Warfield. I have had one good crop of late berries in five years. They were Gandy and Sample. This year I set Aroma and Sample but there is about one plant growing where I set six. Will take them all up for plants and try them one more year. Now I would like to know if any of the readers of the Michigan Farmer have had any experience in watering their strawberries. I tried one year to draw water in a tank but found by putting it on the vines it did more damage than good. I have had the idea in mind of trying a sort of irrigation plant. I think a rock well will water one acre. It is about 30 ft. to rock here, which is about 30 ft. thick. By placing a windmill on each well and letting the water run down each row I believe the ground would warm the water before it got to the roots of plants. I set the plants four feet by 28 inches. A large tooth on cultivator would make a small ditch in the center of the row for the water to follow. The cost of windmills is about \$35 apiece, or perhaps more. The pipe and pump are all the other expense necessary. I could drill the wells myself. The expression of readers as to their experience and ideas along the above line would be interesting at this time and so many are considering the advisability of installing irrigating plants. I have arrived at the conclusion that water is more essential to strawberries than any other condition I can bring about.

J. L. R.

Michigan Horticulturists hold their 41st annual meeting at Ludington, December 5-7. A practical and timely program by growers and marketers of note is being arranged, and displays of fruit, tools, power sprayers, appliances, etc., will furnish a feature of rare educational value. The annual banquet will be held on the first evening.

We Get a Slap

The big coffee trust, made up of Brazilian growers and American importers, has been trying various tactics to boost the price of coffee and get more money from the people.

Always the man who is trying to dig extra money out of the public pocket, on a combination, hates the man who blocks the game.

Now comes a plaintive bleat from the "exasperated" ones.

The *Journal of Commerce* lately said "A stirring circular has just been issued to the coffee trade." Then the circular proceeds:

"The coffee world is discussing what is to be the future of coffee as a result of the campaign of miseducation carried on by the cereal coffee people. We have before us a letter from one of the largest roasters in the South asking what can be done to counteract the work of the enemies of coffee

"The matter should have been taken up by the Brazilian Gov't when they were completing their beautiful valorization scheme."

Then the article proceeds to denounce Postum and works into a fine frenzy, because we have published facts regarding the effect of coffee on some people.

The harrowing tale goes on.

"Where a few years ago everybody drank coffee, several cups a day, now we find in every walk in life people who imagine they cannot drink it. (The underscoring is ours.) Burly blacksmiths, carpenters, laborers and athletes have discontinued or cut down the use of coffee; as there is not a person who reads this and will not be able to find the same conditions existing among his own circle of acquaintances, is it not well for the Brazilians to sit up and take notice?"

Isn't it curious these "burly" strong men should pick out coffee to "imagine" about? Why not "imagine" that regular doses of whiskey are harmful, or daily slugs of morphine?

If "imagination" makes the caffeine in coffee clog the liver, depress the heart and steadily tear down the nervous system, bringing on one or more of the dozens of types of diseases which follow broken-down nervous systems, many people don't know it.

But it remained for the man who has coffee, morphine or whiskey to sell, to have the supreme nerve to say: "You only imagine your disorders. Keep on buying from me."

Let us continue to quote from his article.

"Notwithstanding the enormous increase in population during the past three years, coffee shows an appalling decrease in consumption."

Then follows a tiresome lot of statistics which wind up by showing a decrease of consumption in two years of, in round figures, two hundred million pounds.

Here we see the cause for the attacks on us and the Brazilian sneers at Americans who prefer to use a healthful, home-made breakfast drink and incidentally keep the money in America, rather than send the millions to Brazil and pay for an article that chemists class among the drugs and not among the foods.

Will the reader please remember, we never announce that coffee "hurts" all people."

Some persons seem to have excess vitality enough to use coffee, tobacco and whiskey for years and apparently be none the worse, but the number is small, and when a sensible man or woman finds an article acts harmfully they exercise some degree of intelligence by dropping it.

We quote again from the article:

"These figures are paralyzing but correct, being taken from Leech's statistics, recognized as the most reliable."



tistics, recognized as the most reliable."

This is one of the highest compliments ever paid to the level-headed, common sense of Americans who cut off about two hundred million pounds of coffee when they found by actual experiment (in the majority of cases) that the subtle drug caffeine, in coffee, worked discomfort and varying forms of disease.

Some people haven't the character to stop a habit when they know it is killing them, but it is easy to shift from coffee to Postum, for, when made according to directions, it comes to table a cup of beverage, seal brown color, which turns to rich golden brown when cream is added, and the taste is very like the milder grades of Old Gov't Java.

Postum is a veritable food-drink and highly nourishing, containing all the parts of wheat carefully prepared to which is added about 10 per cent of New Orleans molasses, and that is absolutely all that Postum is made of.

Thousands of visitors to the pure food factories see the ingredients and how prepared. Every nook and corner is open for every visitor to carefully inspect. Crowds come daily and seem to enjoy it.

"There's a Reason"

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You need the most powerful and reliable light you can get when loading the wagon for market in the early morning.

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They do not flicker, but burn with a steady, brilliant light. They will not blow out. They are economical, because, besides being moderate in price, they give you the greatest light value for the oil they burn.

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Thirty Years' Popularity: Dead Shot every time. Largest Sale, 7-lb. pks., \$1.; 5-lb. pks., 50c. Of all Druggists or **F. S. BURCH & CO.** 64 W. Illinois St., Chicago, Ill. Illustrated Catalog of Stockmen's Supplies Free.

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Has No Equal for Cure of injured tendons, bone-spavin, curbs, splints, ringbone, sidebone, thoroughpin, bog-spavin, windpuffs and other enlargements.
\$1.00 Quick, sure and lasting cure guaranteed—money back if it fails. Mail \$1.00 for this great remedy today.
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Highest Grade of Corn and Buckwheat Flour in One Grinding
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LIVE STOCK

THE SOWS AT BREEDING TIME.

A final culling of sows ought to be made before any breeding is done in the fall. All sows which have remained in the herd and which are in any way unsuitable should be rigidly discarded. Brood sows need to be culled just as much as do dairy cows. If the ones that would likely be unprofitable if bred are gotten rid of, better care can be bestowed upon the superior ones which are retained and far more profit secured.

The sows should be in a healthy, and if possible, a gaining or growing condition at breeding time. While experimental work done by the writer and others does not show it to be a fact, yet it is agreed by practically all practical hog men that a sow that is gaining is far more apt to catch at the first service. It is a mistake to change the sows from pasture to dry lot at this time. They should have succulent feed with plenty of protein and with abundance of exercise to keep up their vigor.

The boar needs careful looking after. If he is a boar that was used last year and whose work as a sire has been entirely satisfactory, he usually can be depended upon if he has had sensible care during his idle season. A young boar will need very close watching.

It is not good practice to allow the boar to run with the sows at breeding time. In the first place it is injurious to the boar. It allows him to reduce his vitality by excessive service and thereby lessens his breeding powers, making him less satisfactory as a sire. Many boars have become unable to get sows with pig through such excessive service at the beginning of the season. To keep the boar in a pen separate from the sows and allow him just one service conserves his vitality and pigs resulting from service at the end of the season will be just as good as the early ones.

To keep the boar away from the sows enables a careful record to be kept of the breeding date. One hundred and twelve days is about the length of time sows usually carry their pigs. By figuring that number of days ahead from the breeding date, the probable day of farrowing can be determined. The date of service should be carefully recorded for that reason. If that is done there need be no guesswork about the time the sows are to farrow. No loss of pigs need occur on account of the pigs coming sooner than had been expected.

If the herd is pure-bred and pedigree records are to be kept of pigs produced, all the more care should be exercised in recording the breeding date. The sow's number should be recorded and that of the boar if there is more than one boar in service. Each day all breeding entries in the small herd book should be copied into a larger register or journal as an extra precaution. The day-book might be lost, as is often the case. When that happens the records will be safe and secure in the large register if they have been transferred to it, as they should be. The loss of a note book in which entries had been made and from which they had not been copied has caused many a breeder grief and, in case the book was not found, often it has caused the loss of money.

A strong, vigorous boar can serve quite a number of sows if handled rationally. Last year in the writer's work a sixteen-months' boar was used on 43 sows and all bore pigs although some of the sows were bred for three successive heat periods before they conceived. The number of sows allowed the boar was entirely too large, yet circumstances made it necessary to use the same boar on all these sows. The breeding season was made unnecessarily long and the boar was very badly reduced in weight although he recovered very nicely afterward. This year on the same farm two boars will be provided for 50 sows. Probably that is nearer the number that should be allowed.

Two services per day with complete rest on Sunday are as many as should ordinarily be allowed. In the case mentioned above a third service was sometimes permitted but that is not advisable. The boar needs good feed and plenty of it during the season. Protein is needed as much as ever an animal needs protein. Some shorts with tankage or oil meal should be fed liberally to insure that he gets plenty of protein. He needs some exercise to keep up his

tone and vigor and to make him active in service.

A breeding crate should be provided. It will enable a big sow to be served by a small boar satisfactorily. A heavy boar may be used on a small sow and no ill results occur. A breeding crate, if properly constructed, will support the greater part of the weight of the boar during the act of service and the danger of injury to the sow and of poor service resulting are minimized.

The time to begin breeding can be determined by first deciding the time of year it will be most desirable to have the pig crop put in its appearance. Then if approximately 112 days are counted back from that date, the time to begin using the boar will be secured. For instance, if it is desired to have the pigs begin coming late in March, the breeding should be commenced in late November or early December.

Iowa.

H. E. MCCARTNEY.

SEEK MORE EQUITABLE TERMS FOR SHIPMENT OF PURE-BRED STOCK.

At a meeting of the executive committee of the National Society of Record Associations, held at the Great Northern Hotel, Chicago, Ill., September 30, 1911, the chief work transacted was the consideration of the present rates on shipment of pure-bred live stock, in less than carload lots, and the varying railroad requirements in connection with same.

A large number of specific cases were submitted, wherein shippers of pure-bred live stock had been required to furnish an attendant to personally accompany such pure-bred live stock and to pay full passenger fare for said attendant, both going and returning.

As an illustration, it was shown that the freight rate on shipment of one pure-bred bull, from the vicinity of Chicago to Knoxville, Tenn., would be \$22.50, while the expense of passenger fare for the attendant and the cost of his employment for the time required, together with cost of meals and incidentals enroute, would amount to more than \$50, making the total charges in excess of \$70, which breeders will readily recognize is practically prohibitive.

It was brought out that the roads operating north and west of Chicago have no such burdensome restrictions, and that they accept and handle pure-bred live stock in less than car load lots without question. The southwestern roads and the roads in the southern classification, appear to be the ones which are the most serious offenders.

President B. O. Cowan stated that the matter had recently been brought to the attention of the live stock agents in Missouri, with the result that the railroad regulations on roads operating in that state had been amended so that they no longer require an attendant with such shipments.

Director Curtiss called attention to the fact that the railroads which were imposing these requirements were pursuing a very inconsistent course, in that many of them were at the same time furnishing, free of charge, trains for the dissemination of agricultural information, with a view to improving the agricultural methods in the districts tributary to their line; and it was pointed out that to burden live stock breeders with the necessity of providing an attendant in charge with shipments of pure-bred live stock, in less than carload lots, practically amounted to an attempt on the part of the railroads to secure their profits by taxing pure-bred seed, which the breeders were attempting to distribute in the localities tributary to the lines of the railroads. In other words, instead of doing all possible to encourage and facilitate the distribution of pure-bred seed among the farmers contributing traffic to the lines, and securing their returns in the increased traffic, due to the production of more and better live stock, the railroads were attempting to secure their profits from charges incident to the distribution of the better seed.

A committee was appointed to collect all possible specific data and to prepare the same for presentation to railroad authorities, and if necessary, to the Inter-State Commerce Commission.

Breeders throughout the United States will confer a special favor upon the National Society of Record Associations, if they will report specific cases where they have been obliged to provide an attendant and pay charges incident thereto, to Sec-Treas. Wayne Dinsmore, Chicago, Ill., who has charge of the collection of information for the committee.

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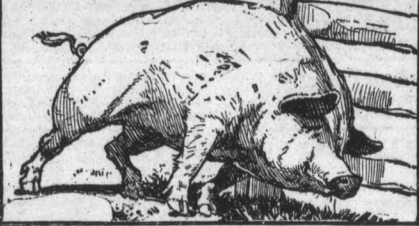
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LIVE STOCK NOTES.

This item of news from Colorado furnishes a fair illustration of the great shrinkage that has been going on in the range stock growing states in recent years. The assessor of Logan Co., Col., found only 846 sheep in the county this year, while ten years ago there were 18,000, and he returned the number of cattle as 15,000, compared with 40,000 in 1901. The grazing land in Logan county ten years ago was recorded as 406,000 acres, and the 1911 record shows only 185,000 acres. Now there are 75,000 acres of irrigated land, besides about 250,000 acres of "dry farm" land, while ten years ago the agricultural land amounted to only 27,000 acres.

For several weeks the leading Chicago commission firms engaged in selling milch cows have been advising country shippers to hold back all backward cows and to keep them on pasture at least until they come within a week or ten days of their time for calving. For quite a number of weeks the demand for backward springers has been extremely poor and in nearly every instance sellers have had to rely on killers to take them off their hands, prices paid being extremely low, as is always the case when they go for slaughter. Dairymen naturally are unwilling to buy cows that have to be carried along for several weeks or months, as the cost of feed meanwhile amounts to a considerable item, and they want cows that will produce milk from the date of purchase. The demand all along has been for good fresh cows and springers with full bags, and the call for prime Holsteins at fancy prices usually exceeds the supply. Extra choice cows sell for \$70 to \$75 and even higher, now and then, owners usually refusing to part with high-grade milkers at any price. Countrymen with good autumn pasturage have had a good opportunity to purchase carloads of good milch cows in the Chicago market in recent weeks and some have done so.

Hundreds of farmers scattered all over the corn belt states are in a quandary as to whether corn at ruling high prices is too dear to feed to stock on the farms, and many are inclined to think the best course will be to market the corn and stay out of cattle feeding, regardless of losing the manure and the splendid outlook for prime corn-fed beefs, which are sure to be scarce and extremely dear during the winter and spring months. It is, of course, a peculiar state of things when as high as seventy-five cents a bushel is paid for corn at the end of the crop year of the largest crop of corn on record, yet the best authorities agree that it will pay to fatten cattle of the better class, having hogs to follow the cattle.

A. N. Grady, Washington Co., Ia., says the high price of corn stands in the way of cattle feeding in that region, sales being made around 60c per bu., and farmers are not going to do much feeding this winter, notwithstanding frequent chances to pick up rare bargains in stockers and feeders after declines in prices in western markets, following liberal receipts. He reports matured hogs well shipped out and a small crop of fall pigs, most of the pigs being born in the spring months. Young hogs are generally healthy and putting on flesh rapidly, feed being abundant.

The dearthness of hay is influencing farmers in many localities to sell off their thin horses at low prices rather than carry them through the winter. They take the ground that hay is too high to feed on the farm.

At a recent sale of colts and yearlings at Bloomington, Ill., none of the sucking colts went below \$50, and yearlings sold as high as \$110.

A writer for the Manitoba Free Press says: "Murdo McKenzie, manager of the Matador Cattle Company, is well known in western Canada, where he matures many Texas-bred cattle. He has just been made manager of the San Paulo Cattle Company, of Brazil, an enterprise backed by English and United States capitalists. McKenzie asserts that if Brazilian cattle can be dressed to net \$4 per cwt. on the hoof at San Paulo his company will have a good margin of profit, and dressed beef can be carried by water from Brazil to New York for less money than by rail over the 1,000 miles separating the Atlantic seaboard from Chicago. McKenzie says they are equal in quality to the best Ontario grassers."

Western packers are slaughtering at the rate of 575,000 hogs a week, compared with 385,000 and 475,000 respectively one and two years ago. During the summer packing season that embraced March to October inclusive the western packing amounted to 17,450,000 hogs, or 4,435,000 more than a year ago.

Stockmen are warned as to the danger of poisoning stock from feeding frozen beets, by Dr. F. B. Hadley, of the veterinary department of the College of Agriculture of the University of Wisconsin. Last year a considerable loss was sustained by Wisconsin stockmen from this cause. A live stock paper says: "The greatest trouble resulted from beets that were frozen and afterwards thawed before being fed. In one serious case the frozen beets were boiled with grain to make a slop. After this mixture was fed the hogs died in a short time, due to paralysis of the heart. Recent investigations show that the chemical changes that take place in the processes of freezing and thawing produce a poisonous substance which causes rather sudden death when eaten. Beets that have not been frozen make excellent feed for stock."



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VETERINARY

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Scirrhus Cord—Abscess on Knee.—I am puzzled to know what ails a horse that I recently purchased. His scrotum is swollen and pus discharges from each side of sheath; the openings are well back. He also has a suppurating bunch on knee, much like a boil. These sores do not seem to cause much pain. M. S. S., Rapid River, Mich.—When horse was castrated the end of each cord adhered to skin of scrotum and a tumor has grown on end of cord which will have to be cut out. This is a simple operation, but of course it should be done by a veterinarian who has had experience. The abscess on knee should be opened up freely; when drainage is allowed it will soon heal. Apply equal parts powdered alum, oxide of zinc, boric acid and iodoform twice a day.

Bruised Hip.—My horse backed against hay-rack and scraped a large patch of skin off hip; since then he has been quite lame, and sore does not heal as rapidly as I would like to have it. He also lifts opposite leg too high when backing, but shows it very little when going forward. A. C. N., Spring Lake, Mich.—Apply peroxide of hydrogen to wound twice a day; ten minutes after each application apply one part iodoform and ten parts boric acid. Lameness will subside as soon as wound heals. The jerking of leg indicates stringhalt, an ailment which can often be helped by a surgical operation.

Hidebound.—Three-year-old filly has been out of condition for several months; showed symptoms of distemper during hot weather but now has good appetite; local veterinarian has failed to do her much good. C. V. H., Lucas, Mich.—If filly is running on pasture she should be grained twice a day and salted well. Oats is the best food for her. In addition to this increased food supply she should be stabled at night and well groomed twice a day.

Quittor.—Your advice through Michigan Farmer has been helpful to me many times, but I am puzzled to know what ails my horse's foot. A discharge of pus runs from upper part of quarter and I am unable to heal it. I might say this horse is right in every other way. C. W., Portland, Mich.—Quittor is not easily cured. Fairly good results follow a few applications of tincture iodine; then apply one part bichloride mercury in 100 parts water. If opening is large enough fill it with one part iodoform and six parts boric acid. The wound should be covered with oakum and a tar bandage applied. It is needless for me to say that diseased quarter should be relieved of pressure from shoe.

Surfeit.—Stallion has a few pimples on him; would like to know if it would be safe to give him Fowler's Solution, and if so, how long it should be kept up; also would it be just as well to give it with a syringe or diluted and mixed with feed? Another horse is out of condition; would you recommend same treatment for him? B. D. B., Woodland, Mich.—Give each a dessertspoonful of Fowler's solution twice a day. I prefer to put it in water and mix with feed; however, it will do no harm to give it alone, but it does irritate the mouth a little. Keep up this treatment for 30 days.

Old Horse Slavers.—Horse 24-years-old does not eat well. I suspected bad teeth and had them filed. This horse slavers some but I suppose it comes from foul pasture. He eats grain ravenously but dislikes hay. A neighbor, who is a horseman, says he needs a good stiff tonic. He has been fed stock food for some time. W. F. J., Mayfield, Mich.—His teeth are doubtless worn short and perhaps some of them have dropped out, making it impossible for him to properly masticate food. Feed ground grain and cut hay; also give him 1 oz. ground gentian at a dose in feed three times a day. I suggest a change of pasture.

Bunch on Stifle.—Colt six months old has bunch on fore part of stifle joint; he travels somewhat stiff and is inclined to drag toe. E. R. M., Elkton, Mich.—Apply one part red iodine of mercury and ten parts cerate of cantharides to bunch once a week.

Indigestion.—Out of Condition.—Five-year-old horse has been gradually failing for past three months and is now quite thin. J. H. G., Sunfield, Mich.—Mix equal parts powdered sulphate iron, gentian, ginger, cinchona, fenugreek and rosin and give horse tablespoonful at a dose in feed three times a day. Are you sure he is fed enough grain? Besides, salt him well.

Cow Has Spavin.—Ten-year-old cow has what I call spavin; both hocks are diseased. She seems stiff in both hocks and is bothered in getting up. J. A., Bad Axe, Mich.—She will perhaps always be stiff, but much benefit will be derived from applying one part red iodine of mercury in four parts lard to hocks once a week.

Nasal Catarrh.—Eighteen-months-old calf has what we believe to be a case of distemper which causes him to sneeze and cough. A. P., Addison, Mich.—Mix equal parts ginger, gentian, licorice and rosin and give calf two tablespoonfuls at a dose in feed three times a day.

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BERKSHIRES.—Boars at special prices for 30 days. Also Leicester rams, from prize winning stock. Elmhurst Stock Farm, Almont, Mich.

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O. I. C's.—Boars all sold. Choice young sows weighing 180, also 60 Aug. & Sept. pigs, either sex, pairs not akin. Order early. Fred Nickel, Monroe, Mich., R. 1.

OUR Imp. Chester Whites and Tamworth swine won 245 1st at Fairs in 1911. Service boars, also sows bred for spring farrow of either breed that will please you in quality and price. Adams Bros., Litchfield, Mich.

Improved Chesters.—Young breeders of March, April and May farrow, either sex. A few tried sows for sale when bred. Also Holstein cattle. W. O. WILSON, Okemos, Mich. Both phones.

DUROC JERSEYS.—Nothing for sale at present. CALEY U. EDMONDS, Hastings, Mich.

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

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We have several spring boars that are ready for service now from our two

Large Boars Big Tom and Big Wonder.
The dams of these boars we are offering were from Happy Wilkes, a 1000-lb hog and Jim Perfection an 800-lb. hog.

We also have several females. Write us your wants; we will sell them at farmers' prices.
ALLEN BROS., Paw Paw, Mich.

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

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Poland Chinas.—Spring and fall pigs of large and medium style, at right prices, either sex. E. D. BISHOP, Route 38, Lake Odessa, Mich.

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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.
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Boars old enough for service. A few bred Sows, Fall Pigs, pairs and trios not akin. I will sell you fall pigs at prices that will surprise you. Satisfaction guaranteed. COLON C. LILLIE, Coopersville, Mich.

Large Improved Yorkshires.—5 boars for sale. Farrowed July 11. Price reasonable. Address W. H. Parker, Grand Blanc, Mich.

POULTRY AND BEES

CRATE FEEDING OF CHICKENS FOR MARKET.

I have been fattening chickens for market for some considerable time. Finding it both difficult and expensive to bring them up to my ideal of what a No. 1 market fowl should be, I finally decided to try crate feeding. It has proved a success with me and I have satisfied myself that the selling of lean chickens is a wasteful practice, to say the least.

I had some fattening crates made which are 36 in. square and 18 in. high. Each crate is divided into four compartments, each compartment holding five fowls. The crates are made of slats, except that the partitions between the compartments are of thin boards placed tightly together so that the fowls cannot see each other. The slats on top and bottom run lengthwise of the coop, while those on sides and ends run up and down. I used common laths for slats, placing them two inches apart to allow the chickens to put their heads through for securing food and drink. The slats on the bottom are placed one inch apart. There is a small door in the top, fastened with a button, through which the fowls are put into and taken out of the crate. There is a small V-shaped trough extending the full length of each of the four sides of the crate; two of these are used for water and the other two for feed.

I keep fresh water constantly before the fowls. The first week I feed cooked food, boiling small potatoes, mangles, etc., and mashing them with finely ground cornmeal and oatmeal in equal parts. This makes a thick mash. When it has cooled a little I thin it with skim-milk until it pours out like a batter. This I feed twice a day, never more at a time than the fowls will clean up in ten minutes. I give, three times a day, equal parts of oatmeal and white cornmeal finely ground and mixed with skim-milk. Add to this a pound of clean melted tallow for every 50 fowls. I make the noon meal quite sloppy but have the mash a little stiffer for morning and evening feeding. I give them all they will eat up clean; if any remains I take it away, as care must be exercised about overfeeding. I find that if I get them off their feed it is difficult to get them started right again.

The fowls are given gravel every four days, also all the prepared charcoal they will eat. Chickens weighing from 2 to 2½ lbs. when put into the crate have made the most profitable gains for me, making gains of from 30 to 35 per cent in 12 days. All fowls should be dusted with sulphur before placing them in the crate. Also locate the crates where they will not encounter drafts.

I feel that I owe my success to careful feeding, rather than to hard work. I have not lost a single fowl in a feeding crate. I trust that this general idea of my methods and experience will be of some benefit to others.

Wayne Co. MRS. A. D. PITCHER.

ONE MAN'S SUCCESS IN TREATING ROUPY FOWLS.

Colds and roups are prevalent at this time of year and extra precautions must be taken lest the entire flock become infected. By poultry owners who have had experience in the treating of fowls infected with roup the disease is readily diagnosed, as there is no mistaking the "roupy smell," the swollen head and eyes and the sticky discharge from eyes and nostrils. There are, however, diseases somewhat similar to roup which in reality are not roup, such as catarrh, diphtheritic roup and ordinary colds, all of which are sometimes mistaken for genuine roup, but can easily be distinguished by the smell. Colds, if taken in time, can easily be checked by the use of simple remedies. If the fowls sneeze and snuffle while on the roost at night, put about a tablespoonful of coal oil in the drinking water. The oil will remain on top and they will treat themselves when drinking. Spirits of camphor added to the drinking water is also beneficial.

Roup can usually be traced to damp quarters, drafts in the poultry house and overcrowding. The last named is, in my opinion, one of the principal causes. In the fall one usually has more stock on hand than can be properly housed. The fowls crowd together on the roost until

they become overheated; on leaving the roosts in the morning they rush out into the cold and become chilled. Therefore have sufficient roosting room so they won't be crowded on the perches.

I have successfully treated some very severe cases of roup and as yet have not lost a fowl. A few of the hens had swollen heads, both eyes swollen shut and feverish, sticky discharge from nostrils and eyes, and a cheesy growth or "false membrane" in the mouth. On opening the eyes, morning and night, the sticky discharge was pressed out. At times cheesy matter was removed from the eyes with a straw. After getting out all the matter possible I injected into the eyes, nostrils and throat a solution made from one of the well known coal tar preparations, using one part to two parts water. A small oil can was used for injecting it. I found that the fowls would not drink water to which the coal tar preparation had been added, therefore I injected it and put permanganate of potash into the drinking water; just enough is dropped into the water to give it a good pink color. Permanganate of potash is a strong disinfectant but is not poisonous; as there is no smell to it the fowls will readily take it with the water. The coal tar solution is excellent to inject as it dries up the discharge.

One must exercise patience in treating rousy fowls as they cannot be completely cured in a few days' time. While some improvement can usually be noticed after a few days' treatment a complete cure cannot be effected in less than ten days or two weeks. The principal thing in treating roup is to keep the eyes and nostrils open so that the discharge can be removed and dried up.

Fowls cured of roup must not be used as breeders, however well they look. They will do for market, or for market eggs, but never breed from them as they will transmit the disease to their offspring. The cured fowls should be marked so that they can be easily distinguished when selecting the breeding stock.

Indiana. O. E. HACHMAN.
(The attention of Macomb County Subscriber, and of others who have recently sent inquiries which indicate that they have roup in their flocks, is directed to the suggestions and experience given in the above article.—Ed.)

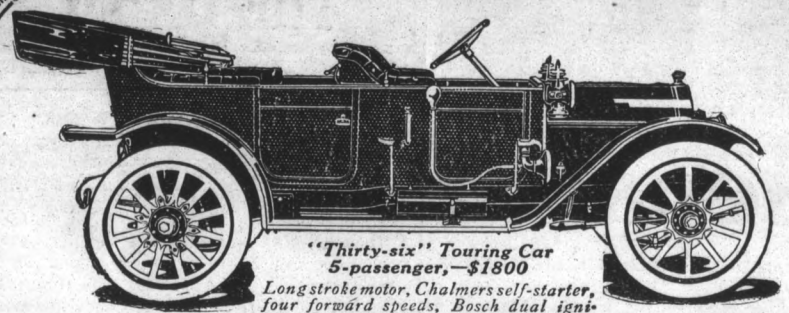
MARKETING EXTRACTED HONEY.

I have always rather favored the idea of the producer putting his name and address upon each section of honey that he placed upon the market. It will advertise his honey and some consumers will send to him direct for their supply, thus enabling him to make many more sales.

When commencing to put extracted honey on the market the best style or kind of package was with me a matter of much perplexity. After trying many and various kinds I finally decided that glass fruit jars, in their various sizes, were, all things considered, about the most satisfactory packages that could be obtained here for the retail trade. The glass itself, barring accidents, lasts an indefinite length of time. As the caps or covers are made of zinc they do not rust and if they become discolored or old-looking there are a number of preparations with which they can be very quickly and easily cleaned so that they look as bright as when new. On this account these jars, after being emptied, represent, or are worth, about as much money as when new, something that can hardly be said in favor of any other retail package with which I am acquainted. Usually even the most thrifty of housewives will hardly object to the cost of the jars, owing to the almost universal use that is made of them by all classes for canning fruit.

Extracted honey will granulate or become white and hard in cold weather. While at first this may seem to be a detriment, it is not, for it can be reduced to its liquid form again by simply heating it. Place the can or dish containing the honey you wish liquefied in warm water. In a short time the honey will all melt and will not granulate again for a long time. But be sure that the water does not get too hot—not hotter than you can bear your hand in—as overheating the honey spoils the flavor and darkens it. I try to have all my honey in the liquid form when sold, but it may granulate in time, and this is good, in fact the best, proof of its purity. Some prefer it in its candied or granulated form. Honey should be kept in a warm, dry place; dampness often causes it to sour.

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Furthermore, this car has bigness, strength, proved durability, beauty, fine finish, comfort.

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Many motorists, hearing of the Chalmers "Thirty-six" for the first time, then

learning the price, have felt much the same way.

But they are wrong. There really is such a car as the "Thirty-six," with the features named above—for \$1800.

You can see this car now at our dealer's store near you. It will look better to you there than in this advertisement. See it. Ride in it.

No car can be more serviceable to the farmer than the new Chalmers "Thirty-six." It is a car that will compare, point by point, with the most expensive car made, and yet is sold at such a price that it will pay its way in the every day work on any good sized farm.

The famous Chalmers "30" and Chalmers "Forty" also offer unusual values. The "30" sells at \$1500 and the "Forty" at \$2750. Both fully equipped at these prices.

The Chalmers Company realizes that there is no better field for the sale of cars of the Chalmers class, than right on the farm.

We want your patronage. Let us get acquainted. A postal will bring you our catalog and an introduction to our dealer nearest you.



This monogram on the radiator stands for all you can ask in a motor car

Chalmers Motor Company, Detroit, Mich.



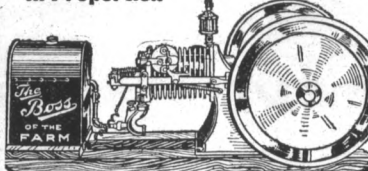
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FOR SALE—Fancy R. C. Rhode Island Red Cockerels from good laying breed. E. S. HIGBEE, Wayland, Mich.

FISHEL STRAIN White Plymouth Rock cockerels. Special sale during Nov. Price \$1 & \$2. Guaranteed to please. Bruce W. Brown, R. No. 3, Mayville, Mich.

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B. P. Rocks, R. I. Reds, W. Wyandottes and S. C. W. Leghorn eggs for sale. 15 for \$1; 25 for \$1.50; 50 for \$2.50. COLON C. LILLIE, Coopersville, Mich.

SILVER, Golden and White Wyandottes of quality, young stock after November 1st. Fine circular free. A few white roosters. C. W. Browning, Portland, Mich.

WHITE WYANDOTTES—Useful and beautiful. The kind that weighs, lays and pays. A. FRANKLIN SMITH, Ann Arbor, Mich.

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TRAINED running Fox Hounds, and some partly trained rabbit dogs, and Shetland Ponies. Ferrets wanted. Send stamp. W. E. LECKY, Holmesville, O.

For Sale, Collies—Extra fine brood matrons. Best of breeding, open and bred. Also puppies. W. J. ROSS, Rochester, Mich.

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CONDUCTED BY COLON C. LILLIE.

ADDRESS BY PRESIDENT TAFT AT NATIONAL DAIRY SHOW.

LADIES AND GENTLEMEN:—This dairy show and convention is only a part of a movement in this country that has been brought about by a consciousness that the food problem in the United States may, in the somewhat near future, become a serious one.

We have been in the habit of thinking that we had so much land and such good land that there never could come a time when we would have more people to feed than we could feed. But the last census statistics indicate otherwise. The farming lands, the total acreage in the last ten years has increased only four per cent; the improved acreage only 15 per cent; while the population has increased 21 per cent.

In the last decade, the productivity of the acre has increased one per cent a year. And thus far we are keeping up, the productivity of an acre is a hard thing to continue to increase at the same rate.

We are near the limit of our acreage. Perhaps not more than 150,000,000 acres more are capable of tillage in this country either by irrigation, reclamation or drainage.

The consequence is that in order to increase our food supply to meet the growth of the population, which in fifty years is likely to be two hundred millions, we are obliged to resort to those methods that involve greater attention, greater industry, and greater scientific knowledge than are used in the opening of a country that seems so rich that all you have to do is to tickle it with a hoe to make it smile.

As the question of food products and their movement becomes more important, those branches of the agricultural industry that depend for their success on constant manual attention and close scientific study become more important. And that, I think, is the reason for the development of the dairy interests.

That is the reason why it is so important to study the question of breeding, and the methods of feeding and the mechanical appliances for the purpose of making easier and more certain the cleanliness of the production of the milk and the manufacture of butter and cheese.

The federal government has no direct authority in this matter, except through interstate commerce and the pure food law. But it has that general interest which justifies it in expending the people's money under the welfare clause for the purpose of promoting all branches of agriculture. And through the Department of Agriculture it is doing so. And under the bureau of animal industry, it is promoting, as far as it may, the knowledge of the dairy farmers with reference to how cattle ought to be treated and how the dairy business ought to be carried on.

I believe that in Massachusetts as far back as 1816 there was a cow that produced 476 pounds of butter in one year. And now there are cows that can produce more than a thousand pounds of butter—perhaps eleven hundred.

Since I acquired one of the noted cows, I am looking into the statistics, and I want to apologize for the failure of her royal highness to be present this morning; she ought to be here.

But in spite of those high figures, I understand the average production of a milk cow is something less than 150 pounds.

Now certainly there is great room for improvement in that regard, when the difference between the average and the extreme is so great. There is room for an improvement in breeding and an improvement in feeding, and an improvement in all the methods properly usable to increase the supply of milk and butter. I am glad to be here to give, so far as I may, while the titular head of the government, the approval of the administration to any enterprise like this of a national character, that tends to promote in the spirit of competition and a proper emulation, the importance of this great branch of agriculture, and the helping along of the people by the increase in the supply of healthy milk, butter and cheese.

I do not suppose that it has any particular relevancy, but I did not know

until I went to the tropics that one of the reasons why the dreadful destruction of infants that occurs in those regions is so great, is the fact that they have not any milk with which to feed the infants—any cow's milk. It is not impossible that they should have because after I went to the Philippines I imported a cow and kept it all the time I was there, and I do not see any reason why they might not have in the tropics that source of milk to promote the cause of health. Perhaps this is reaching a little toward an ideal more ambitious than this national dairy show need be. But the importance of the production of healthy milk, and its generous supply impressed itself more on me when I had some experience in its absence, than it would if I had always had the benefit of drinking good milk and eating good butter.

I hope for this association and enterprise the greatest good fortune. I hope for the prizes that are offered here a stirring up among the professional men engaged in this work, that spirit of investigation and education which will promote the cause of this branch of agriculture everywhere. And I look forward with confidence to a development in this work which we may expect, a branch which by education, industry, enterprise and science can be made more profitable and at the same time most useful to the general public. I thank you for your kind attention.

A BALANCED RATION WITH CORN-MEAL, WHEAT BRAN, MIDDINGS AND ENSILAGE.

Can I make a balanced ration of bran, middlings and corn meal, and how many pounds of each would you feed a cow giving 12 pounds of milk at a milking? Also, have carrots, mangels and ensilage to feed her, or would I get better results by substituting seed meal in place of the middlings.

Schoolcraft Co. C. W. J.

In order to make a balanced ration with these foods you would have to use so much wheat bran that it would make the ration cost too much and you would also feed too much grain in proportion to the bulky part of the ration. I would suggest that you leave out wheat middlings entirely, they add nothing particularly to the balancing of the ration because they are no richer in protein than bran and they are now as good a cow feed, and I would substitute in the place of the middlings, cottonseed meal. Then if you will mix bran, corn meal and cottonseed meal equal parts by weight you will have a grain ration which will balance up the corn silage very nicely. A cow giving 12 pounds of milk needs in the neighborhood of 1½ to 2 pounds of protein per day. Now, two pounds of cottonseed meal, two pounds of wheat bran and two pounds of corn meal will furnish 1.24 pounds, and 40 pounds of corn silage will furnish .36 pounds, making a total of 1.60 pounds of digestible protein in the ration and I think this will be all that you can afford to feed a cow that gives only 12 pounds of milk at a milking or 24 pounds of milk per day. Of course, it will depend considerably upon the quality of the milk which the cow gives. If she gives five per cent milk it would be different than if she gave three per cent, and I would suggest that you quit figuring on the number of pounds of milk which the cow gives but figure on the pounds of butter-fat which she produces. Rich milk produces more butter-fat and it takes more feed to produce rich milk than it does to produce ordinary milk. I would also suggest that you feed some form of dry roughage food in connection with the corn silage. I don't like to have all of the roughage a succulent food. You ought to have some kind of hay, and clover hay would be best. Corn stover would be better than nothing, and even oat straw fed in connection to furnish a dry food in the ration would be better than to feed none at all. It would also be a splendid thing to feed her some of the carrots and mangels.

BUTTER MARKET NOTES.

The government is active in a campaign looking toward the detection of dealers who are selling butter with an excess of moisture. Much of it has been found and many men are being asked to pay the annual tax for handling butter having more than 16 per cent of water.

There is every promise that butter prices will rule high this winter. The average receipts are about on a par with those of former years, considering the natural increase in the number of dairy cows kept. There is a lively demand especially for the better grades of creamery, which are selling at a premium. The other grades are not without attention, but inquirers are less urgent than are the buyers of top grades.

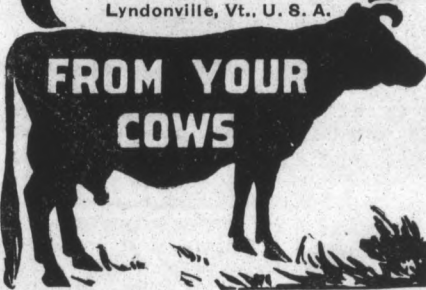
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A METHOD OF IMPROVING THE DAIRY.

Through the medium of publicity of dairy conditions and payment for milk on a basis of quality, it was possible in the course of four years to completely change the character of the dairies supplying milk for the city of Geneva, N. Y. Consumers are being instructed by physicians, boards of health, the press and otherwise, of the value of sanitary milk and the danger of that which is unsanitary. Knowing this, the factor of publicity becomes a key that opens the door for the correction of many of the evils connected with the supplying of pure milk. However, the correction is limited by the amount which the consumer stands ready to pay for the product.

In the above case quarterly inspections were made of each of the dairies supplying milk to the city. At each inspection a score was made of the sanitary conditions under which the milk was being produced and a copy of this score was furnished to the producer and to the dealers who made it a basis of payment under their contract. The scores of the different producers were also published, with the names of the retailers to whom they sold their products, that the public might know exactly from whom they were purchasing their milk and under what conditions it was produced.

It became necessary to reduce these scores to a numerical basis that comparisons might be made between the different dairies as well as between the different scorings of the same dairies. The dairies were classified as follows: A "poor" dairy was one where filthy conditions were present; a "medium" dairy where conditions were merely dirty; a "good" dairy was one where the conditions were fairly clean; and an "excellent" dairy, was a dairy where conditions were both clean and sanitary. At the beginning of the work it was believed, and there is every reason for that belief, that the dairies supplying the milk to this city was as good as the average dairies supplying milk to other cities.

The first inspection, which was very carefully made, showed 37½ per cent of the dairies to be classified as "poor," 57½ per cent in the "medium" class, while only five per cent could be called "good."

At the end of one year the score cards ranked the different dairies as follows: 2.9 per cent was "excellent;" 82.8 per cent as "good;" and 8.1 per cent of the "medium" class.

At the end of the second year the score card showed 8.6 per cent of the dairy grading as "excellent;" 82.8 per cent as "good;" and 8.1 per cent of the "medium" class.

At the end of the third year the score cards showed 12.8 per cent of the dairies to be "excellent;" 74.4 per cent to be "good;" and 12.8 per cent to be of the "medium" class.

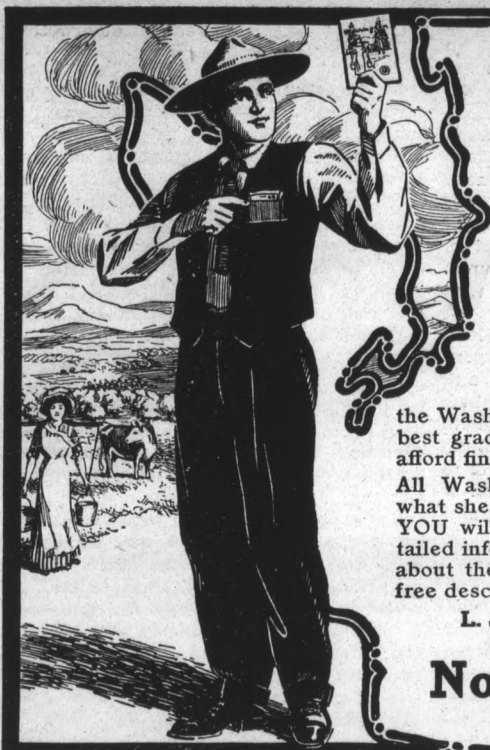
Fifteen months later, or at the end of the first quarter of the fourth year the same method classified 12.8 per cent of dairies as "excellent," and 87.2 per cent as "good." None of the farms producing milk at this time were found to grade in the "medium" or "poor" class.

It will be seen from these figures that the policy of inspection, the results of which were made known to the consumers, provided a valuable means of securing a desirable quality of milk. However, it was observed that when there appeared a disinclination on the part of the consumer to pay a reasonable amount for the attending expense of producing the better milk, there the improvement stopped, since the dairymen could not be persuaded to go to a greater expense than their receipts will allow, which, of course, is a rational attitude.

DAIRY NOTES.

W. W. Marsh pointed out that a wagon load of grain that sells for \$16 to \$20 will take as much nutriment from the soil as a car load of butter, and the butter is worth \$6,000.

Dairy products are now bringing unusually high prices, being above the values usually seen at this time of the year. The production is scarcely keeping pace with the requirements of the market, the rapidly growing population of the United States calling for increased supplies, and stocks in cold storage are much smaller than a year ago. Butter is going to be dear the coming winter. The best creamery butter is wholesaling for 31 cents a pound in the Chicago market, and cheese is also up in price, "Americans" going for 15 cents a pound.



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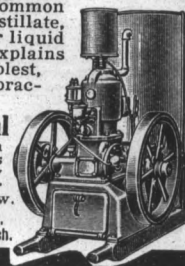
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The Lawrence Publishing Co.,
Detroit, Mich.

DETROIT, NOV 18, 1911.

CURRENT COMMENT.

Michigan's Sugar Crop. The present estimate on the increased acreage of sugar beets in Michigan as compared with last year gives us an area of about 20 per cent more than one year ago. The unfavorable weather of the late fall is likely to decrease the percentage of sugar in the beets and may interfere with harvesting a portion of the crop. However, the late rains increased the tonnage to some extent, possibly enough to counterbalance the other factors noted.

With this increased acreage in beets, Michigan will make a close race for first place as a beet-producing state this year. Three years ago it took third rank in the United States, Colorado and California being ahead in tonnage. Last year it was next to California, Colorado dropping behind in the race. Most dependable estimates indicate that Michigan will produce close to 135,000 tons of sugar this year. The high price of sugar will make it a profitable season indeed for the sugar factories, which have been uniformly prosperous during recent years, and, although the crop has proven a profitable one to Michigan farmers under present price conditions, the season may be a favorable one for securing the price advance which was demanded before the business reaction of last year and which, it would appear, sugar factories could well afford to pay, as indeed one of them is now paying practically the price demanded by the farmers who inaugurated the movement last year which was not carried to a final issue.

Implement Dealers Oppose Parcels Post. At a meeting held in Lansing last week, the Michigan Retail Implement and Vehicle Dealers' Association adopted resolutions advocating the appointment by congress of a non-partisan commission to investigate the question of parcels post, legislation to be deferred until such commission shall have had ample time to act and report. It is difficult to see why an association of this kind should take such an active interest in the possibility of inaugurating a parcels post, since farm implements and vehicles would hardly be transported through the mails under any parcels post law that has yet been proposed. It is, however, perhaps fortunate rather

than otherwise, that this action was taken, since it will help to awaken the farmers of the state who are in favor of an adequate parcels post law, to the necessity of taking some personal action in the matter if they would influence the Michigan delegation in congress to favor such a law. If every reader of the Michigan Farmer who is in favor of the enactment of a parcels post law, would take the time and trouble to write his member of congress and the United States senators from Michigan, touching his views upon this question, there is little doubt that the Michigan delegation would favor the enactment of a liberal parcels post law. However, if a representative contingent of business men oppose the measure and the people themselves do not voice their interest in it, they will have none to blame but themselves if the Michigan delegation is not active in the support of such a measure at the coming session of congress. A word to the wise is sufficient.

Would Apply Favored Nation Clause. A recent dispatch from Washington states that Norway and Sweden, through their diplomatic representatives, have requested the United States to grant to them, under the favored nation clause of their treaty with this country, the same privileges given to Canada by Section 2 of the reciprocity agreement, by which wood pulp and print paper are admitted free of duty from that country into the United States. It is also said that several other countries, including Germany, are believed to have asked the same privilege of the United States.

This little echo from the reciprocity campaign brings up a point which was advanced by some opponents of the Canadian pact, that it would open up a possible avenue of difficulty with other nations due to the favored nation clause, so-called, which is written into practically all of the commercial treaties of the United States with other countries. But the most interesting point about this latest echo regarding the reciprocity bill, is the fact that the newspaper interests behind it, seeking free pulp and free paper, were not obliged to take any chances on the final ratification of the pact by both countries.

It will be remembered that the portion of the bill referring to the paper schedule, as it was passed by our congress and signed by our President, was incorporated by itself in Section 2 and did not depend upon the reciprocal action of Canada to make it effective. Hence, when the bill was passed by congress and signed by the President, the paper schedule, so far as Canada was concerned, was revised and print paper and pulp have been coming into the country from Canada under its provisions, although little has been said about this phase of the proposition in the public press.

It may be in line with good policy to conserve our supply of pulp wood by such means, although it would not appear that it was wholly necessary to provide for it by this cleverly manipulated method, which is brought forcefully to public attention for the first time by the attempt of other nations to profit by the favored nation clause of their treaties in a similar manner.

Teaching Agriculture in the Schools. It is not uncommon for speakers and writers of some note in the business world to advocate the teaching of agriculture in the common schools and to refer to what is being done in other states or countries along this line. As a matter of fact, however, there is probably no state in the Union which has made a better start in the teaching of agriculture in the public schools, than has Michigan. For several years a department of agricultural education has been maintained in our agricultural college in charge of an ex-deputy superintendent of public instruction, who has had a wide experience in school work in the state and who has a deep knowledge of our public schools, as well as a good working knowledge of the kind of agricultural instruction which can best be inaugurated in those schools. Michigan has begun at the bottom in this work, the first move being the placing of agricultural courses in a number of high schools of the state with a view of affording an opportunity for agricultural education to the patrons of those schools—a large proportion of whom are farm boys and girls—and at the same time provide teachers who will be equipped with the necessary knowledge for the teaching of agriculture in the pri-

mary schools of the state at such time as that may be considered expedient or desirable.

There is no line of work which would seem to promise more for the future of our agriculture than the betterment of our common schools in this manner, and the greater the improvement in our common schools, the higher will be the class of citizenship which they will produce in the future generations of our people. But there are peculiar advantages in the teaching of the elements of scientific agriculture in the common schools which will amply repay the cost of inaugurating such instruction in them.

With the view of bringing this point out more strongly than would otherwise be possible, the publishers of the Michigan Farmer aim to give the opinions of practical farmers, located in the several sections of the state where agricultural courses are now maintained in high schools, regarding the benefits derived by the communities, as well as by the boys and girls themselves, from this innovation. The first of these letters appears in this issue, being the opinion of a practical Otsego county farmer upon the advantages to be derived from the teaching of agriculture in the schools. Other similar letters will follow, giving the opinions of other farmers who live in close proximity to these schools in which agricultural courses have been started, to the end that the true sentiment regarding such schools held by the farmer taxpayers who are helping to support them may be presented to our readers, thereby bringing this proposition of school improvement squarely to their attention at a time when the knowledge and opinions gained may be of some value in solving this impending question in the reader's locality.

The First Secretary of Agriculture. During the early days of November the announcement of the death of the

Hon. Nor. J. Colman was flashed over the land. Mr. Colman's demise removed from the field of action a man who has been influential in the upbuilding of American agriculture. Mr. Colman was born in Otsego county, New York, in 1827. A lawyer by profession, he practiced in Albany, Ind., from 1850 to 1852 inclusive, during which latter year he removed to Missouri. Soon after locating in St. Louis, Mo., he established an agricultural journal which is still in existence, which entitles him to be classed as the dean of agricultural editors in his state, if not in the country.

He was the recipient of many local honors in his own state and was appointed in 1885 by President Cleveland as United States Commissioner of Agriculture, which position, under that administration, was elevated to the dignity of a cabinet position, and in 1889 he was appointed by President Cleveland to be the first United States Secretary of Agriculture. Mr. Colman had ever retained a direct interest in agriculture and for several years conducted a model and experimental farm in Missouri. During his service as Secretary of Agriculture—although comparatively few people are aware of the fact—Mr. Colman drafted the law providing for the establishment of experiment stations under government aid, which is commonly known as the Hatch Act. This bill represented the results of several years' study by Mr. Colman and was introduced for him by Congressman Hatch, of Missouri, whose name it bore after becoming a law. It is said that the original draft of the bill, in Mr. Colman's well-known handwriting, is among the archives of the Department of Agriculture at Washington.

Mr. Colman received many honorary degrees and decorations from foreign countries, as well as by colleges and agricultural associations. He retained his interest in agricultural affairs until the last, being en route on a railway train to a distant point where he expected to purchase a horse for his farm at the time of his death. He had an extended experience as a horse breeder, which caused his selection as one of the commissioners to head the government horse breeding farm at Fort Collins, Col., for the establishment of a breed of American trotting carriage horses. The development of a national department of agriculture, the founding of which was the culmination of Mr. Colman's personal ambition, has been such as to clearly demonstrate the foresight of this pioneer in agricultural educational work, while the invaluable accomplishments of the many experiment stations which have been established under the Hatch law, constitute

an imperishable monument to the achievements of Mr. Colman, of which his numerous friends, and, indeed, the country at large, may be justly proud.

TEACHING AGRICULTURE IN OUR SCHOOLS.

Its Effect Upon the Community, the Farmer and the Farm Boy.

I think farming one of the noblest callings of man, and believe that all who come in contact with it cannot but feel they have something to live for that is worth while. My experience as a boy, over forty years ago, was that the farmer boy was jeered at and made fun of by the town boys. But in this regard things have changed. Our boys can now go to town and talk base ball, foot ball and farming with the town boys on equal terms, and all seem to take an interest in farming as well as in sports and games.

I think the general interest taken in the teaching of agriculture in our schools has brought about the change, and am certain that these modern influences have been and are of untold benefits to our community. The boys so taught can go forth into the world and set examples that others may follow, and that will be a credit to themselves and all mankind. The boy who has a chance to learn the scientific principles of up-to-date farming, how to maintain fertility of the soil and make a success, will be a guiding star to many others through the whole-some power of example.

I could enumerate many benefits to be derived from the teaching of agriculture in our schools, but the all important one is, we are in need of better farmers—men who have the up-to-date knowledge as well as practical experience to get more out of the soil, and still build up the depleted fertility of our farms, thus making provision for future generations which they will surely need.

We have a farm one mile from a hustling town and have six boys from eleven to twenty-three years old, all at home and well contented. We also have four girls that can give us help at many things on the farm and take pleasure in seeing the work pushed along. I think money is well spent in teaching agriculture, in or out of school, and say, push the good work along.

Otsego Co. J. H. BARTON.

HAPPENINGS OF THE WEEK.

National.

Farm buildings in the United States were valued in 1900 at \$3,555,640,000, whereas in 1910 the value had increased 77 per cent and amounted to \$6,294,737,000.

The north central states were hit by a cold wave and high winds on Sunday last. Unusual temperatural changes accompanied the storm, the thermometer having dropped in different places from 50 to 70 degrees. Much damage was done by the wind. The storm struck heavily at Owosso, Mich., where two persons were killed, many hurt and property to the amount of \$500,000 destroyed. Eight persons are dead at Janesville, Wis., and vicinity, two fatally injured and scores of others hurt and property estimated to be worth \$1,000,000 is destroyed. In Chicago two men were frozen to death, seven fishermen are reported missing on Lake Michigan, while many persons were hurt on icy pavements. The shipping interests of the western metropolis were severely shaken and considerable damage done. A man was frozen to death at Grand Forks, N. Dakota, while another one died from the same cause at Omaha, Neb. The whole state of Indiana was swept by a blizzard and it is estimated that a million dollars worth of damage has been done to property. Ohio suffered similarly from the effects of cold, winds and snow. Kentucky was also included among the states which suffered from this storm and Alabama and the Gulf Coast were effected to an unusual degree.

The damage done the shipping interests on the great lakes by the storm of Sunday will amount to millions of dollars. Many boats are ashore and several exciting experiences of seamen are reported. At Cleveland it is stated that the storm is the worst that has appeared for 20 years. Seven men were driven across Lake Michigan from Milwaukee in an open boat. They suffered severely from exposure. Seven men are also missing in a gasoline launch out from Chicago. Two steamers are aground in St. Mary's river where the storm lowered the water and made navigation hazardous.

President Taft has returned to Washington from an extended trip through the country, having made 15,000 miles in his journey to the north, west, southwest and south. He is most sanguine regarding the outlook of the country, and for his political party. He points toward the recent elections as indicating that a halt had been made in the drift toward democracy.

An organization has been consummated for the purpose of promoting the adoption of the proposed arbitrary treaties between the United States and England and

FARMS AND FARM LANDS FOR SALE OR EXCHANGE

FARMS—Before you buy send for my list of over 200 Southern Michigan Farms. Eyster, The Farm Man, 507 Majestic Bldg., Detroit, Mich.

FOR SALE—Fine 80-acre farm in fine condition, all improved, tiled, with good buildings, in fine neighborhood. Price \$100 per acre if taken now. Leslie G. Brown, St. Johns, Mich.

For Sale—160 Acres in Oakland County. Good soil, 2 houses, 2 barns, silo. \$45.00 per acre. \$3,000.00 cash. Balance time. Address the owner, O. N. KING, Ortonville, Mich.

HOMESEEKERS—Virginia offers vast opportunities. Best markets, finest climate, cheap good lands, schools, society, good fruit section. Write for catalog. Desk 3, International Farm Agency, Lynchburg, Va.

For Sale—One Farm of 260 Acres or two smaller ones of 120 and 140 Acres. Splendid brick house and good farm buildings—two miles from city. Strong soil for all crops. A. L. SMITH, Coldwater, Michigan. Bell phone.

CENTRAL MICH. FARMS—For sale, 3000 acres out over hard wood lands near Bay City on D. & M. R. R. in lots to suit purchasers. Address JACOB SCHWARTZ, Saginaw, Mich.

WHY PAY RENT when you can buy the Best Land in Michigan at from \$7 to \$12 an acre near Saginaw and Bay City. Write for map and particulars. Clear title and easy terms. Stafford Bros. (owners) 15 Merrill Bldg., Saginaw, W. S. Michigan.

Large Farm For Sale by Owners!

900 Acres, near coast in Eastern North Carolina. As equable and healthful climate as can be found in North America. Will grow profitably every farm and truck crop of either the North or South. Soil exceptionally fertile. 350 Acres newly fenced and 200 acres in high state of cultivation, 125 of which is black loam 3 to 5 feet deep on clay sub-soil. Lands level, well drained and no rocks or stumps. Large demand and high-priced market for everything raised. Will sell all or part at a bargain and on satisfactory terms. Excursion rates twice a month. Full particulars by addressing the owner.

R. C. COOL, Southport, N. C.

FOR SALE—A Good Farm 145 Acres

only 1/2 mile from Wayne County line. Soil dark clay loam, nearly level. 20 acres good timber and sugar bush. Good buildings and fences. A better farm than many that have recently sold at \$80 to \$100 per A. If sold soon \$11,000 takes it, (less than \$76 per A.) Buy direct of owner, and save commission. Address SUPERIOR FARM, R. No. 1, Plymouth, Mich.

FREE Literature will be sent to any one interested in the wonderful Sacramento Valley, the richest valley in the world. Unlimited opportunities. Thousands of acres available at right prices. The place for the man wanting a home in the finest climate on earth. No lands for sale; organized to give reliable information. Sacramento Valley Development Association, California.

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The territory traversed by the Nashville, Chattanooga & St. Louis Railway is rich in natural resources, and its climatic conditions and the fertility of its soil offer unexcelled opportunities for the profitable production of grains, grasses, live stock and truck crops. Fertile and attractive farm lands may be had at very low prices. Write me at once for free descriptive literature. H. F. Smith, Traffic Manager, Dept. P, Nashville, Tenn.

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My charge of one dollar with a good description of your property covers all expense to you, and I'll send the buyers your name and address with description of property. Stocks of Mdse., Farms, Elevators, Hotels, Machine Shops, anything that has value is wanted by someone somewhere. Let me try to put you in touch with real owners, either sale or trade.

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The Secretary of the United States Department of Agriculture, James Wilson, after personally inspecting New York State farms, said: "Hereafter when a young man with a few hundred dollars asks where he can engage in farming to the best advantage, I shall ask that he be directed to the possibilities existing throughout New York State." This splendid 250-acre New York State farm is better than the average machine worked fields out 50 tons hay, spring-watered pasture, 300 cords wood, large quantity timber, apple orchard producing 800 barrels, other fruits: 2-story 15-room house, running water, big barn, other out-buildings; beautiful shade, pleasant view; 1 1/2 miles to railroad, electric cars, stores, etc; school and neighbors near. To settle estate quickly two horses, two cows, five hogs, all wagons, farming machinery and small tools included, \$5000 takes all, half cash, balance at 5 per cent; full details and traveling directions to see this and other profit-paying dairy, corn and fruit farms, page 28, "Strout's Farm Catalogue '11" illustrated and filled with reliable information regarding climate, railroads, markets, schools, crops raised, etc., in all the best farming districts in the east; copy free. Station 101, E. A. STROUT, Union Bank Bldg., Pittsburg, Pa.

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France. The personnel of the organization, which has its headquarters in New York city, consists of men of prominence from all parts of the country. Michigan is represented among others, by Dr. J. B. Angell of the state university.

John T. Shaw, president of the First National Bank of Detroit, was fatally injured in an auto crash Sunday while journeying in Ohio from Cleveland to Willoughby.

The railroad traffic in the north central states appears to be improved over last year. It is generally estimated by traffic men to be 20 per cent higher.

It is reported that the administration is drafting a bill to supplement the Sherman anti-trust law. The nature of the proposed measure is not divulged.

Two thousand visitors are expected at Columbus, Ohio, this week to attend the eight agricultural conventions to be held there. The different organizations holding their sessions are: The American School of Agronomy, The American Association of Agricultural Institute Workers, The Ohio State Grange, The American Association for the Advancement of Agricultural Teaching, The Society for the Promotion of Agricultural Colleges and Experiment Stations, The Association of American Seed Analysts and the National Grange. Prominent men from all over the country will be present and address the different organizations.

The constitutionality of Oregon's initiative and referendum law is being tested by the supreme court of the United States in two cases brought by the Pacific States Telephone & Telegraph Co., and the taxpayers of Oregon.

A special train carrying a number of governors of western states will visit Michigan the latter part of November. The purpose of their visit is to awaken interest in the possibilities of the west, as well as to become more intimately acquainted with the eastern states.

Because they were compelled to eat food which they deemed unfit, waiters at Sage Dormitory, Cornell University, are out on strike.

Foreign.

A by-election held in the city of London for selecting members to the British House of Commons resulted in a gain of one member for the unionist party.

Twenty-six persons are believed to have been drowned in the steamer Carara which left Barcelona for Berlin. Nothing has been heard from the craft or its crew.

The recent storm caught much grain in the Canadian Northwest in the shock, the snow covering the wheat a foot or more. The grain will suffer considerably from this cause.

The Italian-Turko war has offered no exciting news during the past week. The Italian fleet is being assembled for an attack on coast cities in the Egean Sea. Should an attack be made on these cities as planned, Turkey has notified the powers that she will be compelled to expel the Italians from the territory about.

It is becoming evident that the present revolution in China is quite different from the Boxer uprising of ten years ago, since foreigners were not being molested in the recent massacre. Care has evidently been taken by both the revolutionists and the Manchus to protect the persons and property of foreign residents. Within the past few days communication between the throne and Yuan Shi Kai—to whom had been offered the premiership of the empire but who has refused to accept the office—has brought a feeling of relief that is particularly noticeable in Peking. It is hoped that a conference between this great statesman and the administration will result in a plan to end present warfare. Reports of engagements have been favorable to the rebels, showing that several cities have fallen into their hands during the past week. The situation is becoming acute and it is feared that much suffering will soon result from famine should hostilities be permitted to continue much longer. An appeal has been made by Wu Tung Fang to Prince Regent Chung to resign his position, join the republican party and thereby put an end to the struggle. Many reports testify that large numbers of the imperialist troops are going over to the rebels and making the situation more threatening to the government.

MICHIGAN CROP REPORT.

Wheat.—The condition of wheat as compared with an average per cent is, in the state and upper peninsula 90, in the southern counties 87, in the central counties 93, and in the northern counties 94.

The total number of bushels of wheat marketed by farmers in October at 129 flouring mills is 251,052 and at 143 elevators and to grain dealers 320,944, or a total of 571,996 bushels. Of this amount 392,774 were marketed in the southern four tiers of counties, 145,465 in the central counties and 33,757 in the northern counties and upper peninsula. The estimated total number of bushels of wheat marketed in the three months, August-October, is 5,000,000. Seventy-seven mills, elevators and grain dealers report no wheat marketed in October.

Corn.—The estimated average yield of corn in bushels is 32 in the state, 33 in the southern counties, 31 in the central counties, 30 in the northern counties and 37 in the upper peninsula.

Clover Seed.—The per cent of acreage of clover seed harvested as compared with average years, is 64 in the state and northern counties, 61 in the southern counties, 69 in the central counties and 81 in the upper peninsula. The average yield per acre in bushels is 1.49 in the state, 1.39 in the southern counties, 1.68 in the central counties, 1.64 in the northern counties and 2.00 in the upper peninsula.

Potatoes.—The estimated average yield per acre, in bushels, is 92 in the state, 84 in the southern counties, 87 in the central

counties, 105 in the northern counties and 128 in the upper peninsula.

Commercial Fertilizers.—The per cent of farmers who have used commercial fertilizers on their wheat this fall, is 19 in the state, 27 in the southern counties, 20 in the central counties, 4 in the northern counties and 1 in the upper peninsula.

Live Stock.—The average condition in the state of horses, cattle and swine is 96 and sheep 95.

Table showing for the state the estimated acreage and yield per acre of the following farm products for 1911:

Farm Products.	Estimated acreage.	Yield per acre, bushels.
Wheat	834,000	17.
Corn	1,684,972	32.
Oats	1,471,948	27.
Barley	94,050	22.
Rye	428,129	14.
Buckwheat	75,909	14.
Potatoes	354,734	92.
Beans	438,858	12.
Peas	73,500	12.
Clover Seed	144,412	1.49
Apples	269,449	41.08
Peaches	30,000	51.75
Pears	9,398	69.15
Plums	7,063	44.67
Cherries	5,097	37.81
Strawberries	10,217	61.42
Raspberries	6,300	32.54

Sugar beets	111,000	Tons. 10.
Timothy hay	1,201,500	1.19
Clover hay	1,016,750	1.24

NATIONAL CROP REPORT.

The Crop Reporting Board of the Bureau of Statistics of the Department of Agriculture estimates, from the reports of correspondents and agents of the Bureau, as follows:

Corn.—Total production for the year, 2,776,301,000 bu., compared with 3,125,713,000 bu. in 1910. Average yield per acre, 23.9 bu., compared with 27.4 bu. in 1910 and 26 bu. the average for the past 10 years. Percentage of 1910 crop on farms Nov. 1, 1911, is estimated at 4.2 per cent (132,063,000 bu.), against 4.3 per cent (119,056,000 bu.) of the 1909 crop on farms Nov. 1, 1910, and 3.3 per cent, the average of similar estimates of the past 10 years.

Wheat.—Total production, 655,316,000 bu., compared with 695,443,000 bu. in 1910 and a five-year average of 692,825,000 bu. The average weight per measured bushel of this year's crop is 57.8 lbs., against 58.5 lbs. in 1910, and 57.6 lbs. the 10-year average. The price per bu. on Nov. 1, 1911, was 91 1/2c, compared with 90 1/2c for same date of 1910.

Oats.—Total production, 873,641,000 bu., compared with 1,126,765,000 bu. in 1910, and a five-year average of 897,415,000 bu. The average weight per measured bushel of this year's crop is 31.1 lbs., against 32.7 lbs. in 1910, and 31.2 lbs. the 10-year average. The price per bu. on Nov. 1, 1911, was 43.8c and 34.9c on Nov. 1, 1910.

Barley.—Production, 145,951,000 bu., compared with 162,227,000 bu. in 1910 and a five-year average of 161,241,000 bu. The average weight per measured bushel of this year's crop is 46.0 lbs., against 46.9 lbs. in 1910. The price per bu. on Nov. 1, 1911, was 84.9c, compared with 55.3c on Nov. 1, 1910.

Rye.—Production, 30,677,000 bu., compared with 33,039,000 bu. in 1910 and a five-year average of 31,503,000 bu. The price per bu. Nov. 1, 1911, was 83.1c and 71.6c Nov. 1, 1910.

Buckwheat.—Production, 17,051,000 bu. compared with 17,239,000 bu. in 1910 and a five-year average of 15,366,000 bu. Average yield per acre is 21.3 bu., compared with 20.9 bu. in 1910 and a 10-year average of 19.1 bu. The price per bu. Nov. 1, 1911, was 73c and 65.9c Nov. 1, 1910.

Potatoes.—Production, 281,735,000 bu., compared with 338,811,000 bu. in 1910 and a five-year average of 304,513,000 bu. Average yield per acre is given at 80.6 bu., compared with 94.4 bu. for 1910 and a 10-year average of 92.8 bu. Quality is placed at 5.3 per cent, compared with a 10-year average of 87.7 per cent. The price per bu. Nov. 1, 1911, was 76.3c and 55.7c Nov. 1, 1910.

Hay.—Production, 46,969,000 tons, compared with 60,978,000 tons in 1910 and five-year average of 63,418,000 tons. The average price per ton on Nov. 1, 1911, was \$14.62, compared with \$11.96 on Nov. 1, 1910.

Apples.—Average production of 1911 crop, 62.4 per cent of full crop against 43.5 per cent of a full crop in 1910, and 49.4 the ten-year average percentage of a full production. The quality is 78.2 per cent.

CROP AND MARKET NOTES.

Newaygo Co., Nov. 1.—Too much rain for everything. Wheat is looking yellow; corn fodder getting very black; not much of the corn husked out yet. Beans are a poor quality with a yield of about 10 bushels per acre and selling at \$2 per bushel in our market. Potatoes are poor in quality and will hardly keep until spring; they are selling at a good price and still going up. Only one light freeze, followed by a light skiff of snow, which frosted lots of undug potatoes. Wheat, 84c; oats, 45c; corn, shelled, 70c; rye, 80c; potatoes, 55c; eggs, 26c per doz; butter, 26c lb.; hay, \$20 per ton. Lots of auction sales this fall and a good many farms changing hands, going to outside buyers.

The 56th annual gathering of the Illinois State Horticultural Society will meet in the agricultural building of the Illinois State University, December 11-16, 1911. An unusually well balanced program has been arranged and preparations made for fruit and machinery exhibits.

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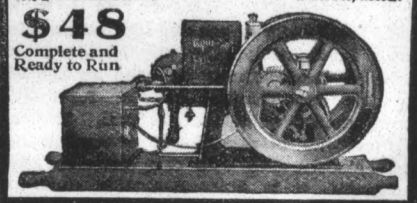
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PRACTICAL SCIENCE.

ANALYSIS OF THE SOIL.—III.

BY FLOYD W. ROBISON.

We have observed the possibility of considerable difference existing between immediate productive capacity of a soil and the permanent productive capacity. We have likewise observed that one may be very much deceived by judging a soil upon the results of its immediate productive capacity, likewise, on the other hand, a soil of much promise may be passed by as undesirable because of its lack of sufficient immediate productive capacity, where if it were properly handled so that its immediate productive capacity were improved it might, because of a very desirable permanent productive capacity, prove to be a very desirable soil. A careful chemical analysis, coupled with a quite thorough mechanical analysis, will give one clue to the permanent producing capacity of a soil. If to this analysis we add a chemical analysis of the capillary water of that soil, or what may perhaps be considered closely similar, an analysis of the watery solution of that soil, we will have a very fair idea of its immediate productive capacity as well.

Perhaps one of the most desirable methods of determining the productive capacity of a soil is by means of what we may call the physiological analysis of the soil. By a physiological analysis of the soil we mean here an analysis through the medium of the crop. This style of analysis requires, as will be seen, practically a season for its completion. Incidentally, the physiological analysis of the soil may be used as a basis for the ascertaining of the fertilizing requirements of a certain soil. To the farmer who is capable of observing results closely, and who can exercise good judgment, it is quite desirable that his farm be so arranged as to different fields, etc., that it is possible for him to carry out from time to time a series of experiments on the different fields to ascertain the condition of fertility and likewise ascertain at the same time what fertilizing materials may be added advantageously to the soil.

Most farms are laid out without any apparent regard to the classes of soils which go to make up that farm. One large field, for example, may contain a great variety of soils. It is very difficult to crop such a field advantageously and economically. It is likewise very difficult to fertilize intelligently such a field. If the high portions of the farm were reserved by themselves and the low portions were likewise segregated or arranged in fields by themselves, then it would be comparatively easy to carry out a systematic cropping of the soils and likewise a systematic fertilizing of that soil. There is no doubt that certain soils, because of their different physical and chemical composition are differently adapted toward crops. Not all soils will produce a crop of corn equally well with equal economy. Nor are all soils similarly adapted to wheat growing or to various truck gardening propositions. This condition is recognized generally when we know that in certain sections of the state and country wherein the soil is uniform and of particular character, certain definite farming operations thrive well. We know, for example, that the vicinity of Kalamazoo has become world-famed for its production of celery. We may likewise know that down in this same section is grown the greater portion of the peppermint of the world. A great many farmers have in their fields a soil that is well adapted to the growing of corn. In other portions is a soil that is well adapted to the growing of wheat; in still another portion is a soil that is well adapted to the growing of celery, or mint, or other crops. To so lay out the farm that one field has in it all classes of crops just mentioned above is to make sure that the farmer is operating much below his possibilities on this farm. One would not think of planting wheat on the soils which are especially adapted to the growing of mint; nor would one expect to get desirable results by planting to mint a soil that has been shown to be especially adapted to the growing of corn, but when the farmer divides his farm mechanically and regularly into different fields without regard to the kinds and condition of the soil in those different fields, then he is compelling the soil which may be adapted especially, we will say, to mint growing, to respond for the

sake of harmony to the growing of a crop of corn which he may have decided to plant upon this field because perhaps the major portion of that field may be best adapted to corn growing. This difficulty is, of course, not encountered when the farm is level and uniform.

On a soil that is level and uniform, the variety of agricultural possibilities is perhaps not so great as on a soil that is varying in its physical and chemical characteristics. On a uniform soil, however, it is possible to know its possibilities and its fertilizing requirements with a great deal more exactness than is possible on the other soil. On such a soil the physiological analysis is a decidedly feasible and, in fact, desirable analysis to make.

Hilgard's system of determining the fertilizing requirements of a soil is, in our judgment, an excellent system to follow, not only in determining the fertilizing requirements of the soil but also in determining the adaptability of that soil to different crops. This will require a full growing year but can be carried on at the same time as other farming operations and if done carefully need not interfere with the ordinary farm operations, nor utilize a large portion of the farm. We give below a diagrammatic sketch for making this so-called plot, or physiological analysis.

On a field which is uniform in physical respects and is so arranged that one portion of the field is of practically the same quality and class of soil as the other portion of the field, perhaps in the center may be laid out a series of plots of say, one-fortieth acre each, separated from each other by a path from two to three or four feet wide. On these different

CORN	WHEAT	POTATOES
CLOVER	BEANS	ALFALFA
CORN	WHEAT	POTATOES
CLOVER	BEANS	ALFALFA

Scheme for making Physiological Analysis of the Soil.

plots different crops may be planted; for example, corn may be planted on one; wheat on another, perhaps buckwheat may be grown on another; potatoes on another; beans on another; clover on another, etc., taking care that the plants do not run into each other nor the seeds become distributed from one plot to the other. The results of these various tests, all things being equal, will determine to a high degree of satisfaction to which one, or to which ones of the crops planted that soil seems best adapted. This is not a simple experiment by any means, but will require the keen judgment and discretion of a man who is in the habit of observing closely. It should also be borne in mind in this respect that his judgment is again called into play in ascertaining the effect upon these different crops, of the particular season. One year may not be a favorable year for the growing of potatoes, because it may be too wet or too dry. The year may be too wet for corn, and to decide this calls for the exercise of keen judgment on the part of the farmer. But we know of no plan which will give a greater degree of satisfaction than this same plan of experimentation, and we think it will well repay the farmer to dedicate a small portion of his farm, which portion is fairly representative of that farm, to the purposes of experimentation as herein described.

After having determined the adaptability of the soil through one season, perhaps, to this or that particular crop, the same system may be resorted to to determine the most desirable kind of fertilizer to be added to this soil in the



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production of this or that particular crop. Suppose that there are twelve different fourth-acre plots reserved for experimentation. To six of these we may apply different kinds of fertilizers and the second six may be reserved as a duplicate of the first six insofar as these particular fertilizers are concerned. To the first six, however, we will add a liberal supply of lime but to the second six we will not add the lime. We will now, per-

NITROGEN CORN LIME	PHOSPHORUS CORN LIME	POTASH CORN LIME
CORN LIME	NITROGEN PHOSPHORUS POTASH CORN LIME	CORN LIME
NITROGEN CORN	PHOSPHORUS CORN	POTASH CORN
CORN	NITROGEN PHOSPHORUS POTASH CORN	CORN

Plans for ascertaining most favorable treatment for a soil planted to corn.

haps determine the effect of these different fertilizers on this soil, upon the growth of the crop of potatoes, we will say, or if we have decided to use wheat upon this soil, let us plant these different plots to wheat and determine under which system of fertilizing the wheat produces the best crop, or corn, or any other crop which we decided to grow upon this field. We give herewith a sample experiment plot in diagram.

ECONOMICAL PRODUCTION.—III.

The development of the idea of the balanced ration for feeding dairy cows has resulted in the compiling of definite and desirable data on the cost of milk production and on the nature of the feed to be used for the economical production of milk. When the balanced ration was first proposed the Wolff Feeding Standard was quite religiously adhered to by feeding experts. The basis upon which this standard was based was the weight of the animal. For a 1,000-pound dairy cow it was assumed that she should require in the ration, daily, about two and one-half pounds of digestible protein and that this protein should bear a certain more or less definite ratio to the other constituents of the feed, i. e., nitrogen-free extract and the fat. The idea of the balanced ration is right but the ratio must not be too iron clad. The food requirements of an animal do not depend directly upon the body weight but more directly upon the body surface of the animal.

Armsby, in his work on cattle feeding and the maintenance requirements for dairy cows used a factor compiled according to the body surface of the animal rather than according to the weight. Even then, however, on dairy cows the results do not bear out tying too religiously to an exact ratio. Two cows of approximately the same weight and approximately the same body surface will vary considerably in the yield of milk and because of this variation their feed requirements are essentially different. A cow giving a large flow of milk will be inclined to be underfed by the feeder, whereas a cow giving a light flow of milk will be apt to be overfed.

Eckles, of the Missouri station, carried out an experiment on the feeding for milk production in which this point was very nicely developed. He states very emphatically that the cow of high milk productive capacity is exceedingly liable to be underfed because the feeder does not take into sufficient consideration the items drawn upon in the system of the animal in the production of the larger quantity of milk which she is daily generating. Ordinarily we say that the first use of the feed that is given to the dairy cow is taken by the animal to keep that animal a cow, or in other words, to keep up the maintenance requirements of the animal body, and after this amount has been supplied then there is material available for the production of milk. This theory is a very beautiful theory and is not an undesirable one to inculcate in

the mind of the feeder even though, perhaps, it does not state the exact and entire truth of the matter.

Some cows will produce milk at the expense of the body weight while others will make body weight at the decided expense of milk production and we therefore find that in the last analysis the individuality of the animal is an item that we must give greater and greater attention to. It is well, however, to consider that in cows of high productive capacity the maintenance requirement of the animal should have proper consideration in order to make proper allowance for the food material which the animal is manufacturing and in order that when this food material is manufactured by the animal she is not manufacturing it at the expense of the body weight.

On the other hand, for economical feeding it must not be forgotten that after a satisfactory physiological condition is created in the cow, that the feed should be then governed largely by the results obtained in milk production. In other words, if the animal of low productive capacity is placed on the same basis as the animal of the high productive capacity, such as mentioned above, the animal of low productive capacity will not increase in the output of milk but will begin to take on fat, which is an evidence of overfeeding.

FLOYD W. ROBISON.

LABORATORY REPORT.

Humbug Oil.

It seems almost impossible that a product labeled as above should find sale in these days and yet not only has it been on the market but it has been the cause of an action under the Food and Drugs Act, and the issuance of a notice of judgment, No. 988, the text of which reads as follows:

On April 4, 1911, the United States Attorney for the District of Minnesota, acting upon the report by the Secretary of Agriculture, filed information in the District Court of the United States, against Mrs. J. F. Marshall Smith, alleging shipment by her, in violation of the Food and Drugs Act, on or about May 4, 1910, from the state of Minnesota into the state of Utah, of six boxes of a drug denominated "Humbug Oil," which was misbranded. The labels on these boxes contained the statement: "Humbug Oil relieves diphtheria of the most malignant type."

Analysis by the Bureau of Chemistry showed the product to consist of immiscible portions, one an oil 40 per cent by volume, half volatile (oil of turpentine), and half non-volatile (apparently linseed oil); the other 60 per cent by volume, consisting of hydro-alcoholic solution of ammonia water, ammonium salts, and a volatile alkaloid, probably conin. Misbranding was alleged for the reason that these ingredients do not possess properties to relieve diphtheria of the most malignant type, and the statement on the label to that effect was, therefore, false and misleading.

On April 13, 1911, the defendant pleaded guilty and was fined \$5.

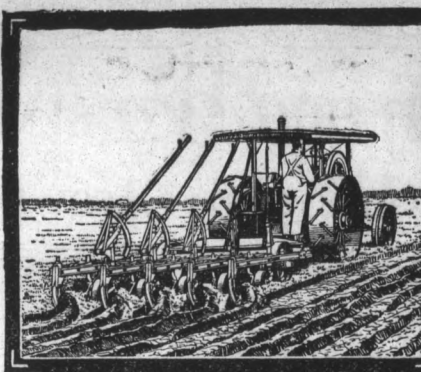
Misbranding of Butter.

Another notice of judgment, No. 1018, which concerns the misbranding of butter, reads:

On April 11, 1911, the United States Attorney for the Southern District of Iowa, acting upon the report by the Secretary of Agriculture, filed information in the District Court of the United States against S. P. Pond Co. (Inc.), Keokuk, Iowa, charging shipment by that company, in violation of the Food and Drugs Act, on or about Oct. 9-14, 1910, from the state of Iowa into the state of Pennsylvania, of a quantity of butter which was misbranded. The product was labeled (on the top of the packages) "Gold Seal Warranted Pure, Fine, Fresh Butter," and on the sides of the packages were the words "Process Butter."

Analysis by the Bureau of Chemistry showed the product to be renovated butter. Misbranding was therefore charged for the reason that the label on the top of the packages of the product was false and misleading and calculated to deceive the purchaser and because the words "Process Butter" which appeared upon the sides of the packages did not lessen the deceit created by the top label, for when exposed for sale, the packages were so arranged that the words "Process Butter" were entirely hidden from view of the public.

At the same term of court the defendant pleaded guilty, and was fined \$200 and costs. On June 7, 1911, the court reduced said fine to \$75.



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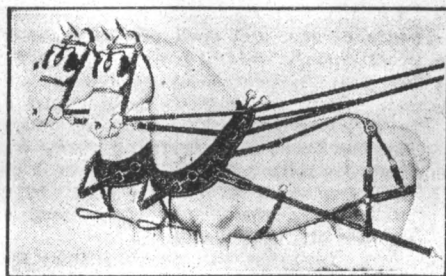
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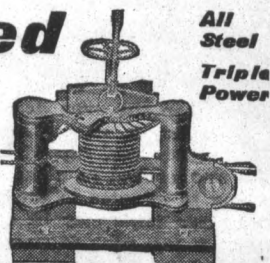
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Woman and Her Needs

At Home and Elsewhere

THE NEW PAPER BAG COOKERY.

I WOULDN'T mind washing dishes if it wasn't for the pots and pans." Lives there a girl or a woman who has not said that scores of times?

Now comes a new system of cookery whereby the dreaded pots and pans may be done away with, a method which is to revolutionize the whole scheme of domestic science, if we can take the word of its discoverer and advocates.

Paper bag cookery, the new method, has been attracting the attention of American cooks for a few months back. The idea came over from England where it originated with Soyer, chef of a famous London club, who in turn got the idea from France where chefs have for years cooked certain foods in paper, or "en papillote." The idea, declares Soyer, came from prehistoric times when foods were cooked wrapped in leaves, or perhaps from the gypsies who encase their game or meat in clay and produce results undreamed of by civilized housewives who depend on roasters and kettles.

Even American housekeepers who have never heard of paper bag cookery have used the idea occasionally, for practically every housekeeper has at some time or other wrapped something she was baking in a sheet of paper to prevent its burning. In paper bag cookery you simply carry the idea a step farther and put the food directly into a well greased paper bag, then lay it either in a broiler or on the oven grate. If you use a coal or wood range with a solid iron oven shelf a broiler is necessary since you need a circulation of air around the food. If you have a gas, oil or gasoline oven with grated shelves the bag may be laid directly on the shelf.

Like every new idea great things are claimed for this system of cookery. Its devotees claim that it saves time in cooking, since paper is a good non-conductor of heat and preserves an even temperature, thus facilitating the cooking. Then it saves waste, by keeping the juices and flavors confined in the bag to be served with the food and not thrown into the sink with the water the food was cooked in. It prevents meats from shrinking, say they, and if you put four pounds of meat in the oven four pounds come out. Last, but not least, it saves time afterwards as you tear off your bag and burn it up when the food is cooked and have no greasy cooking dish to wash afterwards.

However, not every paper bag can be used in this sort of cookery, for obvious reasons. If your food is to be absolutely pure you must have clean, pure bags to cook with.

Among the things one can cook in paper bags are roasts, steaks, chops, stews, eggs, fish, poultry, entrees of many sorts, vegetables, pastry, cakes, beef tea, and other invalid dishes. Soup could scarcely be made in this way, and there are other things which call for the good old-fashioned way of cooking. It is claimed that puff paste and cakes are lighter and better if cooked in paper bags, as the heat is more evenly distributed and no direct draught strikes them when the oven door is opened.

In cooking a roast it should be greased but not flavored, slipped inside a greased bag and cooked in a moderate oven, allowing 15 minutes to the pound. Turkey and other fowls may be cooked the same way. If you wish to stew the fowl put a cup and a half of water in the bag with the bird, of course, putting in seasoning and vegetables if you desire.

Green peas, beans, and spinach may be cooked in bags, allowing only a small quantity of water to the vegetables. Potatoes may be baked, or peeled and cooked in water, allowing a tablespoonful of water to a good-sized potato.

Those who have partaken of dishes cooked in bags are most enthusiastic in their praise. Their comments remind one of the ecstasies of admirers of fireless cookers, until after they have discovered that there are many things which are not nearly so good cooked in the "caloric" cooker as when cooked on the

stove and ventilated thoroughly during the process of cooking. The housekeeper who is fond of trying out new ideas will find much in paper bag cookery to interest her and after experimenting may become an ardent devotee.

WOMEN WHO ARE DOING THINGS. No. 4.

Margaret E. Sangster.

Those young people who think that at sixty years father and mother should sit down with folded hands and leave all work to more youthful minds and hands would do well to take a lesson from the list of American writers, some of the best known of whom are still busily writing though past the age of three score and ten.

Margaret Elizabeth Sangster, who was 73 years of age last February, is still hard at work contributing articles for several of the leading periodicals, and her writ-



Margaret E. Sangster.

ings hold just as much now of wisdom and good cheer, are just as carefully handled, as when she was in what is popularly called "her prime."

According to the laws of psychologists Mrs. Sangster should have been worn out long ago, for she could read at three years of age, and such precocity should presage early waning powers. She wrote her first accepted story at sixteen, and still exhibits with pride some pieces of silver which she bought with the money. For the benefit of struggling young authors, let it be said that she received \$40 for her maiden effort, the story being published by the Presbyterian Board of Publications of Philadelphia.

Mrs. Sangster was born at New Rochelle, N. Y., on Washington's birthday, and was educated privately. She was married to George Sangster in 1858. Shortly after she became a regular contributor to leading magazines and has since been associate editor of *Hearth and Home*, the *Christian at Work*, *Christian Intelligencer*, editor of *Harper's Bazaar* from 1889 to 1899, and staff contributor to the *Christian Herald* and other leading magazines since 1894.

Her work has not been confined to magazine articles, however. She has written stories and verse as well. Among the products of her pen are "Easter Bells," "Poems of Household," "Home Fairies and Heart Flowers," "Hours with Girls," "May Stanhope and Her Friends," "Good Manners for All Occasions," "Life on High Levels," "The Little Kingdom of Home," "Radiant Motherhood," "The Story Bible," "What Shall a Young Girl Read," "On the Road Home," "Our Own" and "The Help that Comes Too Late." The last three are among the best known of her poems.

Great power of concentration is one of Mrs. Sangster's valuable assets. She writes through noise and conversation, if it is necessary, and if interrupted can resume her thread of thought with little difficulty. She is a perfect housekeeper, thus again upsetting the tradition that women writers neglect their homes. She has a gracious, charming personality and

instantly makes a good impression on strangers. Her voice is low and soft, her hands small and her eyes are blue-gray in color. She is a prolific reader of all good books, loves books of biography but cares nothing at all for books of travel. Her favorite flower is the mignonette.

A GIRL'S CHANCE IN THE CITY.

The best place for girls is the home. With that fact firmly in mind, there should be no danger that anyone who reads these lines will interpret the article as a plea for girls to leave home for the dazzling, but unsatisfying prospect of a career in the business or professional world, for such a life is not a desirable one for women. While it may bring financial returns and the consciousness of being regarded as a success, it all too frequently robs woman of her domesticity, rubs off a goodly share of the sensitive reserve which is one of her chief charms, hardens a heart which should be all gentleness and sympathy and often dulls her moral sense as well.

But in spite of these facts there are many women who are forced to enter the business world whether or no. That world-old principle that "he who will not work shall not eat" hits many of us hard, for not all are fortunate enough to have someone else to provide for us. Many a woman who much prefers a quiet home life finds herself forced to become the breadwinner for herself and two or three dependents, father and mother, an invalid sister, or perhaps her own little ones. The country has little to offer such women in the way of employment. There is domestic service, of course, but this does not promise enough to furnish support for three or four people; there is school teaching, for which very few women are fitted and fewer still have any great taste; there is clerking in some country store, but such chances are few and there are more people waiting for them than there are positions to offer. Sewing, for the woman who is handy with her needle, offers another chance of work, and there you have about all that may be done by women.

No wonder that for the women who are forced to work, the city looks so alluring. They meet someone who has gone to the city and made good, and hear fabulous tales of the opportunities which lie around just waiting for someone to take them. Kitchen girls are reputed to get just about three times what they could get in the country, while nursemaids live like ladies and have nothing to do. There is practical nursing for the woman who is handy in a sick room; countless big department stores to offer work for salesladies, work for book-keepers, stenographers, copyists and office girls, not to mention scores of other sorts of work that a capable girl or woman may do.

These women hear these stories, of course, without any mention being made of the fact that there are already hundreds of women already in the city looking for work, or even the slightest allusion to the steps to be climbed and the hard knocks to be endured before they can hope to get to the top in any profession. They determine to come to the city in search of work and are encouraged by their acquaintance from the metropolis. But when they make the suggestion to their own family, trouble begins.

"Don't go down into that Sodom," moans mother. "The city is a wicked place, my dear," quavers father. "You won't know a soul and you'll die of loneliness," prophesies sister. All the friends get together and ask what she intends to do when she gets there; recall all the stories they have heard of girls who have failed in the city; point out all the pitfalls that lurk for the unwary, and gloomily talk over all the murders which have occurred in the metropolis for the past five years. To hear the conclave, one would think the girl was about to leave all that is good and pure and beautiful to enter a realm of such vice and wickedness that she would be the one pure soul therein.



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Like many other views of life, there is just enough truth in this to make it dangerous. The city is wicked, of course. But there is no more wickedness in cities in proportion to the population than in the country. The fact that so many people are congregated in one place, makes the crime seem greater. But human nature is the same wherever it is found, and the girl who would be a good woman in the country and make a success of her work, will be a good and a successful woman in the city. It is the life within that makes her what she is, and if she possesses the characteristics which go to make goodness and success, these characteristics are not going to be changed simply because she changes her home.

There are two classes of girls who should be kept from the city. These are the densely ignorant and the irresponsible. A pen picture will tell you why the former should stay away. Walking up the street towards the Union depot, a man was accosted by a girl of twenty, just arrived from the country.

"Say, mister, can you tell me where I can get work?" was her salutation.

Less than a half block away was the free employment bureau, and the man led her there and left her, after first instructing her as to what to do there, and urging upon her the imperative necessity of speaking only to men who wore suits with brass buttons, and carried a club. The Providence which watches over sparrows directed this girl to the right man, but suppose she had met the wrong one?

As to the irresponsible girl, she should never be allowed anywhere without a guardian. Nothing has any weight with her but the impulse of the moment, and to turn her loose alone in a big city would be nothing short of a crime. But the intelligent girl, even if uneducated, who is governed solely by a strict sense of right and duty is as safe in a city as she is on a farm. Her own womanliness and common sense will tell her the sort of friends to make and the amusements to shun, while her willingness to work and her conscientious performance of duty will bring her advancement.

DEBORAH.

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"How can I amuse my two boys, aged four and five years, on stormy days?" writes a mother. "I should like to hear from other mothers through The Farmer who have to keep active children busy and happy when the weather will not permit them to play out doors. Any new idea will be most gratefully received."

Will not the mother who asks for help write and tell other mothers the things she has already done to entertain her children?—Ed.

CLEANING LACES.

White waists badly stained with perspiration can be cleaned by putting them in a strong solution of castile or any pure soap, then placing in the direct sunlight until the yellow is withdrawn. To make the solution, shave one bar of soap and dissolve in one to three quarts of hot water. The dirt is removed from the lace not by rubbing, but by swishing up and down in a new soap solution, and it is then thoroughly rinsed in two or three clear, warm waters. The lace is next stiffened in weak gum arabic water—one or two kernels to one pint of water. The gum arabic is added to warm water and placed over hot water until dissolved. It is well never to wring lace, but rather to squeeze the water from it. To dry the lace it is pinned on a woolen blanket, or pad, which has been securely fastened to a table. Each point is firmly pinned and the lace is left until perfectly dry. Much may be done toward giving the effect of new lace, if each point is not only carefully pinned out, but when dry, picked out with the fingers.

Dark laces are cleaned by brushing or rolling in corn meal, or magnesia. The dirt adheres to the flour, or powder, leaving the lace clean. When treated in this way, laces need more frequent cleaning, but appear more like new lace. Yellowed, white silk lace may be steeped in a hot bath of milk and borax and bleached in the sun.

M. A. PROPST.

Editor Household Department:—I would like a recipe for making butter-scotch candy.—J. C. W., Homer, Mich.

One cup brown sugar, one-half cup of cold water, one teaspoonful vinegar, butter the size of a walnut. Boil till it snaps in cold water, then turn on greased tins and mark in squares.

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HOME AND YOUTH

MY UNCLE'S EXPERIENCE.

BY EMILY L. WOOD.

One evening, knowing my uncle was in his library, I rapped at the door. In his usually pleasant voice he bade me enter. I found him sitting with no light save a soft glow from the grate.

I seated myself and for a time, not a word was spoken by either of us. Finally he thus broke the silence: "Well, Jamie! is it fully decided that you are to go to Boston to take up the study of law with Judge Marx?" I replied in the affirmative.

"You will find the Judge a man of integrity and true sterling worth, one thoroughly fitted to fill his honorable position. But city life affords many alluring temptations, many snares and devices to mislead the untutored youth."

To this I replied: "It would indeed seem strange were I to prove recreant to all your wise teachings, both in precept and example."

"Have a care," said he; "do not be too sure you will be proof against allurements. Seldom do I refer to the past, but, that it may possibly be a benefit to you, I will relate some of my youthful experience if you care to listen."

Eagerly I expressed a wish for this, for, although socially inclined, on the subject of his past life he had been very reticent.

My uncle proceeded at once with his story, which I will give in his own words.

My parents, in moderate though comfortable circumstances, dwelt with their three children upon a farm. My sisters and I attended the country school and, later, that I might be qualified to engage in business, I was sent to a higher institution of learning, in the village not far distant, still spending Saturdays and Sundays at home.

On a farm adjoining my father's lived a Mr. Holmes. The families had always been on the most friendly terms, and between Mr. Holmes's oldest son and myself there developed an intimacy that is seldom paralleled. In fact, we were almost inseparable; wherever Charlie Holmes was, there would be found Hiram Levingsworth.

Charlie, being a bright youth and one year my senior, finished the business course at the village school before me and went to the city in search of employment. Being pleasant and attractive, he quickly succeeded in gaining a desirable position in a large boot and shoe establishment and soon began writing glowing descriptions of city life, berating a humdrum life on the farm. Fascinated by his flowery letters, I was impatient to finish my course at school, that I, too, might try my fortune in the wide world, and I even requested him to look for a place for me.

My schooling nearly finished, I received a letter from Charlie stating that there was a vacancy in a store of general merchandise, where he had recommended me. He was sure I was fully qualified to fill the position and would be pleased with it; also that it was near the place where he was employed. I could scarcely restrain myself from shouting, so elated was I at my brilliant prospect.

At the close of the school year I received my diploma and considered myself fully equipped for business. Charlie came home for a short vacation, and so enthusiastic was he in describing the advantages of the city for a young man that I was thoroughly captivated. My parents, wiser than I, did not enter into the spirit of this as I would have liked; they even intimated that Charlie had not the frank, wholesouled manner that was his a year ago. However, by much persuasion from both Charlie and myself, after giving me much wholesome advice, they gave a reluctant consent for me to accompany Charlie, on his return to the city.

I obtained the position of which my friend had written and, in due time, became thoroughly acquainted with the various duties assigned me.

My chum took great pains to bring me into notice among the young people with whom he had already become acquainted, which was very kind of him. Still, I observed that many of them were not such as we would have chosen at our own homes, and I mentioned the fact to Charlie. He replied, "Oh, of course, society in the city is different; but they are all right in their way."

Evening parties and balls were given

which, at Charlie's urgent request, I attended, but confess that I saw and heard much which at home would not have been tolerated. Against my better judgment I was persuaded to join the young men's club, where games were played, and candies and fruits were in demand, besides cigars and soft drinks as they were called. I sometimes remonstrated with my friend when urged to attend these meetings, when he would say: "Oh, what's the harm? We can be young but once; we will be old soon enough; then we will settle down, but not just yet."

It was my aim to please my employer and to work for his interest, and I can say that I tried to do so, partly, perhaps, with a view to promotion, but mainly from a sense of duty. But at times, after one of our club meetings of unusual length, I would be languid at my work and would detect the sharp gaze of my employer fixed upon me. Then I would have a confidential talk with Charlie, tell him that we were not spending our hours for rest and recreation as we should, that there was nothing elevating in our gatherings; that, instead, they had a demoralizing tendency. Still, I did not act the manly part and break entirely away from such associations as I should.

Entertainments were given to which neither Charlie nor I would have allowed our sisters to go; games which were at first played for pastime gave place to those of chance; soft drinks were supplanted by wines and other genteel beverages, and still we went on degrading ourselves to the level of those deep dyed in sin, while our prospects for breaking away seemed daily growing more doubtful. My dear, genial friend, whom I loved as a brother, not unfrequently went to his lodgings bewildered by drink, nor was I a step behind him.

The time was drawing near when we were to have a vacation, which was to be spent at our homes. Upon arriving there we were met with outstretched arms.

Oh, the remorse that then possessed me! I felt like a culprit who had betrayed the trust of his dearest friends. Whether they suspected the true state of affairs I was unable to determine, but to their searching questions it was difficult to find answers without bringing myself to shame or breaking the hearts of my parents and sisters, but the truth I would tell, so far as I revealed anything, for I had not yet fallen so low as to tell a falsehood.

I sought an interview with Charlie as soon as practicable and frankly told him I could no longer deceive those who were so dear and who had done so much for me; that I scorned to play the part of a hypocrite, or to live a two-faced life; that, for me, I was fully resolved to break all connections with our new associates and start anew a straightforward and honorable course.

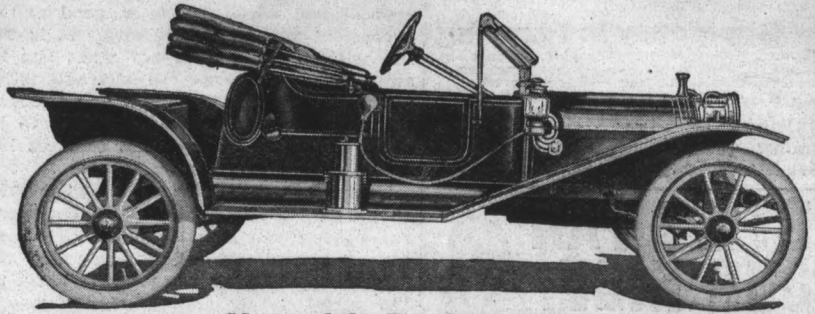
He admitted that we had been a little reckless sometimes and that we must be a little more careful, but said: "We must not break from the boys altogether, for they are good fellows at heart and are all right."

Our friends made our stay at home as enjoyable as possible, but the time soon came when we must return to the city. Bidding my parents and sisters an affectionate farewell, I left them again, fully determined that I would no longer act a cowardly part, but take a bold stand for what I knew to be right, even though I exposed myself to the jeers and taunts of my depraved associates. Alas! how often are good resolutions proven too frail to withstand the force brought to bear upon them.

Arriving in the city we were informed that a tally-ho had been engaged by the club for a ride to the park a few miles from the city on the following day, which was Sunday; that this had been arranged in honor of our return. To this plan I most seriously objected, as in my home training I had been given to understand that the Sabbath was a day for rest and worship, a day that should be held sacred. But, as usual, there was such pressure against my objections that they gave way, I not having the stamina to say no.

Sunday morning found us, with our four-in-hand, gliding along over the smoothly paved streets toward the park, seemingly all in the best of spirits. The drive was a delightful one, and the park was most enchanting with its groves, lakes and cozy nooks, walks and drives bordered on either side with the most beautiful flowers; still, it had little charm for me. I was ill at ease; my conscience

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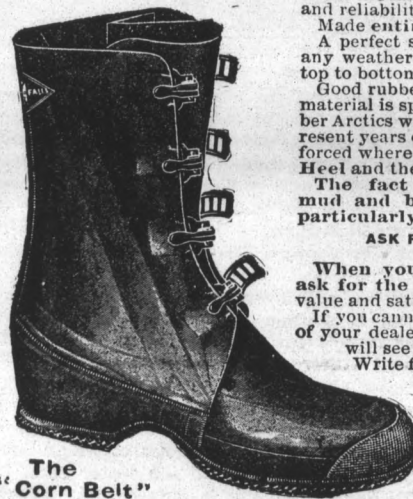
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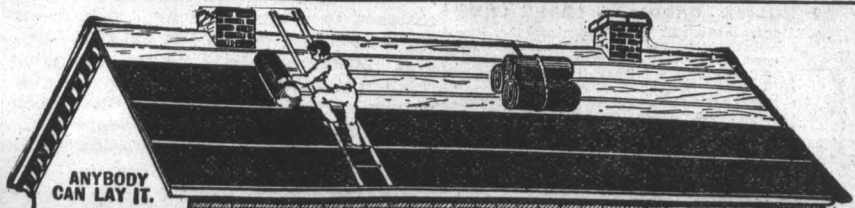
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smote me, telling me I was committing a sin. None knew of this, however, for, false pride bearing me out, my appearance was very deceiving.

The day was spent in playing games, boat riding, singing, dancing and other trifling amusements. A lunch was served, to which were added wine, beer and other liquors of which each and all partook. Toward night our driver informed us that it was time to return to the city and soon we were whirling away, a noisy, hilarious crew. All went well until we neared the city limits, when, ahead and a little to our left, we saw a long train of cars approaching. One of the most reckless of our load called to the driver: "Don't stop, you can easily make the crossing," and the driver, who had also imbibed too freely, rashly attempted to cross. Our ears were filled with a terrific screech from the engine.

When I regained consciousness and looked about I was upon a cot in a strange place. Not a familiar object met my gaze. In an instant my mother, and another in the garb of a nurse, approached my bed. These I plied with questions. "Where am I? What has happened?" Soon my mother was weeping, but her tears seemed more from joy than grief. I was told that I was very ill; that I must be quiet and not talk until I was stronger. Then my father came and stood beside me, looking very happy, as I thought. Again I succumbed to weakness and fell asleep.

It took weeks, as I have been told, for me to gather strength sufficient to talk. Finally I insisted upon an explanation of the mystery that surrounded me. I was told that while riding, I, with others, had collided with a train and received serious injuries.

By degrees the past came to me. At last I thought of Charlie. Asking about him I was told that he, too, was injured. This did not satisfy me for I felt that if it were possible he would visit me. When it became evident that the facts could no longer be withheld I was informed that poor Charlie had been instantly killed in the collision; that his body had been taken to his heartbroken parents and buried near his old home. The shock to me was so great that a relapse seemed imminent, but realizing that for my friends' sake I must rally, by will force, I succeeded. I felt that, if possible, I must in a manner retrieve the great wrong I had helped to perpetrate. As soon as advisable I was taken from the hospital to my home, where I was nursed

by loving hands and at length regained my full vigor.

On my first meeting with Charlie's parents I was overwhelmed with grief and remorse. I reasoned that, dearly as he loved me, had I taken a decided stand and withdrawn from our associations I might have persuaded Charlie to have gone with me and his terrible fate would have been averted. I felt that, to a great degree, I was responsible for his death, and this fact has been, and ever will be, a cloud overshadowing my life.

In time I returned to the city. The merchant again took me into his employ, but, I assure you, all connection with the club was severed. I was resolved to break from all contaminating influences and to be a man. Some members of that club came to a disgraceful end and several of them I have lost trace of altogether. My letters home were frequent, frank and honest; nor was there to be read between the lines anything to make my poor old parents anxious.

Staying for several years with the merchant, I was promoted from time to time as my qualifications would justify. After accumulating a modest fund I came to this quiet town, where Charlie and I had last attended school, and established a mercantile business of my own on a small scale. Trade slowly but steadily increased until now I have an income more than sufficient to supply our needs. At the age of twenty-seven I married Charlie's youngest sister, who has ever been a helpmeet to me, and has faithfully filled the place of mother to you, my sister's son.

Fortune has favored my efforts, but, glancing retrospectively, I dare not think what might have been my fate had not the severest interposition of Providence arrested me in my downward career.

And now, my dear Jamie, let me admonish you to resist the first temptation to do wrong, for in this lies your safety. Shun all appearances of evil and, before participating in any questionable amusement, first ask yourself, "What would the friends at home think of it?"

My uncle ceased speaking and, with moistened eyes, while warmly grasping his hand, I replied: "God helping me, I will!"

Time flies. My uncle, now an old man, has retired from business. I have successfully practiced law as a profession and have cause to be thankful for his advice, his experience, as related to me, having proven a bulwark impervious to the most alluring temptation.

AUTUMN.

BY MILDRED M. NORTH.

The morning light comes later now each day,
And over each low pool a mist hangs gray
That scarcely melts away until the sun
Has half his journey to the zenith run.
The spider-webs hang dew-gemmed everywhere,
Like silver nets and diamonds, and the air
Is crisp and sweet with odors Autumn yields:
Scent of the corn leaves browning in the fields,
Of spicy wild grapes growing black and sweet,
And falling leaves that rustle 'neath the feet
Of squirrel or chipmunk, or of shy wood mouse,
In search of food to store their winter house
Against the time of cold; for well they know
That soon will come the winter and the snow.

The yellow sunbeams of the noonday rest
On countless leaves in sunrise colors drest;
On fields gray-brown, where waved the golden grain,
Or bright with grass fresh started by the rain
To vivid green. The sky is clear and blue,
And through the orchard trees the ruddy hue
Of heaped-up apples shines. A butterfly,
Roused by the June-like warmth, flits slowly by.
Milkweed and thistledown, their work all done,
On airy wings sail idly in the sun,
While floating cobwebs fill the clear dry air
With shining silken threads. And everywhere
The hills are veiled in sunlit purple haze
That adds a beauty to these Autumn days.

Now is the season when the sunset skies
Spread their most gorgeous colors for our eyes.
Broad bands of gold and rose, like fire-light's gleam,
Shine like another sunset on the stream.
But through the air, grown warm 'neath midday sun,
There steals a chill of frost when day is done.
The low-voiced katydids' accusing cry,

The crickets' quick indignant sharp reply,
The birds' soft twitter, and the insects' hum,
Are silent now the Autumn nights have come.
An owl's shrill cry sounds sharp into the night;
High in a cloudless sky the moon shines bright,
Watching the silent shadows sweep around
From west to east upon the dewy ground.

These are the glories that the Autumn lends,
These are the blessings which Our Father sends,
That we in thought their shining gold may keep
When under ice and snow the grasses sleep.

AN EXPRESSED THANKSGIVING.

BY LALIA MITCHELL.

When Brother Hiram fell off the hay mow a week before Thanksgiving and they picked him up unconscious, I was dreadfully frightened. Two of the Davisons have met with a violent death and who knows but it might run in the family. When the doctor said he was all right, except for the nervous shock, I felt greatly relieved, but that did not help out the question of what we, and in fact each of the seven living members of our family, would do for Thanksgiving.

Hiram and I lived on the homestead farm and we always had our three brothers and two sisters and a brother-in-law and sister-in-law home for Thanksgiving. It was so much the custom that we did not have to invite them—they just came because they knew we were expecting them and would be right glad to see them. Hiram's fall upset everything, though. The doctor jabbered off some long Latin name and talked about nervous shock and said we were to keep him absolutely quiet for at least two weeks and, under no condition, must we have any company to tire or irritate him. That may not have been his exact words but it's as near as I could understand him, and after he had gone I just sat down and cried, partly over poor Hiram shut up in the best parlor bedroom for

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Buy that Furniture you have wanted so long right now. Don't think for a minute you can't afford that chair, bookcase, couch or bed. Perhaps you can't afford to pay the price your local dealer asks you to pay; but have you seen our prices? Our values will startle you. Never before have we offered such a complete, high grade, carefully selected line of furniture at such ridiculously low prices. You do not want to miss our furniture book this year. It will be interesting reading for you. From the first page to the last it is all the same story—highest quality furniture at lowest possible prices.

JOHN A. HALL, our expert furniture buyer, has selected this line from the offerings of the leading factories of this country. In many cases he has contracted for the entire output. Thus we have obtained prices that no local dealer can hope to duplicate. This saving is yours—how much of a saving it is, a comparison of prices will tell. And just a word about the assortment. Everything (absolutely everything) that comes within the ordinary furniture needs of man, is here. We have grades and prices that will suit you, no matter what your tastes, no matter how large or how small your pocket-book. Everything is new—up-to-date and stylish in design and finish. The materials are the very best, and we show you a variety ten times as great as you will find in the average retail store.

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| 4 Trunks | 20 Gasoline Engines | 31 Rain Coats, Rubber Coats, etc. |
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| 6 Vehicles | 22 Building Material | 33 Men's Clothing |
| 7 Furniture | 23 Stoves and Ranges | 34 Women's Furs |
| 8 Incubators | 24 Underwear Samples | 35 Dry Goods |
| 9 Wall Paper | 25 Automobile Supplies | 36 Baby's Dress and Toilet |
| 10 Typewriters | 26 Bicycles—Motorcycles | 37 Millinery |
| 11 Grocery List | 27 Baby's Dress and Toilet | |
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—FREE in your kitchen or living room or wherever it's needed. 30 Days' Free Trial—then 300 Days' Approval Test. The Kalamazoo must make good to your satisfaction. Cook stoves, ranges, heating stoves, gas stoves—400 styles and sizes to choose from.

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Cash or credit, just as you wish. Our direct, wholesale, factory prices save you \$5 to \$40 over the very best price your dealer could make. We prepay freight. The stove is one you'll be proud to own—the genuine Kalamazoo—stove standard of the country for years. Made its own way and proved its superiority in 170,000 American homes.

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Your copy ready—the biggest, most valuable book on stoves. You can't afford to be without it—packed with money-saving, inside stove facts. We will ship stove the day the order comes—always within 24 hours. When you write ask for Catalogue No. 113, giving prices and easy terms.

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two whole weeks, and partly because I knew just how disappointed the rest would be, and just a little because I did not know exactly how to write and tell them that we couldn't have them, when we hadn't even heard they were coming.

Hiram couldn't advise me. The doctor had said he must not be worried, and none of the neighbors could be depended upon. I just had to think out some way myself, and that without delay, for Thanksgiving was already so near that I had my mince meat all chopped and ready for the pies. Thinking of pies gave me an idea, and when once it was started that idea grew like a young gourd vine.

If I could not have the boys and girls home for Thanksgiving there was nothing to hinder my sending Thanksgiving to them, and when once I had made up my mind it was surprising how many things I thought of. First, I wrote to the editor of the Fayville Daily News sending him an account of Hiram's accident, with the doctor's caution that he must be kept quiet and not see any company. With my letter I enclosed twenty one-cent stamps to pay for mailing copies of the paper in which the accident news appeared to the five brothers and sisters. Having done that I felt that I had time to attend to the other part of my plan.

Out in the granary were five good-sized boxes, clean and sweet, and these I put in the kitchen, side by side, with a sheet of nice white paper in the bottom. Then I got five sacks and filled each of them with butternuts, hickory nuts and walnuts, just the kind we always have after dinner on Thanksgiving day.

That was all I could do then, and for the next two or three days I devoted myself to Hiram and thinking about my plan.

When the time came I went on with my cooking just as though we were going to have our customary big dinner, only instead of baking a big turkey I picked out five nice young chickens. On the second day before Thanksgiving they went into the oven as plump and pretty as partridges.

Well, on Tuesday night I had everything ready, mince pies and pumpkin pies, and fruit cake and salt rising bread, and everything, even to the little red and yellow chrysanthemums that I've put in the middle of the table for ten years back. After Hiram was asleep, so that he wouldn't be likely to want me for anything, I began my packing. Each box was exactly like the other four and when I had finished them there wasn't three ounces of difference in the weight of them.

But I forgot to tell you what went into them. You see my idea was that if I couldn't have the folks home for Thanksgiving I'd send Thanksgiving to them, and when those boxes were ready to nail up there was a good big Thanksgiving dinner in every one of them. The turnips weren't cooked, nor the carrots and parsnips, but everything else was, and then there was a little jar of marmalade, and a pint can of pickles, and apples, and doughnuts, and cranberry jelly. I knew right well just how pleased each of them would be when the expressman walked in on the day before Thanksgiving, or may be on the very morning of the big day, with a package that they'd recognize by my handwriting.

It wasn't long until the letters began to come to me, and you may not believe it but from the way they wrote you'd think a boxed up Thanksgiving was better than the old-fashioned kind. Of course, I knew it wasn't, and that they missed the visiting and story telling, for I couldn't put that in a box, but so long as Hiram was sick and we couldn't all be at home, I was right glad I had happened to have that idea, and I guess there were seven of us who felt that way, for when I told Hiram about my boxes, on Thanksgiving morning, he smiled the cheerfulness I had seen since he was hurt, and said, "Well, well, this isn't such a dreadful bad Thanksgiving after all, if I did do the best I could to spoil it."

A 24-page, neatly printed catalog, issued by the American Wagon Co., 112 West Adams St., Chicago, Ill., has been received, at this office. This booklet, by word and picture, gives a very clear and comprehensive idea of the Melrose Convertible Wagon Bed, which is designed to accommodate itself to the multitude of purposes that the farmer needs such a structure for. The flexibility of this box, which is easily adjusted from a common wagon bed to a hay rack, a stock bed, a poultry bed, a cord wood rack, a marketing bed, etc., can be readily understood from reading the above catalog, which will be sent free to all readers of the Michigan Farmer upon application to the above address.

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Size, and Power, and ease of riding

No hill too steep
No sand too deep

Size, and power, and ease of riding

Size, and power, and ease of riding

Three factors absolutely vital to your bodily comfort—absolutely essential to the unwavering, unfailing efficiency of your car.

Three sign-posts pointing the way to the extraordinary value of the new Jacksons.

Size, and power, and ease of riding.

Incorporated in the 1912 Jackson models more generously than in any other cars of middle prices.

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For example, \$1500 for the Jackson Model 42 (shown below) commands full 40 horsepower, wheelbase of 118 inches, 34x4 inch tires and full elliptic springs.

A big, powerful, comfortable car—with complete equipment of top, windshield, etc., at no extra cost.

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For no other \$1800 car is to-day or ever has been so powerful and so long in wheelbase; and this Jackson has full elliptic springs, 36 inch wheels and demountable rims.

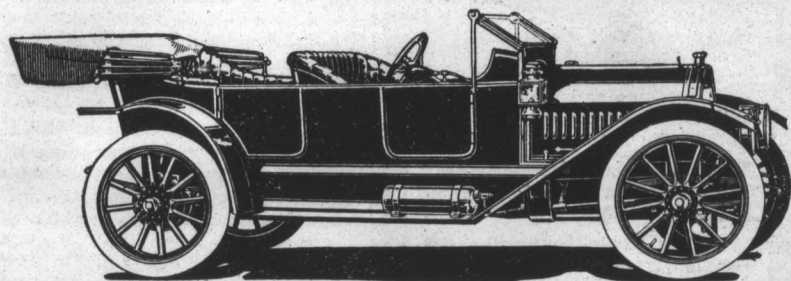
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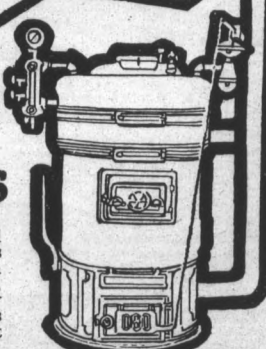
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FARMERS' CLUBS

Address all communications relative to the organization of new Clubs to Mrs. C. P. Johnson, Metamora, Mich.

Associational Motto.—

The skillful hand, with cultured mind, is the farmer's most valuable asset.

CLUB SECRETARIES ATTENTION.

A copy of the program for the annual meeting of the State Association of Farmers' Clubs has been mailed to the president of each of the local Clubs in the state. A copy of the program has also been mailed to the secretary of each local Club, together with credential blanks, report blanks, etc. If these blanks are not received promptly by the secretary of every local Farmers' Club, those who do not receive them should notify the associational secretary at once. It is important that these blanks be in the hands of every secretary at an early date as the credential blanks will be needed by the delegates to the associational meeting who will be elected this month, and the report blanks should be filled out and returned to the secretary at once, in order that she may have as complete data as possible for the preparation of her annual report to be submitted at the associational meeting. Send these reports or any correspondence regarding them, addressed to Associational Secretary, Mrs. C. P. Johnson, Metamora, Mich.

THE YEARLY PROGRAM.

The latest of the yearly programs of the local Farmers' Clubs to come to the editor's desk is that of the Essex Farmers' Club, of Clinton county, the same being the program of the fiscal years of 1911-12, which begins with the October meeting of the year. This is one of the most elaborate programs which we have seen gotten out in any local Club. It is neatly bound in a colored paper cover, the cover page bearing the name and location of the Club, the year for which the program serves, the dates of the meetings, which are held on the second Wednesday of each month, and the hour of meeting, which is 10:30 a. m. The title page of the booklet is a duplicate of the cover and the page following it contains simply the motto and sentiment of the State Association which were adopted at the suggestion of the Ex-Associational President, J. T. Daniells, who is a member and also an ex-president of the Essex Club. This motto and sentiment is familiar to every reader of this department and will be found at the head of our farmers' Club column in each issue, when space will permit.

The next page of the booklet contains a list of the ex-presidents of the Club, which number twelve, and the years for which each has served. The next page is devoted to the list of present officials of the Club, including the members of the standing committees. The several meetings of the Club are given each a page in the booklet, the assignments being complete in each case except for the musical numbers. The farms of the members are named and name of the farm is given in connection with that of the host and hostess, at the head of each program. The order of business which is followed at the meetings is repeated on each page so that each program is complete for the meeting for which it serves.

Two questions are discussed at practically every meeting and these are apparently chosen with more than ordinary care. Some are practical and some are of a more ethical nature, thus lending variety to the discussions. The routine business is gotten through and one question is usually discussed before the dinner hour. Another feature of the meeting, which is apparently original with this Club and exceptional to the general practice of such organizations, is a recess which occurs in each case just prior to the discussion of the last question, which occurs at or near the end of the program. Roll call is responded to in a variety of ways which makes this an instructive and entertaining feature of the meeting. Each program is pleasantly interspersed with literary and musical numbers, an arrangement to make the meeting more entertaining. At the bottom of each page is a sentiment appropriate to the season of the Club meeting, being in every case a quotation from some well known author. The programs

are arranged with a view of expressing appropriate sentiments, throughout, the November program having special reference to the Thanksgiving occasion and the March program being of a strong temperance character. The practical topics are timely in every case and the program as a whole, would be hard to improve upon. A question box is made a feature of some of the meetings but does not appear in every program.

The year's work closes with the June meeting, the Club apparently taking a vacation from June until October, during which period no meetings are scheduled. A feature of the booklet worthy of special mention is a page headed "In Memoriam," the head being followed by an expressive verse and the names of former members who have passed to "the bourne from which no traveler returns." Lastly appears the constitution of the Club, making this booklet one of the most complete and useful programs which could be devised. For it we are indebted to the courtesy of Ex-Associational President Daniells, than whom no other member of this or any other local Farmers' Club has been more constantly devoted to the work of the state organization.

CLUB FAIRS.

Rives and East Tompkins Club.

The Rives and East Tompkins Farmers' Club met at the Maccabee hall in Rives, Wednesday, Oct. 25, to hold its annual fair. There was a good attendance, about 150 being present. After dinner had been served an excellent Club program was rendered in the hall upstairs. It was opened by singing the Club's favorite song, "America," followed by prayer by Rev. Reynolds. Mr. Arthur Perrine gave an interesting talk on cows and the method of testing them. The school children favored us with a song of the country fair. A recitation by Miss Alice Boon, and a duet by the Misses Alice and Lois Severance were much enjoyed. Mrs. James Wood, Mrs. Barber and Mrs. Ina Stringham gave interesting readings, and throughout the program was interspersed musical numbers by the Misses Anna Davey, Rosa Foster and Netta Styles, and songs by Mrs. Susie Smith and Miss Margie Mann. The display of produce from garden and field was splendid, considering the year we have had. We were pleased to see so many ladies from Jackson present and we hope their words of commendation will inspire the Club to greater efforts next year.—Ina Stringham, Cor. Sec.

China Farmers' Club.

The annual fair of the China Farmers' Club, of St. Clair county, was held at the home of Mr. and Mrs. Henry Schroepel, on October 18. There was a large exhibit of fruit and vegetables, including many varieties of apples, peaches, pears, potatoes, beets, watermelons, cabbage, parsnips, carrots, etc. There was also a good exhibit of different varieties of corn and other farm products, while beans, hickory nuts, sunflowers, etc., were in evidence. There was a poultry exhibit as well, while the ladies had a varied exhibit of jellies, pickles, etc., and the fancy work department was not neglected. In the line of curios there were on exhibit a home-made linen coat and vest which were worn by one of the members 45 years ago in his boyhood days; a baby's christening robe 32 years old, a silver spoon brought from Germany 75 years ago and samplers made over 100 years ago. Altogether the fair was a most successful event and will doubtless be continued as a special feature by this Club.

GRANGE

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

HOW THE "CONSUMER'S DOLLAR" GOT INTO A WOMAN'S MEETING.

It was my good fortune last month to sit as a delegate from the Grange in the First International Congress of Farm Women, assembled in Colorado Springs, Col. This body of 222 women, representing 25 states and Canada, was auxiliary to the Sixth International Dry-Farming Congress. It considered a wide range of topics—from the domestic fly to the country church. Its aim was to help the farm woman to find herself among women as an active, real part of the women's world that is seeking whatever will better the conditions and spirit of the home.

This is not the time or place to even outline the results of this significant gathering of women. One incident only shall be mentioned here. It was an incident of the third days' meeting and one that, to many people, gave the pith of the farm problem. We had listened to many carefully prepared papers upon devices for lightening work, upon better educational facilities for rural communities, and upon methods of making the farm home more attractive. These had been followed by a brilliant discussion which

involved the question as to whether the barn or the house should first be considered in the economies of the farm. A good many women had not yet said anything—in public. Suddenly an unpretentious small woman in the rear of the room arose and, in quick, impassioned words, said:

"I have been a teacher and domestic science teacher in Missouri and came out to a Colorado ranch where I am studying farm conditions. I'm sure the trouble is not lack of education or knowledge, for the ranch woman is a cosmopolitan, often a town product, and well cultured. But the trouble is money, money. When we poor ranchers who have worked on the ranch since May, in wet and cold weather, early and late, 14 hours a day, every day, fearing all the time lest the hail will take away all the hard-earned fruits of our toil, when we finally take our crops to market, rising often at midnight—nay, sometimes starting the night before—we are offered a pittance for our products. I have been offered five cents a dozen for corn and six cents a gallon for the beans we have weeded and watered and cultivated for three months. Now the farmer loves his wife and home, and if he had the money he would gladly furnish her a maid and good appliances; but he hasn't got it, and he never will have it until the commission man—the middleman—gets less than the lion's share. As long as such conditions exist the farmer can't make it any easier for his wife, and she has no right to expect any easier lot."

As the woman ceased speaking the president chanced to declare a brief recess and immediately the little woman was surrounded, her hand shaken in eager approval by women whose feelings she had so evidently voiced and by other women to whom she had given a deeper insight into a "real farm woman's" life. When I could get near enough to ask her to write out her statement for me I discovered that she is a member of a Colorado Grange.

This is how, in the minds of some of us, the conviction was driven deeper than ever before that farmers need organizations that will take up vital, present-day difficulties and follow them to a finish. This Colorado Grange-ranch woman had touched a vital, present-day difficulty.

JENNIE BUELL.

CHARLEVOIX POMONA'S LAST MEETING OF THE YEAR.

Despite extremely bad weather, members of six subordinate Granges, of Charlevoix Co., met in Pomona session with Peninsula Grange, Nov. 2. The biennial election of officers resulted as follows: Master, William Mears, Boyne Falls; overseer, John Knudsen, East Jordan; lecturer, Walter Black, Charlevoix; steward, William Stenberg, East Jordan; assistant steward, Arthur Gaunt, East Jordan; chaplain, Viola Heller, East Jordan; treasurer, Henry Black, Sr., Charlevoix; secretary, Leo D. Willson, Boyne City; gate keeper, Fred Heller, East Jordan; Ceres, Ursula Crawford, East Jordan; Pomona, Blanche Wallace, Bay Shore; Flora, Emma Todd, East Jordan; lady assistant steward, Fannie Knudsen, East Jordan; member executive committee, Nat Burns, Charlevoix; Pomona delegates to Michigan State Grange, Mr. and Mrs. Martin Ruhling, East Jordan.

In the evening all officers elect were installed, R. A. Brintnall acting as installing officer. It was decided to place the building fund at interest until time to commence work on the hall next year. The committees appointed returned favorable reports regarding the general condition of the Grange in the county. Harmony was declared the banner Grange for the third quarter. Two applicants for the fifth degree were duly obligated and instructed. Having declined re-election, the retiring secretary, R. A. Brintnall, was accorded a unanimous vote of thanks for the manner in which his past service had been rendered. The next meeting will be held with Rock Elm Grange, in February.—R. A. B.

Clinton Pomona held a successful meeting with South Riley Grange Nov. 8. The annual fifth degree meeting will be held during the winter for the benefit of those who desire to become fifth degree members. G. F. Ottmar and wife, of South Riley Grange, were chosen to represent the Pomona at the coming State Grange meeting.

COMING EVENTS.

Michigan State Grange, Thirty-ninth annual session, at Kalamazoo, Dec. 11-15. Pomona Meetings.
Arenac Co., with Wickham Grange, at Twining, Friday, Nov. 17.
Genesee Co., with Vienna Grange, at Clio, Tuesday, Nov. 28. State Master Hull, speaker.
Clinton Co., with Olive Grange, Wednesday, Dec. 6. Election of officers.
Lenawee Co., at Adrian, Thursday, Dec. 7. Annual meeting and election of officers.
Kent Co., in Court House, Grand Rapids, Wednesday, Dec. 6, at 1:00 p. m. Fifth degree session and election of officers.

Makes a Bad Cough Vanish Quickly—or Money Back

The Quickest, Surest Cough Remedy You Ever Used. Family Supply for 50c. Saves You \$2.

You have never used anything which takes hold of a bad cough and conquers it so quickly as Pinex Cough Syrup. Gives almost instant relief and usually stops the most obstinate, deep-seated cough in 24 hours. Guaranteed to give prompt and positive results even in croup and whooping cough.

Pinex is a special and highly concentrated compound of Norway White Pine extract, rich in gualacal and other healing pine elements. A 50 cent bottle makes a pint—a family supply—of the best cough remedy that money can buy, at a saving of \$2. Simply mix with home-made sugar syrup or strained honey, in a pint bottle, and it is ready for use. Easily prepared in 5 minutes—directions in package.

Children like Pinex Cough Syrup—it tastes good, and is a prompt, safe remedy for old or young. Stimulates the appetite. A handy household medicine for and is slightly laxative—both good features. A handy household medicine for and is slightly laxative—both good features. A handy household medicine for and is slightly laxative—both good features. A handy household medicine for and is slightly laxative—both good features.

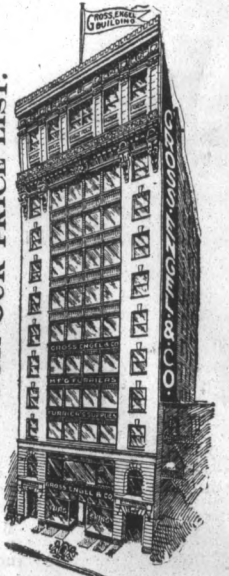
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MARKETS

DETROIT WHOLESALE MARKETS.

November 15, 1911.

Grains and Seeds.

Wheat.—The wheat deal remains about steady with the closing figures of a week ago. There are a few strong features in the market at home, but the crop of Argentine which is estimated to be 50,000,000 bushels more than the bumper yield of 1907, has overcome the bullish feature at home and held the market steady. In the Canadian northwest conditions are discouraging to the bears since frost damaged much of the crop, and now fields that would have yielded millions of bushels are completely covered with snow. The milling demand has quieted, which has slightly weakened cash deals. Receipts in the southwest have been very small. All things considered, it seems that the market is on a basis that might send prices in either direction. One year ago the price for No. 2 red wheat was 94½¢ per bu. Quotations for the past week are:

	No. 2 Red.	No. 1 White.	Dec.	May.
Thursday	96½	93½	.98	1.02½
Friday	96½	93½	.97¾	1.02½
Saturday	95½	92½	.96¾	1.01½
Monday	95½	92½	.97	1.01½
Tuesday	95½	92½	.97	1.01½
Wednesday	96	93	.97½	1.02½

Corn.—While corn values have fluctuated the past two weeks, it now rests on practically the same basis as two weeks ago, with the undertone slightly weaker. However, there is promise of strength in the fact that small receipts are coming to the large markets and country offerings are very light, also the stocks in Chicago and other places are small. One year ago the price for No. 3 corn was 52½¢ per bu. Quotations for the past week are as follows:

	No. 3 Corn.	No. 3 Yellow.
Thursday	75	75½
Friday	74½	75
Saturday	74½	75
Monday	74½	75
Tuesday	75½	76
Wednesday	75½	76

Oats.—This grain has advanced a half cent and the market is firm at the new figure. There has been a slight improvement in the shipping demand and the usual outlets are open and furnish a demand sufficient to keep the market steady. Primary elevators are selling some of this grain but the amounts are not large. One year ago the price for standard oats was 34½¢ per bu. Quotations for the week are:

	Standard	No. 3 White.
Thursday	49	48½
Friday	49½	49
Saturday	49½	49
Monday	49½	49
Tuesday	50	49½
Wednesday	50	49½

Beans.—December beans have advanced while cash and November are a cent lower. Complaints of moisture in the offerings still prevail; however, the farther away the market gets from the threshing season the greater will be the improvement of the offerings so far as moisture is concerned. Reports continue to verify the extent of damage done to the crop. Quotations are as follows:

	Oct.	Dec.
Thursday	\$2.27	\$2.27
Friday	2.27	2.27
Saturday	2.25	2.25
Monday	2.27	2.28
Tuesday	2.27	2.28
Wednesday	2.28	2.30

Clover Seed.—March seed and prime spot are off 5c. The market is firm and active at the quotations given below:

	Prime Spot.	March.	Alsike.
Thursday	\$12.40	\$12.50	\$10.50
Friday	12.35	12.45	10.50
Saturday	12.35	12.45	10.50
Monday	12.35	12.45	10.50
Tuesday	12.35	12.45	10.50
Wednesday	12.35	12.45	10.50

Timothy Seed.—There is no change in the nominal price for this seed, which is \$7.20 per bu.

Rye.—The rye market is dull and quotations are 4c below those of last week, cash No. 2 now ruling at 93c per bu.

Flour, Feed, Potatoes, Etc.

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

Feed.—All grades steady with last week. 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.—Rye straw is firmer and mixed hay is higher. Other grades firm. Quotations are: No. 1 timothy, \$20@21; No. 2 timothy, \$19@20; clover, mixed, \$18@20; rye straw, \$9.50@10; wheat and oat straw, \$9 per ton.

Potatoes.—The national crop report indicates the yield for this year to be 281,735,000 bu., as compared with a yield in 1910 of 338,811,000 bu., and a five-year average of 304,513,000 bu. The quality of the crop is estimated to be below that of 1910. Prices have improved this past week while offerings are light. Car lots on track are quoted at 65@70c per bu. in bulk, and 75@80c in sacks.

Provisions.—Family pork, \$19@19.50; mess pork, \$16.50; medium clear, \$16@18; hams, 14½¢; bacon, 12@13½¢; pure lard in tierces, 9½¢; kettle rendered lard, 10½¢ per lb.

Dairy and Poultry Products.

Butter.—There is a moderate supply of butter and since the trade is not having

the support of large stocks of storage goods the market is firm at last week's figures with a strong undertone. Quotations are: Extra creamery, 32c; firsts, do., 31c; dairy, 21c; packing stock, 20c per lb.

Eggs.—Another advance resulted from the continued broad demand and the constantly narrowing supply of eggs with every prospect that further upward changes in price will follow. Fresh receipts, case count, cases included, are now quoted at 27c per dozen.

Poultry.—All grades and kinds of poultry are steady except chickens which, because of the heavy offerings have suffered a decline. Dealers will be able to stock up for the holiday at low prices. Prices are: Live—Turkeys, 14@15c; geese 10@11c; ducks, 12@13c; young ducks, 14c; spring chickens, 9@10c; No. 2 chickens, 8c per lb; hens, 9@9½c.

Cheese.—Michigan old, 15@17½¢; Michigan, late, 15½@17c; York state, new, 16@17c; Swiss, domestic block, 17@20c; cream brick, 15@16c; limburger, 14@15c.

Veal.—Market steady. Fancy, 10@11c; choice, 8@9c per lb.

Cabbage.—Steady. Selling at \$1.50@1.75 per bbl. for home-grown.

Onions.—Steady; 80@90c per bu.

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

Apples.—There is an improvement in the apple deal and prices rule higher for the more popular varieties. Average offerings are going at 50c@51 per bushel; Snows are selling at \$3.50@4 per barrel.

OTHER MARKETS.

Grand Rapids.

The bean market continues quiet, with white beans worth \$2.05@2.25 and red kidneys \$2.50. Dealers estimate that 25 to 50 per cent of the crop this year has suffered damage from rains. Potatoes are worth 55@60c at up-state loading points and buyers say that this price is too high. The movement out of the state has been heavy but this has been checked now by the colder weather. Not all the potatoes are out of the ground yet, owing to the sudden cold snap. Grain prices are as follows: No. 2 red wheat, 90c; new corn, 58c; old corn, 79c; rye, 83c; oats, 50c; buckwheat, 75c.

Chicago.

Wheat.—No. 2 red, 94½@95½¢; Dec., 93½¢; May, 99½¢ per bu.

Corn.—No. 2, 71½@73½¢; Dec., 63½¢; May, 65c per bu.

Oats.—No. 2 white, 49½@49¾¢; Dec., 47½¢; May, 50½¢.

Barley.—Malting grades, \$1.00@1.26 per bu; feeding, 75@95c.

Butter.—In anticipation of an advance at Elgin, this market began the week with a 2c gain over last week's figures, for best creamery stock. This grade is still quoted 1c above Elgin, but the market is easier with all other grades the same as last week. Creameries, 24½@32c; dairies, 22@28c per lb.

Eggs.—Colder weather has lessened receipts and this market is very firm on a general advance of 1c. Quotations: Prime firsts, 26@28c; firsts, 23@25c; at mark, cases included, 18@21c per dozen.

Potatoes.—The cold snap is regarded as a strengthening influence and prices have been advanced on all kinds. Michigan stock is now quoted at 80@83c per bu; Wisconsin, 78@80c; Minnesota, 80@83c.

Beans.—Offerings of pea beans are heavy and prices show a sharp decline. Red kidneys are slightly higher but the market generally has a weak undertone. Choice hand-picked pea beans quoted at \$2.33 per bu; prime, \$2.26; red kidneys, \$3.40 per bu.

Hay and Straw.—Hay firm; timothy 50c to \$1 higher. Straw unchanged. Quotations: Choice timothy, \$23@24 per ton; do., No. 1 \$21@22; do., No. 2 and No. 1 mixed, \$19.50@20; do., No. 3 and No. 2 mixed, \$14.50@18.50; clover, \$15@17; do., No. 2 and no grade, \$8@13; rye straw, \$9.50@10.50; oat straw, \$9@9.50 per ton; wheat straw, \$7@8 per ton.

New York.

Butter.—Higher and steady at the advance. Creamery specials are quoted at 24½¢ per lb; extras, 33½¢; firsts, 31@32½¢; seconds, 28@30c; thirds, 25@27c per lb.

Eggs.—About steady at a general advance of 1@2c. Fresh gathered extras, 37@39c; extra, firsts, 34@36c; seconds, 28@30c; western gathered whites, 33@40c per dozen.

Poultry.—Live.—Prices rule slightly lower. Western chickens, 10½@11½¢; fowls, 10@11½¢; turkeys, 14@16c. Dressed—About steady. Turkeys, 10@21c; fowls, 7@16½¢; western chickens, 7@16c per lb.

Boston.

Wool.—The amount of business was smaller last week than in the preceding week. However, the market continues strong with prices favorable to the sellers. The fleece trade continues to be the strong feature of the market, although territory stock is receiving considerable attention. Michigan fleeces are in moderate demand. Following are the leading quotations for domestic fleeces: Ohio and Pennsylvania fleeces—Delaine washed, 30@31c; XX, 28c; ½-blood combing, 25½@26c; ¾-blood combing, 25@25½¢; ¼-blood combing, 24@25c; delaine unwashed, 25c; fine unfinished, 20@21c. Michigan, Wisconsin and New York fleeces—Fine unwashed, 19@20c; delaine unwashed, 23@23½¢; ½-blood unwashed, 24½¢. Kentucky, Indiana and Missouri—¾-blood, 24c; ¼-blood, 24c.

Elgin.

Butter.—Market firm at 32c per lb., which is last week's quotation. Output for the week, 659,300 lbs., as compared with 667,500 lbs. for the previous week.

THE LIVE STOCK MARKETS.

Buffalo.

November 13, 1911.

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

Receipts of stock here today as follows: Cattle, 6,000 head; hogs, 17,600 head; sheep and lambs, 20,000 head; calves, 1,000 head.

With 230 loads of cattle on our market today, and 25,000 reported in Chicago, the good and prime cattle sold at about last week's prices; all others sold from 15@25c lower; and for anything below the good quality, the market was slow and draggy from start to finish, with at least 15 cars unsold at the finish.

We quote: Best 1,400 to 1,600-lb. steers \$7.75@8; good prime 1,300 to 1,400-lb. do. \$7.25@7.50; do. 1,200 to 1,300 lb. steers, \$6.50@6.75; best 1,100 to 1,200-lb. shipping steers, \$5.75@6; medium butchers steers, 1,000 to 1,100, \$5@5.50; light butcher steers, \$4.50@4.85; best fat cows, \$4.50@5; fair to good do., \$3.25@3.50; common to medium do., \$2.25@2.75; trimmers, \$1.75@2.25; best fat heifers, \$5.25@5.75; fair to good do., \$3.75@4.25; good fat heifers, \$4.50@5; stock heifers, \$3@3.50; best feeding steers, dehorned, \$4.40@4.60; common do., \$3.25@3.50; stockers, all grades, \$3@3.25; prime export bulls, \$5@5.25; best butcher bulls, \$4.25@4.65; bologna bulls, \$3.25@4; stock bulls, \$3@3.75; best milkers and springers, \$5@6; common to good do., \$2.50@3.50.

The hog market ruled fairly active after the opening; the bulk of the choice quality strong weight yorkers, mixed and medium weights selling at \$6.65, with quite a number of selected decks, running to the heavier weights at \$6.70, with a few decks of heavy hogs up to \$6.75. Good many very good kind of yorkers sold at \$6.60, and a few around \$6.50@6.55. Pigs and lighter weights sold generally at 6c per pound, with some of the light yorkers ranging on up to \$6.25. The good kind of rough sows sold mostly at 6c per pound, and stags around \$5@5.50. Hogs are well cleaned up tonight, except a few late arrivals. Market closing steady.

The sheep and lamb market was slow today; most of the choice lambs sold at \$6.25@6.35; wethers at \$3.50@3.75. There is a good many unsold; market closing dull. Look for lower prices the balance of the week unless the runs are light.

We quote: Best spring lambs, \$6.25@6.35; cull to common do., \$4.50@5.50; wethers, \$3.50@3.75; bucks, \$2.50@2.75; yearlings, \$4@4.50; handy ewes, \$3.25@3.50; heavy ewes, \$3@3.25; cull sheep, \$1.50@2; veals, choice to extra, \$9.25@9.50; fair to good do., \$8@9; heavy calves \$4@5.

Chicago.

November 13, 1911.

Cattle. Hogs. Sheep.
Received today 25,000 30,000 28,000
Same day last year .. 27,028 26,485 58,094
Received last week .. 73,286 151,492 166,776
Same week last year .. 87,711 108,516 158,200

The sheep and lamb market was unusually excited and 25@50c higher today, the receipts being unusually light, variously estimated at 25,000 to 28,000 head. Top prices were: Lambs, \$6.25; yearlings \$5.15; wethers, \$4; ewes, \$3.50; feeding lambs, \$5.10. This remarkable boom will doubtless bring in greatly increased receipts the next few days, although the range shipping season is closing, and reactions in prices may be expected.

Today's moderate Monday receipts of cattle, including about 2,500 from western ranges, made a better outlet for most offerings, and prices averaged 10@15c higher. Strictly prime beefs of the \$9.10@9.25 class were scarce and unchanged.

Hogs had a quick rise of 5@10c this morning, selling largely a dime higher, with a strong demand. Few went lower than \$5.70, and the top stood at \$6.65. Hogs marketed last week averaged 203 pounds.

Butcher lots of cattle sold extremely well, and late today fat cows and heifers sold as much as 15@25c higher. A prime heifer brought \$7.

Cattle prices had quite a widening out last week because of the extremely large supplies of common and medium kinds and the marked decrease in the receipts of prime heavy beefs. The best cattle in the hands of stock feeders have been largely marketed, and most of the receipts from western ranges are ordinary in quality, as is usual near the close of the shipping season. Recent weeks have seen unusual variations in the marketing of cattle, the receipts running extremely large and extremely light in volume according to how prices are ruling, and last week's big runs were due largely to the substantial rally in prices the preceding week, when receipts were very limited. The most important event was the new high record made in fancy beefs, several car loads of prime Hereford and Shorthorn steers averaging 1,620 to 1,698 lbs. selling at \$9.25 on Wednesday. On the other hand, the general run of cattle had to go lower, and the poorer lots of grassy steers sold at \$4.25@4.75. A large share of the fed steers went at \$5.50@8.25, with less trading above \$8.25 than of late, and very good steers sold between \$7 and \$8, although in the absence of any official grading different live stock commission firms naturally differ in their definition of what constitutes "good" cattle. Cows and heifers were bought for butchering at \$3.25@6.90, only a few fancy heifers selling above \$5.50, while cutters sold at \$2.60@3.20, canners at \$1.75@2.55, bulls at \$2.75@5.75 and calves at \$2.50@8.50. There was the largest traffic in stockers and feeders seen at any time this season, the former selling at \$3@5.10 and the latter at \$4.25@5.80, but not much was done above \$4.50 for stockers or above \$5.50 for feeders. Western range steers sold at \$4.50@7.40.

and milch cows sold moderately at \$30@70 each, being lower in price. The close of last week showed an advance of a dime for the best beef steers of heavy weights and a decline of 15@50c in others.

Hogs are moving to this and other western markets freely most of the time, and supplies show substantial gains over corresponding periods for the last two years, when the hog supplies in the corn belt were unusually light. The number of hogs slaughtered in the country for 1911 shows a big gain over either of the last two years, but trade requirements are on a large scale, and there is no surplus above consumptive wants. The eastern shipping demand last week was much smaller than of late, and this resulted in some weakness in prices, but the best hogs had a good outlet, and had quick recoveries after declines, as they comprised a comparatively small part of the daily runs. With such an unusually large marketing week after week of little pigs shipped from districts where swine plague prevails, the future supply of matured hogs is being cut into seriously, and even at the present time there are more buying orders for prime hogs weighing from 210 to 312 pounds than can be filled readily, the result being that these are the best sellers, going at a good premium over the best light bacon grades. The pigs are extremely bad sellers, the lighter ones selling absurdly low. Looking ahead, it may be said that prospects appear to be extremely favorable for owners of hogs, cattle and sheep. When the week closed hogs sold a little higher than a week ago, the extreme range being \$5.50@6.60, stags going at \$6.40@6.65; mixed pigs at \$4.15@5; selected pigs at \$5.10@5.50 and boars at \$2.75@3.25. Light hogs brought \$5.50@6.40.

Sheep and lambs have been marketed for another week with extremely large freedom, feeders in the country around Chicago shipping liberally, while the ranges were crowding in their last shipments, these being much poorer in quality than a few weeks ago. While there was a fairly active local and shipping demand prices declined under the large offerings, prices for feeders showing, as usual, the least weakness, for the demand was very large. The outlook for sheepmen who produce prime live muttons the coming winter is singularly favorable, as feeding lambs and sheep have been purchased at much lower prices than last year, while much less feeding will be carried on than a year ago. Fat lambs declined last week 50@75c, while sheep dropped 10@25c, but prime yearlings had a good advance. Lambs closed at \$3@5.75; ewes at \$1.75@3.25; wethers at \$3.35@3.75 and yearlings at \$3.85@4.75. Breeding ewes sold for \$3.15@4.25, and feeders paid \$4.35@5 for range lambs.

Horses have been in the poorest demand recently that has been reported in a long time, and all that saved the better class of horses from selling at lower prices was their scarcity. The common and medium grades have sold around \$25 per head lower than a few weeks ago in numerous instances, inferior to medium animals going at \$65@150 and the better class of drafters at \$200@250, with extra fine heavy ones quotable at \$275@325 and few offered. Wagon horses were bought at \$150@200.

LIVE STOCK NOTES.

Hogs have their ups and downs in the market, with strong weights of good barrows selling the highest and choice light bacon grades going at quite a discount, and rough, heavy sows especially low and the first to develop weakness. Of course, the liberal supplies of little pigs are in a class by themselves and can be sold only by submitting to absurdly low prices. The prevalence of swine plague this year has been unusually serious, especially in Illinois, and many farmers have lost all their pigs and sows, while many others have sold their holdings at big losses because the malady had appeared in their neighborhood. Obviously, the marketing of such large numbers of mere pigs is going to make a correspondingly smaller supply of matured hogs later on, and good prices for hogs for months to come are expected by the best judges of the situation.

With the exceptions of the last two years, hogs started off for the winter packing season November 1 at around the highest prices seen since 1902. Some months ago there were predictions by the packers that there would be \$5 hogs in the Chicago market around the first of November, but, as usual, their predictions were absurdly wide of the mark. It is believed that hogs will pay well for their board all the winter season, as the dearthness of beef and mutton resulting from the short supplies of both beef cattle and sheep and lambs will naturally create an unusually large consumption of fresh pork and cured hog meats.

The demand in the Chicago market for feeding lambs has undergone an improvement, owing to the fact that the federal government authorities no longer insist upon such stock being dipped before shipping to feeding districts. A great many sheepmen always raise strong objections to dipping at this season of the year.

Having Lost All My Buildings by Wind Storm

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PUBLIC SALE

Monday, Nov. 20th, 10 A. M.

3 horses, 24 dairy cattle, 55 hogs, all farm tools including one 18 special Smalley Ensilage Cutter and a 2-pail B. L. K. Cow Milking Machine and equipment complete. Will meet all local cars on Jackson, Kalamazoo Electric Car.

G. E. LOCKWOOD, Marshall, Mich.

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.
November 16, 1911.
Cattle.

Receipts, 1,250. Market strong at last week's prices.

We quote: Best steers and heifers, \$5.50@5.75; steers and heifers, 1,000 to 1,200, \$4.50@5.25; do., 800 to 1,000, \$3.75@5; steers and heifers that are fat, 500 to 700, \$3.50@4.50; choice fat cows, \$4@4.50; good fat cows, \$3.50@3.75; common cows, \$2.75@3; canners, \$1.50@2.50; choice heavy bulls, \$4@4.25; fair to good bolognas, bulls, \$3.50@3.75; stock bulls, \$2.50@3.50; choice feeding steers, 800 to 1,000, \$4.25@4.50; fair feeding steers, 800 to 1,000, \$3.50@4; choice stockers, 500 to 700, \$3.50@4; fair stockers, 500 to 700, \$2.50@3; stock heifers, \$2.50@3; milkers, large, young, medium age, \$4@5; common milkers, \$2@3.50.

Bishop, B. & H. sold Mich. B. Co. 14 butchers av 675 at \$3.50; to Schlischer 15 do av 571 at \$3, 7 do av 736 at \$3.15; to Hammond, S. & Co. 7 do av 820 at \$3.50, 7 canners av 800 at \$2.50, 1 heifer weighing 960 at \$5; to Parker, W. & Co. 4 cows av 1,035 at \$3, 3 do av 960 at \$2.50, 5 do av 1,010 at \$3, 5 do av 830 at \$3.10, 10 do av 868 at \$3, 11 do av 884 at \$3; to Bresnahan 9 canners av 916 at \$2.50, 12 do av 860 at \$2.35, 10 stockers av 630 at \$3.35, 3 cows av 950 at \$2.50, 2 do av 870 at \$2.50; to Hammond, S. & Co. 2 bulls av 1,255 at \$3.75; to Newton B. Co. 13 butchers av 903 at \$3.75, 32 do av 653 at \$3, 1 steer weighing 1,080 at \$5.50, 15 do av 758 at \$4.25, 5 cows av 932 at \$3.50; to Thompson Bros. 5 butchers av 916 at \$3.45, 2 cows av 1,140 at \$2.50, 1 bull weighing 980 at \$3.45, 1 do weighing 1,300 at \$4, 5 butchers av 930 at \$4, 2 steers av 880 at \$5.25; to Sullivan P. Co. 16 cows av 812 at \$2.85, 3 canners av 870 at \$2.25; to Chapman 16 feeders av 800 at \$4.25; to Hirschleman 10 steers av 840 at \$4.80; to Mich. B. Co. 2 cows av 950 at \$2.75; to Bresnahan 5 canners av 1,036 at \$3; to Parker, W. & Co. 20 steers av 1,045 at \$5.25; to Erban Bros. 11 butchers av 584 at \$3.50; to Mich. B. Co. 11 do av 644 at \$3.

Spicer & R. sold Newton B. Co. 5 steers av 822 at \$4.75, 16 do av 908 at \$5.50, 1 cow weighing 870 at \$2.75; to Bresnahan 5 canners av 880 at \$2.65, 2 do av 1,010 at \$2.65; to Thompson Bros. 5 butchers av 666 at \$4.25, 1 heifer weighing 820 at \$4.25, 1 cow weighing 1,080 at \$3.75; to Sullivan P. Co. 5 do av 962 at \$2.75, 5 steers av 1,100 at \$5.35, 1 do weighing 1,390 at \$4, 1 heifer weighing 720 at \$4.25; to Breitenbeck 28 butchers av 906 at \$4.30; to Rattkowsky 2 bulls weighing 690 at \$3.25, 1 cow weighing 970 at \$3.40, 3 heifers av 640 at \$3.40; to Hammond, S. & Co. 1 bull weighing 1,350 at \$3.75; to Smith 1 steer weighing 950 at \$4.

Haley & M. sold Thompson Bros. 4 cows av 867 at \$3.50, 2 heifers av 590 at \$4; to Sullivan P. Co. 1 cow weighing 930 at \$2.50, 14 butchers av 743 at \$3.80, 1 cow weighing 860 at \$3, 2 steers av 1,110 at \$5.25; to Mich. B. Co. 4 cows av 1,037 at \$3.25; to Hammond, S. & Co. 1 heifer weighing 540 at \$4.50, 1 do weighing 550 at \$3, 2 canners av 770 at \$2.25, 2 do av 855 at \$2.50; to Goose 3 cows av 873 at \$3.10, 3 do av 970 at \$2.75; to Bresnahan 2 cows av 830 at \$2.50; to Sullivan P. Co. 7 butchers av 700 at \$3.75, 1 cow weighing 1,020 at \$2.50, 9 butchers av 750 at \$4.10; to Petrosky 16 do av 632 at \$3.50; to Mich. B. Co. 1 bull weighing 1,130 at \$3.75, 2 steers av 820 at \$3.70, 6 do av 716 at \$4.10; to Hammond, S. & Co. 3 heifers av 790 at \$4.50, 7 cows av 980 at \$2.75, 1 do weighing 1,160 at \$4.25, 4 cows and bulls av 1,012 at \$3, 7 butchers av 654 at \$3.50; to Newton B. Co. 21 do av 751 at \$3.90.

Roe Com. Co. sold Hammond, S. & Co. 5 heifers av 610 at \$3.25, 1 canner weighing 1,180 at \$2.50, 3 do av 841 at \$2.75, 1 bull weighing 930 at \$3.50; to Smith 5 stockers av 528 at \$3.50, 1 do weighing 630 at \$3.75; to Bresnahan 14 do av 537 at \$3.25; to Thompson Bros. 11 butchers av 652 at \$3.75; to Breitenbeck 2 do av 620 at \$4.10, 6 do av 740 at \$4.10, 11 cows av 1,000 at \$3.10; to Kamman 17 butchers av 572 at \$3.30; to Goose 7 do av 386 at \$2.50; to Regan 16 do av 593 at \$3.10; to Kamman 15 cows av 761 at \$3.25; to Kamman B. Co. 10 butchers av 634 at \$3.25; to Newton B. Co. 3 cows av 1,262 at \$3.75; to Hammond, S. & Co. 1 heifer weighing 650 at \$4, 1 cow weighing 830 at \$2.50, 1 do weighing 1,080 at \$3, 1 canner weighing 700 at \$1.50; to Sullivan P. Co. 3 cows av 870 at \$2.75; to Thompson Bros. 2 bulls av 1,150 at \$3.75, 12 butchers av 515 at \$3; to Sullivan P. Co. 13 do av 494 at \$3.

Johnson sold Thompson Bros. 6 butchers av 746 at \$3.75.

Lowenstein sold Mich. B. Co. 6 cows av 1,080 at \$4, 2 do av 1,030 at \$3.50.

Receipts, 385. Market steady at last week's opening prices. Best, \$8@8.75; others, \$4@7.50; milch cows and springers steady.

Spicer & R. sold Mich. B. Co. 5 av 125 at \$8.25, 1 weighing 100 at \$6.50, 18 av 125 at \$7.75, 19 av 135 at \$7.75.

Duelle sold Burnstone 21 av 140 at \$8.25, 1 weighing 220 at \$6.50.

Jedele sold same 7 av 150 at \$8.25.

Haley & M. sold Sullivan P. Co. 1 weighing 200 at \$3.50, 4 av 140 at \$8, 1

weighing 170 at \$6, 3 av 150 at \$8, 2 av 170 at \$8.

Roe Com. Co. sold Hammond, S. & Co. 1 weighing 150 at \$6.50, 4 av 140 at \$8.25; to Sullivan P. Co. 2 av 145 at \$6.75; to Hammond, S. & Co. 3 av 150 at \$8.25, 5 av 160 at \$8.50; to Sullivan P. Co. 13 av 135 at \$8.

Bishop, B. & H. sold Parker, W. & Co. 2 av 165 at \$8.50, 1 weighing 290 at \$6, 9 av 150 at \$8, 10 av 127 at \$8, 1 weighing 130 at \$5, 6 av 130 at \$7.50, 7 av 135 at \$8.50; to Mich. B. Co. 11 av 155 at \$8.25, 3 av 130 at \$8, 3 av 135 at \$8; to Newton B. Co. 4 av 140 at \$6.50; to Rattkowsky 3 av 275 at \$3; to Hammond, S. & Co. 3 av 155 at \$8.75, 2 av 280 at \$5; to Sullivan P. Co. 2 av 105 at \$6.50, 5 av 150 at \$8.50.

Sheep and Lambs.

Receipts, 7,210. Market steady with Wednesday's close; 10@15c lower than last week. Best lambs, \$5@5.15; fair do., \$4@4.75; light to common lambs, \$3@3.85; fair to good sheep, \$2.50@3; culls and common, \$1.50@2.25.

Spicer & R. sold Mich. B. Co. 69 lambs av 74 at \$5.30, 23 do av 65 at \$5.15, 33 sheep av 85 at \$3.

Jedele sold Newton B. Co. 31 lambs av 70 at \$5.10.

Roe Com. Co. sold Hammond, S. & Co. 45 lambs av 40 at \$3.75, 66 do av 67 at \$5.25, 6 sheep av 90 at \$2, 14 do av 120 at \$2.75, 37 do av 90 at \$2.75, 89 do av 65 at \$4.50, 10 sheep av 70 at \$1.50.

Haley & M. sold Sullivan P. Co. 4 lambs av 58 at \$5, 11 do av 110 at \$3; to Newton B. Co. 76 do av 73 at \$4.75, 20 do av 50 at \$3.50.

Bishop, B. & H. sold Youngs 22 sheep av 90 at \$3, 34 do av 95 at \$2.50, 27 do av 88 at \$1.50, 76 do av 90 at \$2.75, 8 do av 125 at \$3, 288 lambs av 70 at \$5, 50 do av 68 at \$5.20, 15 do av 65 at \$5, 13 do av 60 at \$4.75, 51 sheep av 83 at \$2.25, 48 lambs av 65 at \$5.10; to Hammond, S. & Co. 102 do av 52 at \$3.50; to Sullivan P. Co. 3 do av 120 at \$3, 10 do av 86 at \$1.50, 50 lambs av 50 at \$3, 46 do av 50 at \$3, 65 do av 55 at \$3.50, 22 do av 47 at \$3, 42 sheep av 110 at \$3; to B. Hammond 128 sheep av 90 at \$1.60, 20 do av 90 at \$1.25, 32 do av 95 at \$2.50, 11 do av 80 at \$1.50, 6 do av 83 at \$1.25, 15 do av 90 at \$2.50; to Nagle P. Co. 579 lambs av 70 at \$5, 186 do av 60 at \$4.50, 76 do av 55 at \$3.50, 65 do av 60 at \$4, 53 do av 55 at \$4.25, 57 sheep av 100 at \$2.25; to Parker, W. & Co. 73 do av 85 at \$2.50; to Youngs 13 do av 110 at \$2.25; to Fitzpatrick Bros. 43 do av 110 at \$2.60, 16 do av 85 at \$1.50, 17 do av 115 at \$2.60.

Hogs.

Receipts, 7,030. None sold at noon; packers bidding as follows: Range of prices: Light to good butchers, \$6.30@6.40; pigs, \$5.50@5.60; light yorkers, \$6.15@6.25.

Bishop, B. & H. sold Parker, W. & Co. 4,885 av 180 at \$6.35, 1,130 av 180 at \$6.30, 850 av 170 at \$6.25, 515 av 150 at \$6.15.

Roe Com. Co. sold Sullivan P. Co. 225 av 205 at \$6.40, 430 av 190 at \$6.35, 320 av 180 at \$6.30, 255 av 180 at \$6.25.

Haley & M. sold Hammond, S. & Co. 520 av 200 at \$6.35, 250 av 160 at \$6.30.

Spicer & R. sold same 1,115 av 200 at \$6.35, 220 av 150 at \$6.25.

Friday's Market.

November 10, 1911.
Cattle.

Receipts this week, 2,124; last week, 1,756. Market for stockers very dull; other grades steady; no demand from country. Best steers and heifers, \$5.50; steers and heifers, 1,000 to 1,200, \$5@5.25; do. 800 to 1,000, \$4.50@5; do. that are fat, 500 to 700, \$3.50@4; choice fat cows, \$4; good do., \$3@3.25; common cows, \$2.50@3; canners, 1@2.25; choice heavy bulls, \$4; fair to good bologna bulls, \$3.50@3.75; stock bulls, \$2.75@3.25; choice feeding steers, 800 to 1,000, \$4.50@4.75; fair feeding steers, 800 to 1,000, \$4@4.50; choice stockers, 500 to 700, \$3.50@3.75; fair stockers, 500 to 700, \$3@3.50; stock heifers, \$2.50@3.25; milkers, large, young, medium age, \$4@6; common milkers, \$2@3.

Hogs.

Receipts this week, 14,709; last week, 12,822. Market steady at Thursday's prices. Few choice a trifle higher. Light to good butchers, \$6.15@6.25; pigs, \$5.25@5.40; light yorkers, \$5.80@6.10.

ADDITIONAL VETERINARY.

Warbles.—Two of my cows have bunches under skin, situated mostly on back and between ribs. C. K. Shelbyville, Mich.—I am inclined to believe that your cows suffer from warbles. The only satisfactory treatment is to open skin with a sharp penknife or lancet, squeeze out grub, then apply one part carbolic acid in 30 parts water to wound twice a day, or dust on boracic acid. Painting bunches with tincture of iodine once a day might reduce and scatter them.

Spinal Paralysis.—Lamb is sick and when down on side is unable to roll over or get up without help. When down the legs move fairly well, and when up it can walk and seems to have fairly good appetite. I thought sheep ticks might be causing weakness, but killed them with dip, and lamb is no better. G. H. Fair Grove, Mich.—Lamb suffers from spinal congestion, producing partial loss of power, and may never fully recover. Fairly good results follow keeping the animal warm, bowels open, kidneys active and giving 8 grs. powdered nuxvomica at a dose in soft feed three times a day. This is not a large dose of powdered nuxvomica, but it may be too much for your lamb unless it is fairly good size for its age. A dose of ground nuxvomica for a sheep is from 10 to 40 grains.

Indigestion.—Piles.—Spring pig suffered from piles during summer and some two months ago seemed to bloat considerably, then have diarrhoea. This pig has been somewhat out of health for past 60 days. O. A. M., Green Spring, O.—Perhaps a

change of feed would have a good effect; also give a teaspoonful cooking soda and 15 grs. salol at a dose in feed three times a day. Good results follow feeding ginger and charcoal to such an animal.

Impure Blood.—One year ago I bought a 12-year-old horse that had had an attack of farcy. He has remained in good condition since I have owned him until six weeks ago. He now has several blotches that fluid oozes from. C. H. F., Bellaire, Mich.—Your horse suffers from blood impurities, not farcy or glanders. Apply equal parts oxide of zinc, powdered alum, boracic acid and flower of sulphur to sore parts twice daily. Give him a dessertspoonful of Donovan's solution at a dose in feed three times a day for not less than 30 days.

Preventing Milk Fever.—What can be done to prevent cow having milk fever? I have a good cow that comes fresh next month. R. W. R., Rose City, Mich.—No deep-milking cow can be immunized against milk fever; however, by feeding her lightly, keeping her bowels open a few days before she calves, and drawing only a portion of milk from udder for a few days after she calves, she will run little risk of having parturient apoplexy. You should purchase one of our milk fever outfits for giving the air treatment which is the only known remedy for milk fever. Such an outfit costs only \$2 and with it you can give the treatment yourself.

Wound.—About three weeks ago my horse ran against a barb wire, wounding himself; he is not recovering as rapidly as I think he should. Have applied hydrogen peroxide, also equal parts boric acid and air-slaked lime. W. F. P., Delano, Cal.—After using hydrogen peroxide, apply one part iodoform, one part powdered alum and six parts boric acid. A wound never heals well if the animal is kept in an unclean, badly ventilated stable.

Chronic Poll Evil.—Four-year-old mare has poll evil; she has been treated by local Vet. for past four months and his charges for services are \$50. This is about all I care to spend for treatment unless she can be cured. I cannot tell what he did for her, but part of treatment was given with hypodermic syringe. The wound almost healed, but soon broke out again. G. G. Orion, Mich.—Obstinate and severe cases of poll evil are often brought to my hospital and I can safely say that I have had about as much experience with such cases as any veterinarian. I am free to admit that they are usually unsatisfactory cases to treat. I often find it necessary to remove some diseased bone before a cure can be effected. If the bone is diseased the discharge will give off a very offensive odor. Strange to say, if very little is done for poll evil, most cases seem to get well in a year or two. The bacterin treatment, which has been practiced successfully in the treatment of such cases for the past year or two, usually gives fairly good results. This I presume your Vet. applied. If your mare does not suffer much pain, and the discharge is not offensive, she will perhaps recover slowly if you will inject fistula with hydrogen peroxide once a day. Your syringe should be clean and go to bottom of tumor. The peroxide should be dropped slowly into cavity, for it makes gas which must have vent. Ten minutes later apply one part tincture iodine in eight parts water. For a few applications I often use tincture iodine, or a strong bichloride of mercury solution; however, you had better try iodine.

Opacity of Cornea.—For past 18 months my mare has had a thin scum over eyeball, which I think was caused by injury. She seems near-sighted. When a lantern is held near her she can see the light. T. W., Carsonville, Mich.—Give mare 1 dr. iodide potassium and a teaspoonful Donovan's solution at a dose in feed two or three times a day; leave the eye alone. The absorbent effect of medicine will have a tendency to remove a portion of film. This treatment should be kept up for a month or two.

Chronic Stiffness.—Early last summer I bought a mare, 11 or 12 years old, that appears to be stiff in all parts of body. Exercise gives her some relief. C. G. S., Holton, Mich.—Your mare has either been foundered, has navicular disease, or else suffers from rheumatism affecting the joints. If she has either of the foot ailments, standing her in wet clay an hour or two a day, or applying wet swabs whenever she is in stable, will give some relief. For rheumatic ailment give 2 drs. salicylate of soda, 1 dr. colchicum seed and 1 dr. nitrate of potash at a dose in feed three times a day.

Barrenness.—Stricture.—Cow that came fresh last March has not been in heat since. Have another cow the milk stream from one of whose teats scatters. C. L. L., Delta, Mich.—Giving medicine to cows with a view of stimulating the ovaries into action is not attended with satisfactory results; however, you may give her 15 grs. powdered cantharides and a tablespoonful of cayenne pepper at a dose in feed twice a day. A liberal grain allowance will also help to bring her in heat. Dilate teat opening, or use a milking tube.

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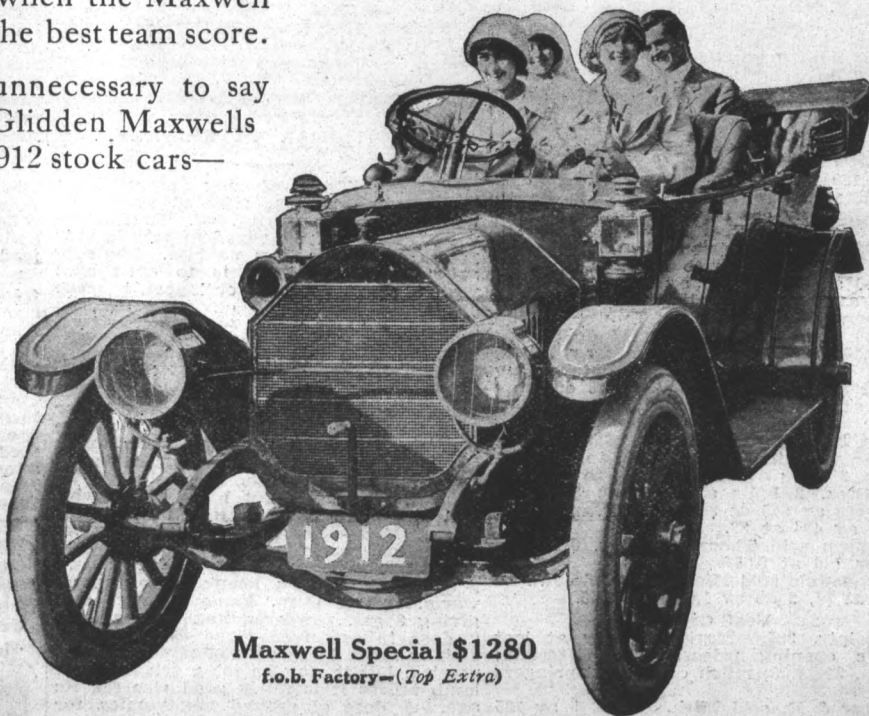
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