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\$1.50 THREE YEARS

FARM NOTES.

Cutworms in the Corn Field.

I have a heavy sod which I intend to plant to corn and would like to have you give me some advice on how to stop cut worms from eating up the corn. I was troubled so badly with cut worms last year that I concluded I had better ask you, through your paper, for advice.

Oakland Co. SUBSCRIBER.

Where sod ground is known or suspected to be infested with cutworms, fall plowing is the best preventative of damage to the crop to be planted the following spring. But, of course, since that cannot now be done, some other means must be taken to keep them in check. Two methods of preparing the soil offer some help in this direction. One of these consists in very early spring plowing and thorough fitting of the soil, as frequent stirring of the surface does not seem to agree with these worms. Then if planting is delayed until the weather is favorable for the quick germination and rapid growth of the corn plants both soil and weather will be in a condition to favor this desirable end, and cultivation of the crop with the weeder and cultivator can be begun early. This will push the corn ahead as well as retard the work of the worms, so that a minimum of damage will result.

Another method which has given good results in some cases is to let the grass grow as late as possible before plowing, then plow, fit and plant as soon as possible. The theory in this case is that the worms will continue to work in the tender blades and roots of the grass plowed down until the corn gets well started and out of their way. This plan has a marked disadvantage over the one first mentioned in that it does not permit of as thorough preparation of the seed bed and early killing of the weeds as does the earlier plowing. However, the policy to be pursued will depend so much upon local conditions that it is quite impossible to advise intelligently as between the two methods above noted.

Various remedial measures are advised by different authorities. Some farmers claim to have had excellent results through the use of salt. Others have been able to note little if any benefit from its use. Another remedy often used by gardeners is the poisoned baits. These baits consist of fresh, green clover, poisoned with paris green and water, scattered in small bunches at intervals of a few feet, preferably at night when the worms are most active and when the bait will not wilt so quickly. Bran mash to which poison has been added is said to be still more effective, but would be

more objectionable from the danger of poisoning useful birds or other animals. But as a general practice this poisoning process will hardly be adopted upon the farm. In such case thorough preparation of the soil followed by early and frequent cultivation of the crop should not be neglected as it offers a maximum of protection if applied in accordance with either of the plans above outlined.

Fertilizer for Clover.

Please advise me as to the kind and amount of fertilizer to use on sandy soil when I desire to make a crop of small clover without a nurse crop.

Calhoun Co. C. C. W.

A light dressing of a complete fertilizer would be sufficient for clover sown

from the use of any other kind of fertilizer, for the reason that in addition to furnishing plant food the surface covering of manure prevents the sand from blowing, which is a frequent cause of the loss of young clover plants soon after seeding, and also prevents soil moisture from evaporating so rapidly from the surface, since it will act as a mulch in the conservation of the moisture which is needed by the young plants.

Early vs. Late Planting of Potatoes.

Would you think it advisable to plant the main crop of potatoes in May, instead of waiting until June as has been the custom in recent years?

Lapeer Co. M. A. CRAWFORD.

There are advantages to be gained by

taging to such early planting which seem to be considered to counterbalance it, by the great majority of growers. One of these disadvantages is the greater prevalence of potato bugs on the early planted potatoes. When potatoes are planted the middle or the latter part of June, the bugs are not a serious trouble and in some seasons do not require any attention at all. However, this is probably more than offset by the necessity, or at least the need, of spraying as a protection from late blight where the potatoes are planted in June. Another reason for favoring the late planting of potatoes is the fact that we often get a drought of some duration in the middle of the summer extending well along into August and if the potatoes are just coming into maturity at this time, the crop is more apt to be shortened by adverse weather conditions than would be the case where it matures the latter part of September or the first of October, after the fall rains have come. However, this is not always the case and in some seasons the advantage is in favor of early planting so far as yield is concerned but the later planted potato, one year with another, will probably give a better yield than those planted in May, although in a normal season the potatoes having the longest time in which to grow and reach maturity will give the better crop when our ordinary standard market varieties are used.

Wireworms.

I bought a farm here last year, part of which had lain in June grass sod for a number of years. I planted part of it to corn last year and this spring seeded to oats. The oats came up fine and gave promise of making a good crop, but the wireworms commenced to work on it a few days ago and have ruined it. Could you suggest some crop which I could put in later that the worms would not work on? Will the worms work on flax? Also on buckwheat?

Saginaw Co.

SUBSCRIBER.

Buckwheat would be as good a crop as could be selected for use upon this land. While wireworms attack buckwheat they do not generally damage it badly as, in common with a few other crops, it appears to be distasteful to them. Rape is another crop of this character although, of course, it is valuable only for green forage. The life history of the wireworm is very similar to that of the white grub which was described in the Farm Notes column of the last issue. It is the larvae of the click or snapping beetle and remains in the ground in the larval state for two or three years, according to the species and the conditions under which it develops. This makes it exceedingly difficult to combat, fall plowing being about the only remedy which promises



A Neighborhood Donation.—Scene at a "Bee" recently held for the benefit of an Eaton County farmer, at which his oat and corn ground was plowed and fitted and his oat crop sown.

upon a sandy soil without a nurse crop, say 200 lbs. per acre. While the clover plant is able to gather its own supply of nitrogen from the air, if it is well established and the bacteria peculiar to the plant have stored up this valuable element of plant food in the root nodules which they cause upon the clover roots. But by using a complete fertilizer the nitrogen which it contains will be valuable in helping to get these little clover plants started to a point where the bacteria can perform this service for them. The mineral elements of fertility are needed in greater abundance, but if the clover plant attains a good development, it reaches down into the soil after plant food much farther than most of our crops for which reason only a moderate application of fertilizer seems to be necessary to furnish a maximum of benefit to the clover crop. On very light soil where one can give the ground a top dressing with stable manure after the seed is sown, more beneficial effects will be noted than

planting potatoes early and some successful Michigan growers make a practice of planting late varieties early in May or in April where possible, instead of waiting until June as has become the general custom among a large percentage of potato growers of this state. One advantage to be gained is in the less damage from late blight which will rarely be troublesome on potatoes planted early in the spring. Another advantage is that the crop will mature considerably earlier and may be harvested and marketed before the bulk of the late potato crop is available. Quite often the price is more satisfactory at this season of the year and the crop is disposed of promptly, so that a minimum of labor is required in its handling. Then, too, the potatoes are gotten off the field in time so that the soil can be fitted and sown to fall grain, which is not practicable in case the potatoes are planted late, as is ordinarily the custom.

But there are as well some disadvantages



Farm Home of W. W. Wood, of Manistee Co., which illustrates how New Buildings Gradually Supplement and Replace the Old on Our Michigan Farms.

early relief. The land should be kept in cultivated crops for two or three years until the larvae are eradicated from the soil before it is reseeded. This question of wireworms and similar insects is one which is a strong argument for a short rotation of crops since only when the soil is allowed to lie continuously in grass for a number of years, as is described by this inquirer, will these pests become prevalent or troublesome.

CORN GROWING.

The season for starting the corn crop is soon to be at hand and, like horse racing, getting a good start is very important. Corn is a plant that revels in warm, moist soil. It is a child of the tropics, and does not take hold of life in the cold ground like oats and barley. Whatever merit there may be in the doctrine of tillage being manure, there is virtue in tillage to secure warmth and abundance of plant food available for the corn crop. The extra early bird that gets the worm should not serve on the coat of arms as a model for the corn grower. There is no cultivation of corn so effective as the work done before planting to prepare the seed bed. The much discussed question of dragging corn ought scarcely ever to be declared a timely or important subject the ground should have been prepared so that the necessity would rarely exist.

On a forty-acre field of corn three years ago there was a difference of 15 days between the first and last portions in time of planting. Early in July no difference in the size of the corn plants was observable. A year earlier than this, owing to defective seed, corn was replanted two weeks later than a portion of the field where the stand was deemed sufficiently good to remain and the same observation was made in July as was noted above. Another season's observation was that the corn plant became yellow and stunted during a period of cold weather. "Americanitis" is a term used by the medical profession to describe the haste of the American people to accomplish some object. A Hungarian beet weeder expressed the same idea in saying "too much hurry up." The boys used to be promised that they could go fishing after corn planting, which may have been too great an incentive and accelerated the planting ahead of proper preparation until it has become a habit.

With an edge drop planter the first season, many years ago, I accumulated a large assortment of planter plates, hoping to have the same results in dropping an even number of grains of corn that the machine did at the state fair exhibit. A different set of plates was tried and then another, and the planter seemed to be working the shell game of now you see it, now you don't. The number of grains to the hill was as varied as the reasons for high prices of farm products. The difficulty was not in the planter but in the sizes of the corn grains. The remedy was grading the seed corn, and really, no edge drop planter ought to be used on ungraded seed corn. I am strongly of the opinion that more real merit in producing the maximum bushels of corn to the acre lies in grading the seed corn than there is in detasseling, or the seed corn plot, or in many of the so-called pure-bred pedigreed corn samples. A corn grader is an inexpensive affair and as simple as a meal sieve. When the supreme court of Michigan declared invalid the appropriation for the corn growers' association I always thought they might have added to their decision a few words as to the merits of grading seed corn. It's good enough law, however, it was overlooked by the court.

All stereotyped advice as to corn growing says a clover sod, fertilized with stable manure, and no advice could be better. However, there are sometimes occasions when the clover sod is lacking and the stable manure insufficient to go over the fields as we would wish. What the clover sod and manure call for in the final analysis is fertility, mainly nitrogen and warmth. When the corn plant has that dark green color that comes from sufficient nitrogen and heat under normal conditions a good crop is assured. A commercial fertilizer strong in nitrogen and phosphoric acid, makes a valuable substitute for the ideal condition of clover sod and stable manure. The way to find out is to try it. If one has not the clover sod and stable manure he can buy its equivalent in plant food elements and largely make up for the mechanical difference in soil preparation before and after planting. The sugar beet raisers have quite unanimously agreed that the application of fertilizer

gives the beet the start that enables the plant to appropriate soil plant food earlier than the non-fertilized beet. The same is true of the corn plant, and it hastens the active forces of the plant to give it a strong grip on the soil. Corn seems especially partial to nitrogen, and it is the clover sod and stable manure yielding the nitrogen to the plant that gives the dark green foliage spoken of before.

There are some special implements that add much to the effectiveness of corn culture. The 12-foot wheeled weeder gets over the ground at the rate of 25 or 30 acres a day. The weeder does not supplant, but complements the cultivator. The crust on the soil can be broken with a weeder in one day's time while much longer with the cultivator would be necessary. The weeder gets right in around the plants and permits reasonably clean cultivation when the corn is planted in drills. For large areas of cultivated crops like beets and beans, as well as corn, the two-row cultivator is an economy. The capacity of the man and team is doubled and so perfect are modern cultivators that equally as good work is done as with the single-row cultivator. As a matter of mathematics the tramping at the ends and missteps of the horses is reduced one-half, since each step of the team counts for twice what is done with the single-row implement. The speed of the weeder and two-row cultivator seems to hold the cut worms in check, as cultivation seems to prevent their ravages.

A complete chapter on corn growing is not the text of this article, but merely some of the results of personal experience and observation, among which was top dressing corn with the manure spreader when from three to 12 inches high. Owing to dry weather the effect on the corn did not seem marked. The manure spreader wheels track, two rows of corn are manured at a time and cultivation followed to work in the manure. The effect on the rape seeded in the corn was very noticeable when the top dressed area was reached. Rape in corn is always an uncertain factor, owing to the moisture content of the land, but if conditions are at all favorable top dressing and rape growth are closely connected. If the corn ground is seeded to rye without plowing the manured soil gives the rye a strong start.

Shiawassee Co. JAS. N. McBRIDE.

WILL FERTILIZER INJURE THE GERMINATING POWER OF BEET SEED?

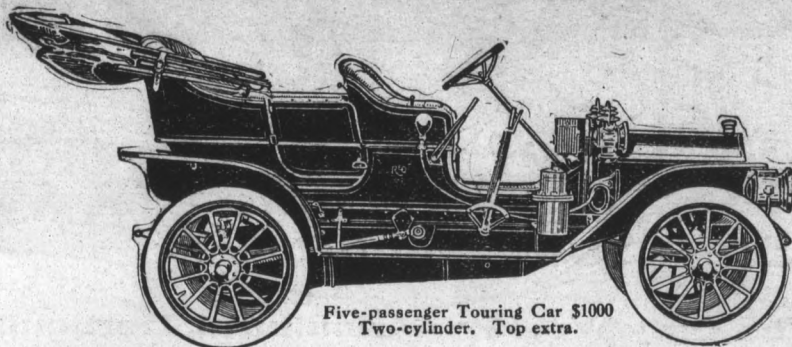
Will a fertilizer containing two per cent ammonia, seven per cent of available phosphoric acid, and 12 per cent of potash, injure the germination of sugar beet seed? Seed to be sown with a drill in which seed and fertilizer drop through same pipe, 250 lbs. to the acre. Also, is this a good fertilizer for new marsh land with heavy sod? Can you give any plant food more available on new land? Please answer through The Farmer.

Gratiot Co. OLD SUBSCRIBER.

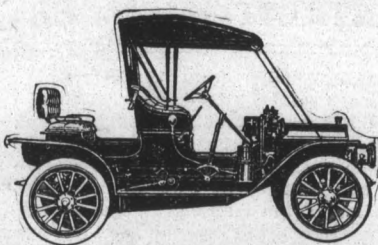
I think that 250 pounds of fertilizer sown directly with the seed, which analyzes 2 per cent ammonia, 7 per cent available phosphoric acid and 12 per cent potash, would be liable to injure the germinating power of the seed. It is the potash that does it. Eighteen per cent potash is a pretty rich potash fertilizer and I would not want to mix 12 per cent of potash direct with the seed in the soil. Where you use a fertilizer as rich in potash as this, it is much better to sow the fertilizer broadcast and harrow it into the soil before the beets are sown. This will obviate any difficulty from this cause. I would say that this would be a good fertilizer for marsh land. Marsh land is apt to be deficient in potash. Here we have one very rich in potash. My opinion would be that gypsum would do very little, if any, good upon this sort of land. Where gypsum or land plaster has proven beneficial it has been upon the lighter sandy soils and the reason probably is because gypsum, or sulphate of calcium, has the power of setting free some of the salts of potash which they find in the soil. This land is liable to be deficient in potash, hence I think gypsum would not be very much of a fertilizer for this soil. I would much rather use the sulphate or muriate of potash on this land, thoroughly incorporating it in the soil before the seed is sown, and it is quite possible that an application of lime would be very beneficial upon this land, which is apt to be somewhat sour. It also contains a large amount of vegetable matter which probably does not contain plant food in a very soluble condition. The lime will assist in setting free plant food.

COLON C. LILLIE.

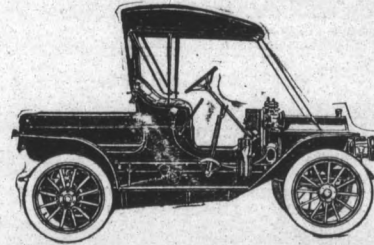
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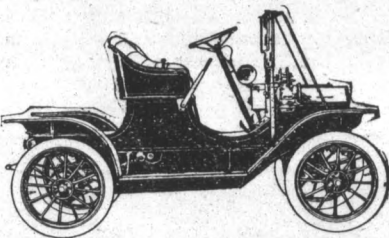
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A NEW PLAN FOR CURING HAY.

I read very carefully all communications in regard to raising and curing alfalfa as I consider it the best crop we can grow for hay where it can be grown successfully, and I fully agree with the idea of covering with caps in the field while curing, but I find that a small stack bottom for each cock of curing hay accomplishes more than the caps and if I could have but one I would prefer the bottoms three to one. They allow the hay to cure evenly from bottom to top of the cock and do not smother the alfalfa roots near as badly as when the hay is on the ground.

I make them four feet square, about like an old-fashioned picket garden gate. I use two pieces, 1½x4 inches wide by 4 feet long and nail any kind of old strip, two or three inches apart, 4 feet long, on the edges, and brace to keep them square. It requires about ten or twelve feet of lumber for each bottom.

I used them for beans in the field and by covering with a little marsh hay could leave them in the field as long as desired.

Presque Isle Co. M. C.

THE OAT CROP.

I notice in The Farmer of April 16 that Mr. Goyk wishes to know more about the figures given in my article on "Oats as a Farm Crop," published in The Farmer of April 2.

In the first place I wish to say that these figures are not estimates. If they were I would place them higher as being nearer the average cost. They are taken from my ledger which lies before me and which is filled out at the time the work was done.

The scale of prices which we followed in computing these figures was \$1.50 per day for a man and \$1.00 per day for team of two horses. The field was clean, perfectly level, and about twice as long as broad. The disking was done with a single action cutaway harrow, first disking around the field, lapping half, which counted as two diskings, then crossing cornerways without lapping, and harrowing cornerways with a spring tooth harrow. This was done in four days by a man and heavy team, and is charged at \$2.50 per day.

The harrowing with 70-spike tooth harrow, which cuts about twelve feet, was done after a hard rain which followed the drilling to break up the crust, and took a half day. The drilling required about a day.

The manure was hauled from 20 to 100 rods with a spreader. A man with three-horse team will haul from 10 to 16 loads per day, say 12 as an average, which would make the labor cost of hauling, at \$3.00 per day, 25 cents per load, as stated in the account. We have kept account of the expense of manure hauling for many days and find that the average cost varies little from 25 cents per load. Much of this manure is secured for the hauling, the balance for furnishing straw for the bedding, the party hauling the straw and we the manure; however, we make a practice of charging the crop with 25 cents per load for the manure, which, with 25 cents for hauling, makes 50 cents per load as charged.

The oats were threshed from the stack at three cents per bushel, the thrasher furnishing all help except to take the grain to the granary, which required two men and a team less than a half day, so the charge of \$3.00 is ample for the labor, though a little more should be charged for fuel used.

It should also be understood that the days are not six or eight hour days in the field as are but in by some farmers with many chores to do at this time of the year, but represent ten hours of work in the field by a good man with a heavy, well-fed team.

As will be noticed, these figures are not intended to cover the use of tools and the rental of the land, or instead of the rental the taxes and interest on the investment. A glance at the itemized statement given will show that we had not intended to include these. To get the real net profit these and other things should be figured according to local circumstances. We find it easier to figure these things as an estimate and add to the cost or deduct from the net profit after the account is completed as given in the article.

If we wish to compute the taxes and use of tools above, we will figure the land worth \$75.00 per acre, taxes 2 per cent, (land is in a village), or \$15.00. We will estimate rental of spreader and drill at \$1.00 per day, binder at \$2.00, disk and harrow at 50 cents, wagon at 25 cents,

which gives \$9.33 for a fair rental of tools used in the work. Deducting this and the taxes from the net proceeds of \$172.38 gives the real net proceeds \$148.05, or nearly 20 per cent interest on an investment in land of \$750. This is presuming that the rental of the team and tools as charged is sufficient to pay interest on the investment and deterioration in value. I am of the opinion that with the present price of horses and grain, a horse should be charged at 75 cents per day instead of 50 and we are considering making this change in our accounts this year.

While the question is up, for sake of comparison we will give a summary of the account of the 1908 crop of oats from 7¼ acres.

One-third of 23 loads manure put on previous corn crop, at 50c.....	3.83
Plowing.....	8.75
Harrowing, twice with spike tooth one day.....	2.50
Thirteen and one-half bushel seed oats at 55c.....	7.43
Drilling.....	2.50
Cutting and shocking.....	4.50
Fifteen pounds twine at \$8.50 per hundred lbs.....	1.28
Hauling to barn.....	5.30
Threshing 320 bu. oats at 3c.....	9.60
Labor in putting in granary.....	1.50

Total.....\$ 47.19

Five loads straw at \$2.00.....	\$ 10.00
320 bu. oats at 45c.....	144.00

Total.....\$154.06

Net.....\$106.81

If we deduct rental of tools and taxes as in the former account we will have an income of about 16 per cent on the investment in land at \$75.00 per acre.

But after all is included that is possible to figure in a general estimate there will be other expenses to take into consideration, which enter directly or indirectly into the cost of any crop. These include the building and repair of fences, the repair of buildings, tools, harnesses, etc., breakage, stormy days, parts of the year when men, harness, and tools are not profitably employed, odd jobs about the farm which can not really be charged to any account, and many things of this kind. Of course, these things vary with places and circumstances. To be on the safe side of a complete estimate we should do as a contractor does in figuring a building and add 10 per cent to the cost after everything is computed that can legitimately go into the account.

Calhoun Co. S. B. HARTMAN.

VARIETIES OF CANADA FIELD PEAS.

What is the difference between white Canada field pea and the Canada green pea in yield of grain per acre when sown with oats? I would like to ask how Swedish select oats yield per acre?

Kent Co. SUBSCRIBER.

There are a great many varieties of field peas, or Canada peas. It is said that there are some 200 varieties that are grown in Canada. I know but very little about these different varieties. As a matter of fact, I have to buy what I can get on the market when I can get them, for seed. It is claimed that the variety known as "White Wonder" has given the largest yield at the Ontario Agricultural College for a series of years. I have never sent to Canada after field peas, although I do not know but what it would pay. I bought them always through the local dealer and I do not know where they are grown or what the name of the variety is. It is simply field peas, but I have no doubt it would pay me to get in touch with some Canadian grower who has some distinct variety, and purchase the peas through them, even though they cost more.

Regenerated Swedish oats have done well for me for the past two years while I have been growing them. They are the best oats I ever raised. I have only raised them for two years, but both years have been very poor seasons, the springs were late and we could not get the oats in early, and an excess of moisture with extremely hot, dry weather following. Yet, for all of that, I have raised 50 bushels per acre each year of nice oats, while last year common oats that I sowed did not yield over 25 bushels. These Regenerated Swedish Select oats doubled the yield last year on my farm.

COLON C. LILLIE.

I like the Magazine Section. Would say that we are well pleased with it, but will also say that it has no weight in causing me to renew my subscription, for I am a farmer and don't see how I could get along without The Farmer. Every week there seems to be something in it that is just what I am looking for, and it gives me some light on the subject.

—Edwin Gill, East Jordan, Mich.

"Think The Farmer is fine, especially the Magazine Section. Would not like to get along without The Farmer."—Henry Falk, Romeo, Mich. R. No. 3.

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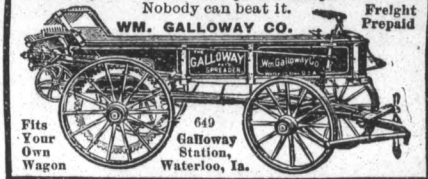
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POULTRY AND BEES

IN ANSWER TO INQUIRIES.

Feeding Treated Wheat to Fowls.

Can wheat that was treated with formaldehyde last fall be safely fed to chickens? Have quite a lot of it and would like to feed it if I dare do so.

MRS. C. L.

Formaldehyde is a gas having a sharp, penetrating odor. While it has a very irritating effect upon the nose, throat and other mucous membranes, it is not considered poisonous in the ordinary sense of the word. The commercial product, generally known as formalin, is a solution supposed to contain 40 per cent of formaldehyde. As a matter of fact, it usually contains less rather than more than this amount. Some years ago the Department of Agriculture obtained a large number of samples of formalin in the open market from different parts of the country and analyzed them. All were found below standard, the average being approximately 37 per cent. This investigation was made with a view to impressing upon farmers the necessity of insisting upon having a product which closely approaches standard strength when purchasing formalin.

For treating seed wheat one pound of this commercial formaldehyde, or formalin, is used in 50 gals. of water. It will be seen that when thus diluted the proportion of formaldehyde in the preparation is very small. After sprinkling the grain until thoroughly wet, most authorities advise covering it with a blanket or canvas, or else closing the bin tightly for a few hours, for the reason that the solution vaporizes rapidly. With these facts in mind, it seems certain that grain treated last fall would now show not more than a mere trace of the chemical. In order to have the grain keep perfectly it was of course necessary to dry it thoroughly before storing for the winter, and this exposure to the air no doubt caused such complete evaporation of the solution that the grain may be fed in reasonable quantities with perfect safety. If, however, the wheat was not properly dried out and has not kept well, it should not be fed, this applying to all grains, whether treated or untreated.

Rearing Young Turkeys.

An Eaton Co. subscriber asks whether it is customary to keep young turkeys shut up in coops until a few weeks old, or whether it is better to set them down in a field as soon as hatched and let them secure their own living. Experienced turkey growers believe that success depends upon keeping just as close to nature as possible, and some now go so far as to practice letting the turkey hen steal her nest, bring off her young and rear them as best she may. The claim is that about as many turkeys can be raised in this way and it is done practically without giving them any time or attention. It is pretty sure to keep them separate from the rest of the farm fowls, a matter of considerable moment when considered in the light of what was said in these columns some weeks ago concerning the source of blackhead, the disease which appears to be threatening the future of turkey raising.

But there are some grave objections to the above system, and for the careful, intelligent poultryman it is not the most economical way to raise turkeys. It has the effect of rendering the fowls very wild and roving in their habits, with the likelihood of developing into a neighborhood nuisance. Then each hen will simply lay one clutch of eggs and bring off a single brood, whereas, under proper management, she should lay enough to set several chicken hens before she is given a clutch herself. Thus she should produce at least double the number of poulters that would be possible if left to her own inclination. The young brought off by chicken hens are more easily controlled but they must not be closely confined. The main thing is to keep them around where they can be fed regularly for a few weeks, and where they will have protection from dew and rain. A pasture lot in which the grass has been clipped pretty close makes an excellent place for turkey hens and their young provided they can be confined to it and can have a good feeding place and suitable shelter. If allowed to have her way the turkey hen will lead her brood through wet grass and weeds until they are drenched. This is disastrous and must be guarded against.

Begin feeding poults the second day after hatching, giving hard-boiled egg

and bread soaked in hot milk. This diet may be continued for several weeks, giving milk curds occasionally for a change, and seasoning with pepper. Meal in the form of corn bread, moistened with milk or water, is liked by some, and meat scraps or ground bone are substituted for eggs after the third week. Meat and bone are especially beneficial during the feathering period, their need depending somewhat, however, upon the fowls' access to insect life. When fully feathered they are able to take care of themselves.

Ventilating the Poultry House.

I have built a henhouse 16x30 ft., putting in a ventilator at each end. One man says these ventilators should start just below the ceiling. I contend that they ought to start about a foot from the floor. Which is right?

Sanilac Co.

M. H.

Your idea of starting the ventilating shafts a foot above the floor is all right provided you have the proper method of admitting fresh air to the building. You are following the lines of the so-called King system of ventilation, and this system calls for fresh-air intakes on the sides of the building near the ceiling. No doubt you are familiar with this system as it has been installed in dairy barns, and therefore know that each intake or wall-opening near the ceiling should connect with an air shaft running down the outer surface of the wall and opening at a point about a foot or so above the ground. The pure cold air moves up these shafts and into the building, crowding the impure air to the floor whence it escapes through the shafts which you have described. To have this system work well the walls of the building must be tight so that air may not enter or escape from the building except through the intake and outlet shafts. The outlet shafts should extend about 16 ft. above the floor of the building and their combined capacity should be such as to allow about four square inches, in cross-section, for each fowl. In other words, a building designed to accommodate 50 fowls would require outlet flues having a cross-section measurement of 200 square inches, i. e., one 10x20 in. shaft or two 10x10 in. shafts. The aggregate capacity of the various intakes should be approximately the same. In order that the passage of air through the shafts may be better controlled on very windy days, and that it may be reduced when only a few fowls are being kept in the building, each shaft should be provided with a nicely fitting cut-off so situated that it may be easily adjusted to suit conditions.

REARING INCUBATOR CHICKS.

The hatching of incubator chicks is comparatively simple, but the rearing of those chicks calls for more care and brings more worry. If the first few days can be safely passed, all usually goes well until the gape stage is reached. Contrary to a common belief, incubator chicks will have gapes if they are allowed to work in ground infested with the pest. That they are generally free from it is due to the fact that they are usually kept from the ground until past the stage for this trouble to prove fatal.

Be careful not to feed too soon. Forty-eight hours is not too long to wait before giving them the first feed. Some sort of brooder is necessary and it should be thoroughly warmed before transferring the chicks to it. Cover the floor with sand or dry sawdust and guard carefully against dampness. Fresh water and grit may be given before there is an attempt to give food. It is the disposition of a chick to peck, so it soon learns to eat, even if it has no mother to teach it. Chicks are much brighter in this respect than young turkeys; they will go about with their heads in the air and must literally be shown how to eat by holding the food before them. But the young chick will soon find out what the food is for.

Unless prepared chick food is used, bread crumbs are best for the young chick, giving only a very small amount for the first two or three meals. When they get to eating nicely, feed five times a day, giving as much as they will pick up clean in five minutes. Some moisten the bread with sweet milk. When this is done, squeeze out as much milk as possible as sloppy food should always be avoided. Give the milk in the form of drink, but never allow anything to go before the chicks in the form of a mash. Hard-boiled egg is beneficial two or three times a week, but it should not be given oftener, being sometimes the cause of digestive difficulties. After the first week cottage cheese is relished and the young chicks thrive upon it; after they are two or three weeks old one may feed it freely.

After the first week or two corn meal

may be substituted for the bread crumbs. Some make it into Johnny cake, but we have had equally good results from simply mixing it with sufficient sweet milk or water to moisten it; it must never be fed in a sloppy condition. As soon as the chicks are large enough to eat it, wheat and cracked corn may be given for supper, the meal and cottage cheese forming the earlier meals of the day.

Gradually reduce the times of feeding to four and, by the time they are three weeks old, to three feedings a day, providing the weather is such that they can have a little range in the yard.

Young chicks are very fond of dandelions and it is really amusing to see two or three squabble over a plant thrown in for them. The bit of green is beneficial as well as enjoyable. One of the best ways to free a lawn of the weed is to cut the plants out with a sharp knife and give them to the young chicks.

Always feed on a board, which should be cleaned after each meal. Bits of food left soon sour. If then eaten disease is almost certain to ensue, therefore, be careful to so dole out the food that it will be all eaten; then there will be no danger from this source. A little turpentine or a few drops of kerosene in the water will often protect chicks from gapes, while a bit of charcoal in it serves to correct digestive troubles.

Pennsylvania. BESSIE L. PUTNAM.

CLIPPING THE WINGS OF QUEENS.

A queen's wings can be clipped at any time after she has commenced to lay eggs. During fruit bloom, however, every colony should be examined to see if the queen whose wing was clipped the preceding season has been succeeded by a young one. The reason it is advised that this be done during fruit bloom is that then the old bees will be out gathering nectar and queens are easier found when there are only a few bees in the hive.

Choose a warm day for this work, for two reasons: First, more old bees will be out working; second, there is less danger of chilling the unsealed brood.

Blow in a little smoke at the entrance. Then remove the cover. Do this without jarring the hive, for that will make the queen run and hide, making it harder to find her. When the cover has been removed blow a little smoke over the top of the frames.

The frames must be taken out one by one and carefully looked over for the queen. This should be done quickly as the queen is inclined to crawl from one frame to the next, so if one works slowly it will be necessary to take out every frame before she is caught. She should be caught by the wings with thumb and forefinger of the right hand. Then holding her between the thumb and forefinger of the left hand, get one wing between the scissor blades and a "snip" will shorten the wing. Leave a stub about one-eighth inch in length as it is claimed the queen is hindered in walking by the entire removal of one wing.

Another thing, when the scissor blades first touch the queen's body she will raise one leg and may get it between the blades. Don't snip the scissors until sure there is no danger, for should the leg be cut off the queen will be superseded by the bees.

As queens are, ordinarily, not kept longer than two years, their exact age can be known by cutting off the right wing in even years and the left wing in odd years.

After a queen's wing has been clipped and the operator releases his hold, she will persist in crawling up his hand. A shake would easily dislodge her, but don't do this. At this time of year a laying queen is heavy with eggs and to let her fall only a few inches might do her injury. I let her crawl onto a leaf or spear of grass and lay this on top of the frames. She will then soon crawl down between the frames. The handling of the queen, however, sometimes gives her the scent of human fingers. The bees object to this and will act angry. To make them mind their own business and not injure their queen I blow several good puffs of smoke after her as she runs down among the bees.

Of course a queen's wing should never be clipped until after she has commenced to lay worker eggs. If through mistake it is done before this, the queen, being unable to mate with a drone, will lay eggs that produce drones only. Such a queen is worthless and should be replaced as soon as possible to prevent waste of honey in the rearing of useless drones.

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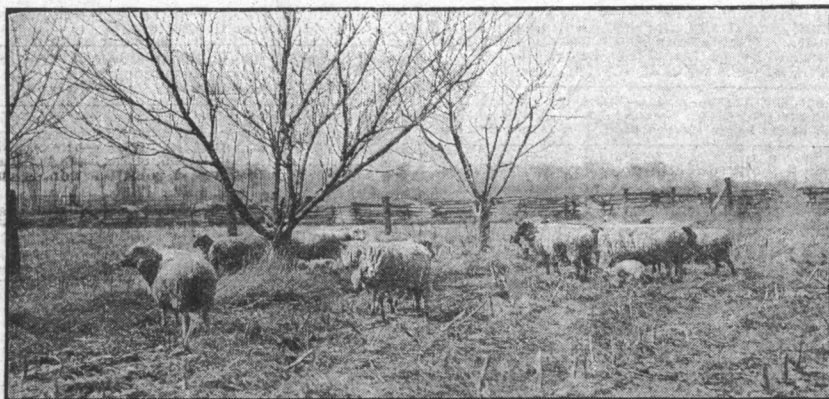
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Good breeding supported by intelligent feeding has effected a wonderful improvement in the leading breeds of swine. Breeding and feeding are of equal importance. It is true that we must have well-bred individuals to build on, but it is equally true that the best individual must have proper feed and care if it reaches its highest and most useful development. The term develop is often used synonymously for fatten. This is a mistake. A pig may be fat, yet not be developed. The essentials of healthy development are suitable food, regular exercise and comfortable and sanitary surroundings.

Successful feeders have learned quite thoroughly that they must feed a balanced ration, that they must have protein for the maintenance of growth and carbohydrates for the purpose of supplying heat, energy and fat. The question is how to supply the growing pigs with a suitable ration that will produce maximum results at a minimum cost. For convenience and economy I say unhesitatingly, that it is best to provide yards and pastures sufficiently large to furnish plenty of green feed and afford the pigs an opportunity to exercise while they are harvesting the grass and forage crops. These forage crops should be supplemented with grain foods to balance the ration and prevent an abnormal development of the stomach and intestines at the expense of other more desirable development. The grass fed hog, like the whey fed, pot bellied calf, is an example of poor development. We should avoid extremes in feeding young breeding swine. Pigs should be allowed to rustle some to develop stamina

swine and which breed possesses the best bone. Feeding has fully as much to do with development of the bone and ability to stand up as breeding. The muscles and tendons have as much to do with the way an animal stands up as the bone does. The quality of the bone has as much to do with holding the animal up as the size of it. Forage and a small amount of grain foods will promote an ideal development. Corn may be fed in limited amounts if the gilts are not making satisfactory gains in flesh, but it is not necessary to overfeed them with heavy fat producing foods because they are growing long and rangy, for then is the time they are on the road to future utility. Try and maintain that kind of growth. Skim-milk, wheat middlings, ground oats and oil meal are excellent foods for young sows. Many feed digester tankage and find it an economical and efficient source of protein. There are numerous other feeds that may be profitably utilized, the main point to avoid is putting on an excess of fat. Cut or ground clover and alfalfa makes an ideal bulky and succulent food for winter when roots and pasture crops are not available. Ground oats is an excellent grain food and outside of its actual feeding value it possesses great value as a nerve producing, energizing force and seems to exercise a particularly desirable stimulating effect upon the development of the organs of maternity. If ground oats were fed to all young swine that are being grown for breeders there would be little difficulty in getting the young sows safe in pig and their organs of maternity would be developed in a manner that would insure their future ability as breeders.

While it is possible (and often desirable) to attain extremely heavy weights at an early age, better economical results will come if the sows are grown and developed upon a cheaper ration of farm feeds. By utilizing pasture and forage crops and feeding a small amount of grain it is possible to obtain a weight of from



Utilizing a Small Flock of Ewes to Clean Up an Orchard. (See Sheep and Waste Feed, page 478).

and trait of character and make the best of their opportunities. But this does not mean to compel them to subsist on grass and forage alone. One extreme is almost as injurious as the other. A good even development of all parts of the growing pigs is what we are striving for and this must come about by feeding a ration that is properly balanced. There must be a proper relation between the protein and carbohydrates and there must also be a proper relation between the amount of concentrates and bulky feeds to bring the best results. These relations are somewhat flexible and must be determined from time to time by the feeder according to various conditions such as food values, kinds of feed available and the conditions under which the pigs are being fed. Where an abundance of forage is available it sometimes pays better to feed bulk and protein in some excess than to increase the cost of the ration by securing expensive concentrated food to make a strictly balanced ration.

Young sows that are to be grown and developed for breeding stock should be selected at weaning time. Those that come up to the required standard of excellence should be removed to a yard or pasture away from the other swine and fed for the development of bone, muscle and constitution without overloading them with an excess of fat. Much, in fact, all of the sow's future usefulness as a breeder depends upon how she is fed and developed until she has reached the age and size that it is desired to breed her for her first litter.

The buyers of registered breeding swine demand bone, muscle and constitution as well as color marking and breed characteristics. A man can feed as well as breed for bone and muscle. We frequently hear and read much discussion regarding heavy boned and light boned

250 to 300 pounds at from nine months to one year of age and this I consider about all that can be reasonably expected, unless we overload them with fat, which certainly does not add to their value for breeding purposes.

In the development of young boars for distribution among farmers and breeders we should not fail to give them, at the start a liberal supply of food, so that we can expect them to transmit easy-keeping and early maturing qualities to their offspring. The real and not the fancied wants of the farmers and breeders should be kept in mind, for to such men it is a living interest to secure breeding animals that will yield large and speedy returns upon their investment.

The young boars should be selected at weaning time and separated from the other members of the herd and placed in a yard away from all other hogs. Like the young gilts they should have an abundance of succulent foods and if possible allowed the run of a large yard where clover, alfalfa or other good pasture is available. Their yard or pasture should be away from other hogs where they will quiet down and make the best of the situation and the danger of having them off-feed will be greatly reduced. If they are separated from other hogs by a fence you will be in a worse fix than ever. I would prefer to have them all running in one yard than to have them separated with a woven wire fence, for they will run along the fence and fight through it, stop eating and go to fretting and chopping. When they get to that condition there is but one thing to do and that is to put them all in small pens by themselves, away from sight and hearing of the rest of the herd.

Many young boars are ruined by ignorance in feeding or by not being properly handled by men who buy them and take

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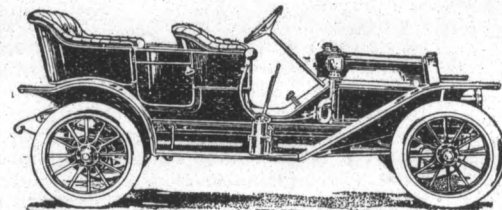
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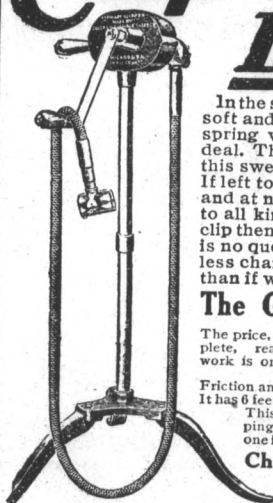
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is not uncommon in the Southern States and has even been greatly surpassed in some sections. The South will produce as much corn and as good corn as any section of this country and the value of last year's corn crop in the South was eight hundred million dollars. Why raise corn on land in the North and West valued at \$200 an acre when equally as good corn-producing land in the South can be purchased at from \$15 to \$30 an acre and where the temperature in summer is no hotter than in the Middle West? And with the additional advantages of another crop or two from the same land and with no long, cold winters.

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In the spring when your horses are soft and you put them at the hard spring work they sweat a great deal. Their heavy winter coat holds this sweat and it dries out slowly. If left to stand they take cold easily and at night they chill and are liable to all kinds of complaints. If you clip them they dry off fast and there is no question but they stand much less chance of taking cold when dry than if wet. You would not like to stand on a raw spring day or on a chilly spring night with a heavy wet suit on. Neither do your horses. It pays to clip them and blanket, if necessary on cold nights. Your horses dry off much faster, they feel better, rest better, get more good out of their food and do better work. They are better all around. Is it the humane and profitable thing to do. The quickest, least expensive and most satisfactory way to clip is with

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DR. CHAS. L. REA
Dept. N, Kansas City, Mo.

them to their farms. It requires skill to buy a young boar loaded with fat and reduce him in flesh until he is in just the right condition for breeding purposes. I think that most breeders will agree with me that a good, thrifty, young boar just out of pasture will usually give better results than one out of the show ring at the county fair.

The matter of sanitary conditions is of great importance and it requires vigilance and patience to keep the young animals free from lice and vermin. Constant watching and often dipping must be resorted to if we keep down the lice and vermin. Pigs that are lousy cannot make good growth, no matter how well they are fed. Everything must be kept clean and no old feed allowed to accumulate. Pure water, dry nests and protection from heat and cold are all necessary factors in the development of breeding swine, regardless of sex.

New York.

W. MILTON KELLY.

SHEEP AND WASTE FEED.

Several years ago we had 17 ewes and just as many lambs. That year we were short as to pasture and so we just let them run loose on the roads. A little grain left in a shed brought them home nights. Thus they run all summer. Not only did they get all their pasture for nothing but they helped to keep the roads clean.

I do not argue that you should follow our example but I do say that you can turn many bad weeds into mutton. A bunch of sheep can get a great deal of feed out of fence corners before the fields are planted. Not only out of the fence rows but out of the fields as well can they get a great deal of feed. Then, as soon as the hay and grain crops are out of the way, a small bunch can keep themselves on the average farm. I there are any children on the farm, an immense amount of waste feed can be secured by herding them on the roads. Thus a small flock can be kept during the summer for almost nothing, besides there is the advantage of getting rid of many noxious weeds.

Ohio.

CLYDE A. WAUGH.

GROW THE LAMBS WELL.

No single part of successful sheep husbandry is more vital to the financial welfare of the flock owner than the growing of the lamb crop to maturity. Every sheep man recognizes the fact that quality is the predominant factor in the determination of market value of flock products. There is little difficulty in securing top market prices when the goods can be delivered. When a lamb is dropped healthy and robust and sucking a deep milking ewe there is little trouble encountered to bring him to early market maturity. But the hitch comes, when adverse conditions are confronted and prudent judgment must be exercised to eliminate the obstacle.

Flock owners generally recognize the importance of properly growing the lamb crop to promote rapid gain and uniformity. The market today from every viewpoint is discriminating in favor of early maturity and uniform quality. The mutton maker must be alert to the demand of the market if he hopes to produce the quality of meat that is going to command the most profitable prices. Improperly grown lambs no longer have a place in the markets of this country. There was a time when such products could be disposed of at fair prices, but that day has gone by. The American consumer has come to know what he wants in the purchase of meat for the table and tough, stringy meat no longer satisfies his appetite. It is the tender, sweet, fine grained mutton that is wanted and commands the best price.

The proper time to begin growing the lambs for the purpose desired is as soon as they are dropped. The early feeding of the lamb largely determines its future growth and development and usefulness, either for the market or breeding purposes. For the first few weeks the life of a newly-born lamb is dependent upon nourishment obtained from its mother. As soon as old enough it begins nibbling on soft food, such as clover leaves and tender grass. This appetite for solid foods should be taken advantage of early as the digestive tract of the lamb will permit and such feeds as can be readily consumed placed within easy reach. If the grain trough is low enough so that the lambs can get to the grain they will soon learn to help themselves. It is an advantage to feed some form of ground feed

to the ewes if possible, such as ground oats or bran.

The importance of directing special attention to inducing uniform growth and development in the lamb crop can not be easily overrated. There are always a few ewes in every flock that are poor milk producers and their lambs are generally poor in flesh and make very slow gain. If these ewes can be selected out and placed in a small pasture lot near the buildings where they can be given special attention a great deal can be done to encourage bone and flesh development in the lambs and cause them to keep well apace with the remaining part of the lamb crop.

Much thought and study should be given to the production of tender, palatable forage for the growing lambs to pasture upon during the summer months. While the lambs will sort out and graze upon the same pasture that is supplied the ewes they will not consume as much food as they would if the feed was of a more acceptable character. It is an excellent practice to sow small patches of forage crops near the main pasture so that the lambs can get to it at any time without leaving the ewes for any great length of time. If care is exercised to sow the forage crops in rotation they will be greedily consumed by the lambs and encourage rapid and profitable gain. It will also lessen the draft upon the ewes and materially reserve their physical strength.

Lambs well started toward good development are in good condition to reach early maturity and command the top market prices. It costs a great deal less to make a pound of gain on a rapidly growing lamb than it does on one that has been retarded. The animal that is kept thrifty from the day of its birth until market is the most profitable. No flock owner can afford to neglect his lamb crop during the summer months. They will come along and develop into just such animals as his care and feed make them. Therefore, give the growing lambs the best the farm can afford of highly nutritious and palatable food.

Shiawassee Co. LEO C. REYNOLDS.

COMBATING THE PARASITES.

Each year a large number of lambs are lost from the ravages of internal parasites, particularly stomach worms. The reports of the Bureau of Statistics of the United States Department of Agriculture published in the last issue shows the mortality among sheep to have been greater than usual last year. The present high price of sheep makes it more than ordinarily important to reduce these losses to a minimum. The ravages of stomach worms and other internal parasites cause the loss of many thousands of lambs each year. The best way to insure immunity from these pests would be to pasture the lambs only on clean pastures. But, unfortunately, upon the average farm this is not practical. However, it should be followed as largely as possible. New seeding of clover, or rape sown for summer forage will be practically safe pasture for the lambs the season through. But even these clean pastures will in some degree become infested with these parasites and it is always a safe precaution to use other preventive and curative measures to keep this danger at a minimum. Some of the proprietary salt preparations are believed by some of the best sheep breeders and feeders of the country to be an efficient preventive as well as a good remedy for these parasites. At this time of the season, where the flock or the pastures are infested by these parasites, they are multiplying rapidly and become more destructive and more difficult to eradicate. Thus whatever preventive measures are to be used should be adopted at once and continued throughout the season of their growth in order to secure a maximum of benefit. Whether it be a proprietary remedy or a combination of drugs prescribed by a veterinarian is a question which may well be debated, but the former has the advantage of being already prepared and, if decided upon, it will be more apt to be used regularly than remedies which require time and trouble to secure and the sheep will suffer correspondingly.

A good deal of talk has been occasioned by the report from the east that Argentine beef is likely to be offered on the New York market, but dealers in beef are not looking for any serious competition from that source. Some Australian frozen mutton has been received at New York, but it is adapted only for a cheap class of trade.

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100 HEAD of ewes and their lambs. All young ewes, black and white faces, mixed. Will be sold, worth the money if sold at once. **J. B. GARDNER,** Lock Box 437, Cadillac, Mich.

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Durocs For Sale—A few fall gilts bred for summer farrowing. Also a few spring pigs. **M. A. BRAY,** Okemos, Michigan.

DUROC JERSEYS. **CAREY U. EDMONDS,** Hastings, Mich. Nothing for sale at present.

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O. I. C. bred sows all sold. Have a few boars still on hand. **GEORGE P. ANDREWS,** Dansville, Mich.

O. I. C.—A few bred sows. Orders booked for spring pigs from very choice stock, pairs not aken. **S. J. COWAN,** Rockford, Michigan

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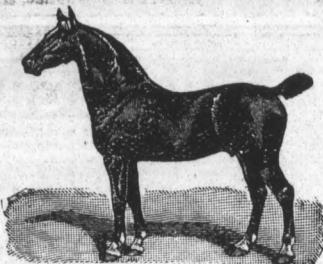
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W. F. YOUNG, P.D.F., 268 Temple St., Springfield, Mass.

SOME HINTS ON FEEDING CALVES.

In a recent number of The Farmer a subscriber tells of feeding his calves on separator milk and reports that they did not seem to do well. Now to raise a good calf by hand is a particular job; one that can not be entrusted to inexperienced hands if one wishes for the best results. Nevertheless it can be done, and on separator milk alone, if necessary, though the addition of a little grain is a great help. In the first place, let us notice the calf helping himself to his mother's milk; you will notice he takes little at a time, but takes it often, thus allowing the juices of the stomach to become thoroughly mixed with the milk. Then, when satisfied, he lies quietly. But the poor calf who must eat out of a pail is expected, nay forced in some cases, to put his head in the pail and keep it there till the bottom is reached, and the quicker the better so some of us think. Then many times he is hustled around and kept moving so he will forget to suck some other calf's ears. When I first started in to raise calves I did that very thing, never stopping to consider the result, but after some dismal failures I started in to do better, and with much more success. The great danger in feeding calves, no matter how or what you feed, is in overfeeding. Don't do it. It's much better to err by feeding too little as that can be easily remedied, but the calf that suffers a bad attack of scours will be a long time in catching up. However, as soon as you detect the signs, which many times are noticeable by the odor before you would otherwise notice anything wrong, cut down on the feed sharply, both milk and grain. Also see if the pen is clean and dry, as a damp, ill-smelling pen often causes trouble, when all else is right.

I have succeeded best when using the following method: The calf is allowed to stay with the cow until the ninth milking. I milk the cow at the regular time, taking what the calf leaves. Many cows give much more than their calf can take. Also the cow, especially if a young cow, becomes accustomed to having her udder handled and relieved, and does not fret so much when the calf is taken away. The morning after the ninth milking, the calf having had his breakfast is removed, or sometimes the cow is returned to her own stall and he is left quietly to himself till night, when, the milk being separated, a very small feed—not over a quart is given him. Sometimes he drinks peacefully and sometimes—that mostly depends on the patience of the person feeding him. I once had a little experience that learned me a lot. In this case the calf, a big, strong, hearty fellow, took his milk all right but insisted on having my fingers to help along, or else he balked right off and vented his displeasure by bunting everything in sight, myself included. Well, he was a good calf and I fussed with him till he was nearly three weeks old, finally getting disgusted. I turned the milk into a trough that happened to be fastened to the floor of the pen and walked off. I was no sooner out of his sight than that miserable calf fell to drinking like an old cow. You may be sure he got no more fingers, but never would he drink while I remained in sight.

But to go back to the feeding subject, increase the amount fed very slowly, decreasing again and again until you find what he can manage. At two weeks of age give him a very little grain. Be sure it is well ground and it does not matter so much what kind, only feed sparingly till he is five weeks or more old. You can then increase to a fair feed, the size of the feed even then depending on the calf, some requiring more than others, but make haste slowly. A very convenient way to feed is to place the calf in stanchions before giving him his milk. As soon as he has finished his milk give him the grain in a small, shallow box, being careful that it is spread over the bottom. Then he will only get a little at a time. Some little care may be needed to get him started eating grain, but he will soon learn. Let the calves stand half or three-quarters of an hour while you do something else before letting them out of the stanchions and they will have forgotten all about sucking and will go away quietly. Now as to the froth on separator milk, don't feed it to anything, except the cats. They will leave milk every time in favor of froth. It pays if one has much milk to have a deep can (with a faucet near the bottom) for the milk to run into. It may then be drawn off at once and fed, leaving the froth to be emptied into some dish where it

can stand five or six hours, when it will all be turned to milk and can then be fed to the hogs, and the can washed and scalded ready for next time.

Another thing must not be overlooked, and that is all pails, feed boxes, etc., must be kept sweet and clean. It takes but a minute to take the pails to the well and thoroughly rinse and turn up to dry, if done before the milk has time to dry on, and the boxes should be turned up to the sun and wind. All these are small items but they have all been a help to me.

A MICHIGAN FARMER.

LIVE STOCK NOTES.

At the recent Shorthorn sale at Aurora, Illinois, extremely high prices were paid, fifty-six head bringing \$35,995, an average of \$642, the highest average made at a Shorthorn sale in ten years. George J. Sayers, of Illinois, paid \$10,000 for the three-year-old bull, Prince Imperial, champion at the last Toronto exposition. The top for females was \$3,050, paid by C. J. McMasters, of Illinois.

Ohio and Indiana buyers have taken a good many stocker and feeder cattle of the better class in the Chicago market recently. Illinois buyers have purchased a good many light stockers, but Ohio has been the heaviest buyer of 700 to 900-lb. steers for fattening for the future market.

The Chicago packers have made an advance of half a cent to a cent per pound for the better grades of dressed beef cuts and a reduction of half a cent a pound in the price of beef chucks. "Most of the demand for beef in the east side of New York city, where the kosher strike is now on, is for chucks," said a prominent Chicago meat dealer. "The agitation in the east against high prices will greatly restrict the consumption of this grade of beef, while it will have no perceptible effect on the other grades. Apparently, it is the purpose of the packers to force prices of beef ribs, loins and rounds to such a high level that local housewives will be forced to use chucks when they want beef, thus furnishing an outlet for the stock that should go east. In this way the market will be kept free from accumulations, and packers will not have to make the concessions demanded by the New York strikers. Because of the higher prices for other parts of beef, the packers, instead of losing by the agitation, will come out ahead if their plans do not miscarry."

Seven car loads of Canadian grain-fed steers were received in the Chicago stock yards on a recent day. The consignment consisted of 138 head, of which 124 steers sold at \$6.80, and 14 heifers brought \$6.50.

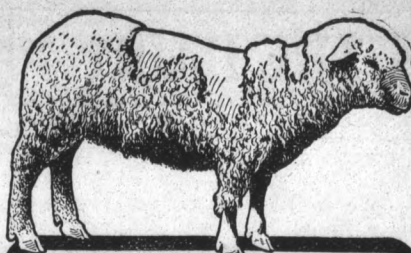
Cattle receipts at the six leading markets during the first three months of the year aggregated about 23,000 head over the same period last year, but there was a marked falling off in average weight, as well as in quality.

W. A. Drake, the extensive sheep and lamb feeder, of Fort Collins, Col., states that no more big "runs" of lambs will be shipped from there this season. He says: "A great many of the lambs cost from \$7 to \$8 per head to put them on the Chicago market, and of course it is imperative that we get better than \$8 a head if we are to make any money. As will be seen, no abnormal profits will accrue even then. A great many of the lambs have \$2 worth of corn and \$1 worth of hay in them per head. They cost around \$4 a head and freight shipping and selling charges will amount to \$1 per head. I look for a relatively light number of lambs to be fed in Northern Colorado this coming winter. A great drawback is the probability of a small crop of alfalfa hay. The long and severe drought of two years ago about ruined our alfalfa fields. Heavy seeding is being done, but it is questionable when we will be able to get a good crop again, although we are in hopes of realizing one at least in 1911. Conditions are as good in Southern Colorado as they are bad in Northern Colorado. However, if the lamb raisers expect Southern Colorado feeders to stock up heavily they will be greatly disappointed. If prices on the range are advanced very much, feeders will simply not take the chances."

It is stated on good authority that the Kentucky and Tennessee "crop" of spring lambs is from 25 to 50 per cent short. This is explained by the fact that on account of the severe winter, the ewes came through in poor condition, and many of them have had no lambs. Under these circumstances, the lambs are expected to bring high prices, and they will be late in coming to market. Owing to the drought, Arizona and New Mexico have small numbers of lambs, and severe weather and mortality among the ewes will result in a small supply of lambs in Wyoming, but Oregon and Washington report a good lamb "crop."

Trade in wool is everywhere very dull, and quite a decline has taken place in prices in recent weeks, contracting in the west for the spring clip having practically closed. Talk of tariff revision, political agitation and labor troubles are charged with much of the dullness and the break in prices, all the foreign markets being active and higher.

Reports from most parts of the corn belt indicate strongly that corn tracts will encroach very greatly this spring on former pasture areas, many farmers preferring to take their chances in raising corn, wheat and oats to pasturing and feeding stock, although there is no reason for thinking that fattening pigs for the market will cease to render big returns. It looks just now as though a long period would elapse before the agricultural regions of the United States produce sufficient numbers of cattle, hogs and sheep to place prices on as low levels as those that have prevailed for the last decade. Beef and mutton are likely to be produced mainly during the winter period, but hogs can not be reared successfully without pasturage.



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THE DAIRY

CONDUCTED BY COLON C. LILLIE.

GRASS BUTTER APRIL 15, 1910.

Who ever heard of having grass sufficiently in Michigan so that you could make grass butter on the fifteenth day of April—a month earlier than ever before. A number of people have turned their cows out to pasture and the grass is not sufficiently matured yet. But they do do it. The cows want to get out and people are anxious to get rid of the chores, besides they are anxious to save high-priced feed and they turn them out before they ought to. Already cows in many localities are getting sufficient grass so that it gives the milk a grass flavor and the grass color to butter. A number of people have turned out their young stock in this vicinity and if they have sufficient rain, young stock can get along without any other food, though I question the propriety of turning them out so early. Grass is very washy, immature, and the young cattle, like the cows, are liable to lose flesh because the grass does not contain enough heart. It is well enough, perhaps, to let them out day times and put them in nights and give them a grain ration, or a ration of corn silage, or hay or something of that sort to mix with this green grass; but to turn them out now and leave them with no other food except this green washy grass cannot but be detrimental in the long run.

Then again, it is not a good thing for the pasture. The pasture ought not to be trampled on and eaten off too closely at the very beginning of the growth of grass. It would pay well to wait a few days until the grass has made a better start before the cattle are turned in. Grazing the pasture too closely now means short pasture and insufficient food later, while a few weeks holding back now and feeding the winter ration until the grass gets a good start, means luxuriant pasture with plenty of heart and better conditions during the middle of the summer.

With a splendid rain on the 17th and 18th, if the weather continues warm, it will only be a few more days at the most before young cattle and cows can be turned to pasture without any detrimental results, but they better be held back a few days longer than necessary rather than be turned out before they ought.

SOME COW STABLE QUESTIONS.

Please answer following questions regarding cow stables: 1, which is the better, all steel or wood lined stanchions? 2, which do you think best, the manure trench or an offset of five or six inches behind the cows? 3, would you think it would be better to put in stalls between the cows or leave the space clear? 4, how much of a rise from floor to bottom of stanchion? 5, what slope and how long should concrete floor and standing space be? 6, how wide should manger be at the bottom?

Gratiot Co.

R. W. V.

Answering these questions in their order:

First, I don't think it makes so very much difference whether the stanchion is all steel or if it has a wood lining, and yet wood against the cow's neck might be a little bit more agreeable than the cold steel.

Second, I prefer the butter, or manure trench, because you can keep the passageway back of the trench much cleaner. If you have simply an offset, the walk back of the cows, or the driveway, is continually littered.

Third, I believe it will pay every time to put partitions between the cows. I realize that cows are stabled in stanchions quite universally, and very few of them have anything between them, and usually no injury occurs, but every once in a while a cow has her udder stepped on by her mate and, with a good cow, one such accident is enough to pay for the partitions in a decently large stable. I would by all means put in partitions.

Fourth, the rise from the floor to the bottom of the manger ought not to be over three or four inches because the cow must lie down with her head between the stanchions and she can never get her head any lower than the top of that side of the manger.

Five, there should be at least a half inch slope from the front of the manger to the gutter and an inch fall will do no harm. No one can tell definitely how far it should be from the back side of the manger to gutter, because this ought to vary with the cow. A good plan is not

to make the gutter straight across the stable where you use stanchions, but to have one end of the platform shorter than the other, then you can arrange the cows according to their length and have the longer cows stand at one end and the shorter ones at the other end. In this way you line them all up to the gutter and can keep them cleaner than you could if you had a short cow on a long drop.

Sixth, the manger should not be over two feet wide at the bottom. You do not want it so wide that the cows are continually stretching and bracing against the stanchions to get their feed out of the back side of the manger. Have it narrow enough so that they won't have to lean and push against the stanchions all the time to get their food.

HOW TO MAKE CIRCULAR SILL FOR SILO.

Please explain how to make circular sill for lath and plaster silo and how to fasten same to top of eight-foot cement foundation, 12 feet in diameter. Please tell how to make frames and doors for silo. Huron Co. D. A. G.

Make a circular sill out of inch stuff. The boards should be ten to twelve inches wide to work nicely. If this silo is to be fifteen feet in diameter then the radius of the silo would be seven and one-half feet. Now take a string or a pole seven and one-half feet long. Fasten one end at the center, lay down your board, take a lead pencil at the end of a string or the end of the board, and draw it over the board intended for the silo sill. This will give you the arc of the circle of your proposed silo sill. If your studding are two by four, this pattern wants to be four inches wide. Simply measure down four inches on your string, or four inches on your board, and draw another circle. Cut these circles up into about two and a half foot lengths and then saw them out. Lay one circle around on the silo foundation, and then another one top of that, breaking joints and nail them together, or you can nail them together before you put them onto the wall. There is quite a little bit of sawing to be done and if you have some one in the neighborhood who has a scroll saw, it wouldn't take long to saw them out. It doesn't take so very much lumber and you could afford to drive several miles in order to have this work done. You want a plate on top of the studding exactly like the sill.

Door Frames for Silo.

Door frames for a lath and plastered silo are made on the same principle as the frames for a window. Where you want your doorway, set your studding at the proper distance apart, three feet say, and then three feet from the bottom put in your first door. This frame is made to set right in between the studding and nailed to these two studding. It is made so that it bevels in, the big side toward the inside of the silo; that is, the top, bottom and sides of the frames are beveled. Then the door is made to fit just about half way in this frame and a jamb is nailed on the inside for the door to set against. Now the doors can only be put in from the inside and they cannot press through. This makes it absolutely tight. The doors are made double with tarred paper between and made just to fit. The door frames should all be made of the same size so that the doors can all be made alike and then if they do happen to get mixed a little, they will all fit. For it is certain that the doors will become mixed and, even if they are numbered, it is a bother to get them arranged in order and keep them so during the busy time when the silo is being filled. Made in this manner there will be no trouble.

COOLING THE MILK AND CREAM.

Aside from using every precaution in keeping the milk as clean as can be from the time it is taken from the udder till it reaches the table, there is another factor quite as important if the product is to be kept in a sweet condition; it is cooling. However well cows may be handled and however clean the premises, the milkers and utensils may be, there are naturally organisms in the product which develop and change its character. Reducing to a low temperature retards, to a large extent, this change. The lower the temperature the more retardation there is, therefore, whatever can be done to cool the milk or cream after it is drawn is a help in getting it to the man who consumes it, satisfactorily. At this season with the sudden changes of weather, its thunderstorms and other conditions that go to encourage the souring of the product, the need is impressed upon us, and

many who have never given the matter consideration before or are starting into the business for the first time are casting about for methods. Each case presents a particular problem. If ice has been stored during the winter, as a larger per cent of farmers are doing each succeeding year, the problem will not be difficult of solution. If other agencies are depended upon, the question is more complicated. Spring water is excellent but is available to but few. Well water is used by many and if properly conducted around the milk and the accommodations are well made, the scheme does well. Sunken milk rooms, cement pits, etc., are also available, as is the cellar which perhaps serves more people than any other room. The point is, get the milk in the coolest clean place you have or can provide, if you do not own the means to construct an ideal place.

CLEAN THE STABLES.

It is the practice on most farms to leave the cows out nights as soon as the weather permits. This practice, if followed with prudence, is commendable and no doubt contributes to the health of the animals quite as much as the open window of the bed chamber does to the health of the human being. In house sanitation we are apprised of the benefits, also, of airing the bedding, and we believe that our stables, especially if they are constructed of wood (and there is but a fraction of a per cent of the barns that are not made of this material), would continue to be better fitted to the needs of the animals if thoroughly cleaned as soon as the animals are not housed therein. Give the air and sunshine a chance to get into every corner. Matted straw, manger dust, cobwebs and all deposits of manure should be carefully removed. The windows should be cleaned and with the doors thrown open. After the stables are thoroughly aired and the floors dried, whitewash applied to the walls and ceilings will keep them sweet and in ideal condition. In the spring time there is much time to do inside jobs. The men are hired usually for the week or by the month. On rainy days they are available for doing this very kind of work, and the dairymen should in these times of high-priced labor make full use of such as he is able to secure. He will find that attention given to the cleaning of his barns in the springtime will help to keep them in sanitary condition throughout the year.

A. H.

RYE FOR SILAGE.

What do you know about rye silage for cows giving milk? Will it give a strong odor to the milk? If you have had no experience will you please ask some reader who has had experience with it, to testify in the case?

Kent Co.

DAIRYMAN.

You can make silage out of rye just as well as you can out of clover, or alfalfa, or any other plant of that nature. It will not make first-class silage because it is not a first-class plant to begin with. Then, too, the stems of the rye are hollow and contain considerable air which will allow more fermentation than if this were not the case. The only remedy for this is to cut it real fine and see that it is well packed in the silo. It would be an excellent thing if you could have some pressure on top after the silo is filled to press it down as much as possible. I would wet it thoroughly.

There is no reason why rye silage should taint milk any more than soiling with green rye and it will not if it is fed judiciously. If the cows are fed a small

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amount of it in the first place, and gradually increased until their system becomes accustomed to it, there will be no trouble about this whatever. I am positive about this. Of course, rye will not make very good silage because it is not very good cow feed any way. It is a poor plant for soiling and for hay, but it will make silage where there is nothing to take its place.

STAVE SILO CAVES IN.

I have a stave indoor silo 20 ft. in diameter and 20 feet high. Each summer when the silage is removed the silo falls in. It is bound with iron hoops on the outside but there is nothing to prevent it from falling in when dry. Can I keep it up by hanging an iron rod by supports from the top, and have it screw to enlarge instead of tighten the staves as the outside bands do? Will it spring in at the bottom even if it is secured at the top? It sets on a stone foundation, having a shelf to hold the staves a little below the top of the wall supporting the staves. How can I make it smaller? Can I build a partition through it, dividing it into two semi-circular silos? My ten cows do not eat enough to prevent great waste. I value silage in my dairy and intend to keep 20 cows, but my silo does not fit my needs and costs me about \$25.00 a year to set up. I want to build a new dairy barn and put in a good silo, but must use this until I can do so. Would you advise lathing and plastering it to stay it? I have 30 tons of silage in it now but must soon stay the top to prevent it from falling down. Has any one else solved my problem, and found a way to stay and divide a silo? Would be grateful for the advice of your valued paper.

Monroe Co. MARY L. MILLIS.

You can prevent the stave silo from caving in by putting a wooden hoop around it, either on the inside or outside, at the top, or one both inside and outside. When your silo is full of ensilage would be the best time to put it there, because then you could work around the top, but if it is empty, of course you have got to build a staging. Simply take thin stuff, half-inch stuff, elm is the best material, but anything that will spring around and fit the silo on the inside will do. Tack each stave to this strip. Put on say two strips, one above the other and tack them on, then put another strip over these two, lapping over the crack and nailing on with a little larger nail. If this does not make a stiff enough hoop, you can put on another strip. This will take up no room in your silo as it will be clear to the top of it and with every stave nailed securely to this wooden hoop, there is no chance for it to cave in and you will have no further trouble. If it racks out of shape at the bottom, the same can be prevented there by putting the wooden hoop on the outside at bottom. I would not put it on the inside at the bottom because it will prevent the proper settling of the silage when it is filled, but when this is done, there is no further trouble from stave silos warping out of shape when they are empty.

You can easily divide the silo in the center and make two silos out of the one, which will be much better for your purpose as long as you do not have stock enough to feed the whole silo down sufficiently rapid to prevent spoiling from exposure. Spike a two by four onto one of the staves (after you put on the hoop). Spike this two by four up and down on the inside of the silo and one directly opposite so that a partition between the two will divide the silo into two equal parts. Now get some good stiff two or three-inch plank. I am afraid that the two-inch plank would spring almost too much and if you can get three-inch plank it will be better. Then fill up one side of the silo first for a certain distance, say three or four feet, putting in the three-inch plank against the two by fours so as to hold the ensilage in half the silo. Then you can fill the other half of the silo up until you come level with these boards and then put in some more. In that way you can fill the silo up from top to bottom. This will take away considerable pressure on the partition and it will be much handier filling it than it would to fill one clear up, before you began to fill the other half. Then, of course, when you take out your silage the pressure will be less because the silage will have settled. I think you will find that this arrangement will work nicely.

A New Dairy Barn.

It is a question of some importance to advise one about building a new dairy barn. I am practically certain how I would build one, but whether this would suit any one else or not, is a question. If anything should happen so that I would have to build new dairy barns, I think I should investigate the round barn, but I do not believe this would be practical for a small herd of cows. You must

have a round barn of considerable size if it is practical because one must have it large enough to drive around on the inside with a wagon. For a small-sized herd, I would build a barn 36 feet wide, and as long as necessary to accommodate the number of cows in the basement and large enough above to store feeding and bedding material. Thirty-six feet will give you sufficient room for two rows of cows facing the outside of the stable with a driveway between the two rows back of them of such width that you can drive through with a manure spreader, or manure truck and take the manure out, and also give you four feet feeding alleys in front of the cows. You want to make the barn long enough to have in one end box stalls for calves, or cows when they are sick at calving time. If you wanted the horses in the same barn, all you would have to do would be to continue it on longer and put one end of the barn into a horse stable and have them stand in exactly the same way as you would the cows, having the driveway right through the center of the barn. If the barn is too long for a single driveway above, you could easily have two driveways into the barn above and then you can make the bays of any desired size that you choose. I would put in 16-foot posts above and have a modern hip roof, and I would have an eight-foot basement. I don't think you can get any better arranged barn, all things considered for the money than one of this sort.

CAN WE INCREASE THE PER CENT OF BUTTER-FAT?

I wish to inquire about increasing the per cent of butter-fat by feeding. This is a subject of controversy. Isabella Co. SUBSCRIBER.

This is one of those questions that will not down. It is very much like the question, "Will wheat turn to cheese?" I have told my opinion about it a great many times in The Farmer. You cannot increase the per cent of butter-fat by feeding. The per cent of butter-fat which a cow will give is born in her and you cannot feed it into her, as I have explained. If a cow has never been fully developed, always been underfed, she may not give her normal per cent of butter-fat. Then by increasing the feed, you can get an increase of butter-fat up to her normal limit, but you can't go beyond that. If this was not so, then you could feed a Holstein cow so that she would give as rich milk as a Jersey. If you will think about it in this way, you will see that the proposition is absurd, because it cannot be done. If the cow is well fed she will give a certain per cent of butter-fat and you can't change it materially by feed. She does not always give the same because she is not always in the same condition, but this is not produced by feed.

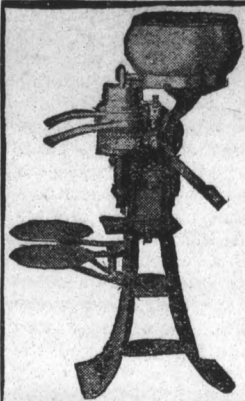
HOLSTEIN MILK FOR CHEESE.

Would like to know if there can be more cheese made from 100 lbs. of Holstein milk, than good Durham and Jersey milk? Lenawee Co. A. C. B.

You can't make as much cheese from 100 lbs. of Holstein milk as you can from 100 lbs. of Durham milk or Jersey milk, on the average. The richer milk is in butter-fat, the richer it is in other solids, casein included, consequently the richer milk is in butter-fat, the larger amount of cheese you can get from a given amount of milk. Cheese contains about 33 1/4 per cent of fat, 33 1/2 per cent of water, and 33 1/2 per cent casein, hence milk low in butter-fat cannot make as much cheese as milk rich in butter-fat. There is a certain proportion that exists between the butter-fat and casein in milk. Several experiment stations have made very graphic illustrations of this fact. A hundred pounds of two per cent milk, a hundred pounds of three per cent milk, a hundred pounds of four per cent milk, a hundred pounds of five per cent milk have all been taken and made into one cheese; and at a number of dairy exhibitions, at state fairs, at the National Dairy Show, and at Dairymen's Associations, these cheese have been exhibited to show people that you cannot make as much cheese from poor milk as you can from rich milk. The per cent of butter-fat in milk is the best gauge known to determine its value for cheese making.

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So far, we have been unable to obtain positive evidence against the guilty parties, but we purpose to follow the matter to the bitter end and will soon catch the LIAR and put him where he belongs.

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IS NOT OUT OF BUSINESS and WILL BE HERE WHEN ALL OTHERS ARE GONE.—The Past Year Was The Greatest Year

In the history of our business, having increased our business more than 100% over any year we have ever had—an extraordinary year.

HEAR IS OUR CHALLENGE:

If it be true that these reports are being maliciously circulated by some competitor whose business is slipping away from him to us, We Are Ready To Throw Open Our Books To A Fair And Impartial Investigation And Comparison With All other Separator Manufacturers, Who May Be Guilty Of The Reports, and Prove A Greater % Of Increase In Last Year's Business Than He Can Possibly Show.—Is That Fair?

There is our challenge, MR. LIAR; we dare you to accept it. Since July 1, last year, our factory has been running night and day—24 hours every day except Sundays—with three shifts of men working eight hours each, manufacturing and shipping on orders.

THE CLEVELAND CREAM SEPARATORS

That is the reason why we have not been doing any publicity advertising. We may also add that much of our success is due—so we believe—to the fact that about a year ago one of our competitors started a fake patent-suit against us (and several others), merely for advertising purposes, and the result was that the consumers, the people who buy CREAM SEPARATORS, learned that The CLEVELAND SEPARATOR was even much better than they had been led to believe before. They began to investigate—to compare Cleveland Cream Separators with other makes and found that

THE CLEVELAND CREAM SEPARATORS

are the best ever made—Low Down, with no lifting of the milk; all Aluminum Parts, easy to clean and perfectly sanitary; all Ball-Bearing and hence the easiest running; only 6 discs to wash as compared to, 80 or more in others; and gives you ALL THE CREAM, not part.

THE CLEVELAND CREAM SEPARATOR IS STILL MADE—WILL ALWAYS BE MADE—AND WILL SOON BE IN USE IN EVERY SECTION OF THE WHOLE WORLD.

Write us for illustrated catalog and sworn tests.

The Cleveland Cream Separator Co., Whitney Power Bldg., Cleveland, O.

664 LBS. BUTTER IN ONE YEAR
MADE BY JOHNNIE'S LUCY (JERSEY) UNDER CONNECTICUT OFFICIAL TEST, ON
UNICORN DAIRY RATION

THIS IS ONLY ONE OF OUR MANY OFFICIAL YEAR RECORDS.

Write us for other records and full particulars.

CHAPIN & CO., Milwaukee, Wis.

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40 cents per line agate measurement, or \$5.60 per inch, each insertion, with a reasonable discount on orders amounting to \$20 or over. No advt inserted for less than \$1.20 per insertion.
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WE GUARANTEE to stop THE MICHIGAN FARMER immediately upon expiration of time subscribed for, and we will pay all expenses for defending any suit, brot against any subscriber to The Michigan Farmer by the publisher of any farm paper, which has been sent after the time ordered has expired, providing due notice is sent to us, before suit is started.

Avoid further trouble, by refusing to subscribe for any farm paper which does not print, in each issue, a definite guarantee to stop on expiration of subscription.
 The Lawrence Pub. Co.,
 Detroit, Mich.

DETROIT, APRIL 30, 1910.

CURRENT COMMENT.

Active preparations for the State Fair of 1910, which will occur the week of September 19 to 23, inclusive, are now in progress and promise much for the success of this year's fair. Several new buildings are to be erected, including a new administration building which will afford space for the State Fair offices, a press room, postoffice, bank, etc.; a machinery hall, 400x70 feet with motive power and shafting so that machinery exhibited may be seen in operation, the building to cost \$20,000; an automobile and electrical building 125x275 feet which will give 70,000 feet of floor space on its two floors, the lower floor to be devoted to the placing of a magnificent automobile show and the upper floor to be devoted to an electrical display, the estimated cost of the building to be \$35,000. There will also be an addition to the dairy building which will cost \$5,000. One new horse barn and one new cow barn will also be erected. A tunnel will also be built under the track and a judging ring provided in front of the grand stand which will give the best of opportunity to see the horses in action. Here, also, will be held a horse show which will be upon a much more pretentious scale than that held last year. The providing of these new buildings will make possible the use of the old administration building for the display of agricultural products which have heretofore been housed in a very poorly lighted structure.

Educational and entertainment features will be provided at this year's fair which will outclass any that has heretofore been offered. Among the educational features will be the building of 1,600 feet or more of good road of several types such as macadam, concrete and gravel. This road will be constructed on the ground according to state specifications and under the supervision of an inspector from the United States Department of Agriculture. It is expected that at least eight companies who manufacture road building machinery will participate in the building of this road which will afford a good opportunity for comparison. A special invitation will be issued to the highway officers of the state to take advantage of this new educational feature. In the way of entertainment, the racing program will serve to illustrate the efforts of the fair man-

agement to provide the best of entertainment for fair patrons this year.

Already the entries for this program are well filled and many of the leading lights in the light harness world are represented. The purses aggregate about five times the amount offered last year, \$5,000 being staked on single races in some instances. Other entertainment features of a magnificent character are already promised and their complete announcement will be a welcome surprise to those who are interested in the success of the Michigan State Fair from every standpoint. The plans now under way should insure a magnificent fair and the shortening of the date to a week, every day of which will be well filled with both educational and entertainment features for fair patrons, will go a long way toward insuring a good attendance throughout the week. Then the fact that this date conflicts with no other big fair will prove helpful in the way of high-class entries of live stock, many more of which are promised than for previous years from outside the state. Michigan breeders should make all preparations for exhibiting, to the end that our home live stock industry may be well represented at this fair, and Michigan farmers generally should plan to patronize it more generally than ever before.

During the latter part of last week a public hearing was held by the committee having before it the bills providing for new legislation on the oleomargarine proposition, some of which contemplate the repealing of the ten cent tax on colored oleomargarine and some of which provide for the strengthening of the present law. It is, of course, too early to even speculate regarding the outcome of that hearing so far as the action of the committee is concerned, or of congress upon the report of that body. But unquestionably the farmers, and particularly the dairymen, of Michigan will be interested in what transpired at the hearing, and Mr. Lillie, who attended the hearing, will write of it in a future issue.

But one thing is apparently clear, and that is that the dairy interests of the country need to be awake to the situation and exercise a united influence for the maintenance of the ten cent tax on each pound of oleomargarine colored in imitation of yellow butter, and that not alone in opposition to repealing the law but perhaps in the interest of supplementary legislation. A recent press dispatch from Chicago states that Commissioner of Internal Revenue R. E. Cabel has made a ruling to the effect that certain materials, now being used to color oleomargarine, if used in quantities sufficient to make them a constituent part of the product, are not to be considered as producing artificial coloration, and therefore not subject to the government tax of ten cents per pound. This is rather a fine point for the lay mind to grasp, but undoubtedly the whole matter will be threshed out in the courts and more clearly elucidated than above. But it should serve, without such elucidation, the purpose of arousing the dairymen of the country to the gravity of the situation which confronts them.

In another column of this issue, space is given to an article from a Michigan

Farmer reader, living in central Michigan in which the writer calls attention to the operations of real estate dealers in securing options on lands, which are later sold to farmers in other states who have sold their farms at high prices and are seeking investments in farm lands in Michigan. The conditions which he describes merit comment from the standpoint of the real value of Michigan farm lands. As has often been noted in these columns, Michigan lands sell at much lower relative prices than do lands of similar values in any of the sister states to the south of us, and it is but natural that farmers who have the opportunity to sell lands in those states at high prices should seek investment in good Michigan farm lands at half their value as compared with the sales which they are able to make in their old locations.

This is a many sided question, however, and it is entirely probable that these operations will bring about a realization among Michigan farmers of the real value of their holdings more quickly than any other influence could do. So far as the real estate agents are concerned, their business is a legitimate one so long as they do not resort to fraudulent means to secure the options. The option is a commonly used instrument in the sale and purchase of city real estate and it

has an entirely proper and legitimate use in the country. The man who knowingly gives an option for the purchase of his farm at a given price, has no legitimate grievance if the party holding the option takes the farm, any more than the party holding the option has a grievance in case he allows it to lapse by default. Any person who gives an option on his holdings at a specified price, is at that time certainly willing to sell them for that figure, but that Michigan lands are often offered for sale at a price far below their real value for agricultural purposes is not to be doubted. The owner of a good farm will do far better to err by asking too much than too little for his land, since there can be no doubt that land values will increase in Michigan as compared with those that have prevailed in recent years and that at no distant date. There is a growing appreciation, shared by business men and city residents generally, of the advantages to be derived from the ownership of a good farm, an advantage which is not always appreciated by present owners, and without such appreciation there are bound to be many cases of the kind referred to in the article mentioned. A change for the better in the selling price of Michigan farm lands is undoubtedly at hand. Indeed, it is now here as this correspondent notes and is a fact which should not be overlooked by any owner of lands who may think to better his condition by selling.

HAPPENINGS OF THE WEEK.

Foreign.

It is stated from the Newfoundland fishing banks that a sealing steamer was recently sunk at the fishing grounds and there is every reason to believe that her crew of 187 men were drowned.

Violent earthquake shocks occurred on Monday in the Minho valley of Portugal. No casualties have been reported.

A decision of great importance to American manufacturers of agricultural machinery was reached when the committee on tariff in the Russian duma decided to withdraw the section in the proposed tariff measure which imposed a tax upon imported agricultural machinery.

The election of members of the French chamber of deputies went off very quietly. There was the same indifference toward the election that has existed during the entire campaign. The results will not be known for a little time but it is generally conceded that the republican majority will be changed but little, if any. Candidates were numerous, one district having 48 persons aspiring for election to a single office.

Colonel Roosevelt spent Sunday in Paris where he received the same demonstrative welcome that has characterized his entrance into all European cities that he has visited. It is reported that the English Universities of Cambridge and Oxford will confer degrees upon the Colonel when he tours that country.

General Wood of the United States war department is in Cuba where he is being welcomed by the officials of that government and prominent men of the island, showing that his activity among them ten years ago is not forgotten.

Prairie fires are raging near Edmonton, Alberta. Vast areas have been burned over by the flames which are destroying buildings and other property. The extent of the damage is not known.

Grand Duchess Elizabeth of Russia, whose husband was killed by a bomb in 1905, has declared to become a nun and took the vows at Moscow last Friday.

Trouble is brewing in the sealing waters of Behring Sea where the Japanese sealers are using motor boats to capture the seals while others are unable to do so, greatly to their disadvantage, on account of a treaty compelling them to use only sail boats.

National.

The contract has been let for the erection of a million dollar temple by the Scottish Rite Masons in the city of Washington.

The plan of the navy department to keep 17 battleships in commission all the time on the Atlantic coast will be possible when the two now under construction are put in commission and four others are overhauled. The additions will make in all 21 battleships on that coast, which will allow four to be on docks for repair at any time and still 17 left for active service.

Last week some 15,000 miners in the Pittsburgh district agreed to go back to work under a contract that was satisfactory to both the men and the operators. Some of the operators had not signed up but they agreed to before the close of the week and upon this assurance the men are going back to work. The demand for labor has been so general from all over the country that the employers are seemingly more willing to meet the men at the new standard than they were some time ago. Public opinion is also with the men generally because of the high price of living.

About 40 men were entombed in a coal and iron mine near Birmingham, Ala., by an explosion which so sprung the cages in the shafts that they cannot be used. The explosion, the cause of which is unknown, did not set fire to the mine and air is being pumped to the men.

The Genessee county circuit court is considering the question compelling a telephone company to connect with local lines at a Flint station. The case, if decided against the telephone concern, will have the effect of making the companies common carriers, in which event they will be compelled to make connections with local and other lines. The question

is one of great significance and which ever way it is decided the matter will be carried to the supreme court for the decision of that body.

Samuel L. Clemens, Mark Twain, died at his home in Redding, Conn., April 22. For a long time the great American humorist and literary man has been suffering. A trip to the Bermuda Islands during recent months failed to give relief; this, and the recent tragical death of his daughter so undermined his vitality that the question of his death was but a matter of days. He was born at Florida, a little town in Missouri, in 1835. Much of his early life was spent in Missouri, Nevada, California and the Sandwich Islands where he was engaged at soldiering, mining and newspaper work largely. His reputation as a writer did not begin until he was about thirty years of age. Since that time he has gained the admiration and respect of America and Europe through his books and writings, nearly all of which are of a humorous character coupled with an undercurrent of sane philosophy. He leaves one daughter.

The main branch of the New Jersey supreme court sustains the decision of Judge Swayze in demanding that the packers present their books for review by the court in a case in which the companies are defendant.

Governor Hughes, of New York, has accepted an appointment by President Taft to the United States supreme court bench. He will fill the place made vacant by the death of Justice Brewer.

Indianapolis suffered from a \$100,000 fire Monday in the wholesale business district.

CROP AND MARKET NOTES.

Livingston Co., April 25.—Weather cold and wet. Oats nearly all up. Farmers plowing for corn. Poor germination of seed corn being reported by those that have tested their seed. Condition of wheat improving somewhat, but will be far below an average crop on account of being badly killed out by ice during the winter. Clover looking fine and promises to make a heavy hay crop. New seeding has started well. From present indications fruit of all kinds will be a large crop unless we have an untimely frost. Good success being reported with the spring pig crop. Horses scarce and commanding prohibitive prices. Prices for all farm produce on the decline.

Osceola Co., April 23.—Farming commenced early this spring; oat seeding began in March; May weather prevailed in March. The snow disappeared in a hurry with no rain. Everything seems to be about a month earlier than usual, but will probably be set back now. It is very cold now, with light snow flurries and freezing nearly all day. Early fruit will no doubt be damaged considerably. Clover and fall grain are looking fine yet and have made a good growth. Oat seeding about completed and plowing for corn and potatoes the order of the day. Some gardens are already put in and a little corn was put in by one farmer during the warm weather of last week. Quite a number of farmers are going to use a little commercial fertilizer this year on different crops. Potatoes have been moving a little lately, at ten cents. Cattle and hogs are scarce and high and early pigs are very scarce. There have been a number of auction sales this spring and everything selling at a fair price, cattle and horses selling high. Fine weather for farm work; not much time wasted on account of stormy weather. It was very dry up until April 16, when there was a good rain, and another one April 22, which soaked up the ground in fine shape.

Ottawa Co., April 18.—The long continued and unprecedented drouth, for this season of the year, was broken by a good rain on the 16th. Grass, wheat and oats were at a standstill on account of the dry weather, and nearly all cisterns were empty, so the rain was greatly needed. Considerable plowing for corn has been done, and a small amount of corn has already been planted and quite a few early potatoes. Many gardens have been planted also, which is something unusual so early in the season. Cherries, peaches and plum trees are in full bloom, and the buds on apple trees are beginning to open, and with warm weather will soon be in full bloom also. Such warm, dry weather that has prevailed since the snow went about the middle of March, has seldom, if ever, been experienced by the oldest inhabitant.

Lapeer Co., April 20.—Excessive rains for the past few days. Snow flurries today. Farmers plowing instead of putting in crops in cold ground. Wheat is improving; some oat fields begin to show a nice green appearance. The usual acreage of potatoes and beans will be put in as usual. We notice in a ride through two or three townships that stock is not in good condition. Cows and horses rule at high prices; spring pigs will bring \$5. Butter and eggs are awarded fair prices. Meadows and pastures coming on finely. Many farmers are ditching and tiling this spring. Wheat, \$1.07; oats, 40c; beans, \$1.75; hay, \$12@14. Hired help on farms scarce and high.

Jay Co., Ind., April 15.—Weather has been very dry for the last month. Ground in excellent condition. Oats all sown and breaking for corn about done if weather continues favorable will commence planting soon; season is 30 days earlier than last year. Fruit all in full bloom on the 14th, when we had a heavy freeze and it was nearly all killed. Market prices as follows: Wheat, \$1.15; corn, 45c; oats, 47c; butter, 25c; eggs, 21c; potatoes, 30c; baled hay, \$12@14; hogs, 10c; horses out of sight.

Laporte Co., Ind., April 20.—Snow four inches deep on Monday the 18th, but all disappeared during the day and has been cold ever since; 30 degrees this morning. Oats all sown and farmers are busy plowing for corn. Some expect to plant first of May. Stock out on pasture grass is good. Fruit trees in full bloom. Stock in good demand. Hogs declined 1c or more, but few to sell.

MANY FARMS SOLD TOO CHEAPLY.

Within the past six months a condition has arisen throughout the state, wherever there are desirable farming lands, which should be brought to the immediate personal notice of Michigan farmers through the press, farmers' clubs and granges.

Farm lands in adjacent states, particularly Indiana, Ohio and Illinois, have increased in value until they have brought prices double and often triple, that of Michigan lands. In consequence this state has become infested with smooth real estate sharks, most of them armed with a hard and fast form of option contract, which they induce farmers to sign by all manner of plausible statements, going so far in cases of which I have known, as to state that the "contract" was merely permission to bring possible customers to look at the property and not otherwise binding. But when the farm owners attempted to withdraw their property from these realty men's lists, damage suits and other litigation resulted.

The game which these realty men pursue is not on the younger, more aggressive up-to-date farm owners, but the elderly men, many of whom are not aware of the advance of nearly 50 per cent which has taken place in Michigan farm land values within the past year. In consequence the options are secured for ridiculously low figures and these same elderly farmers find themselves suddenly without their land and homestead properties and with only what is, in the present era of high cost of living, a pitifully inadequate sum of money to support them in their declining years, and when they desire to purchase village or suburban properties they are amazed to find the prices such small parcels of land now command, not to mention present residence values, and costs of building.

These real estate men who make most frequent use of the ironclad contract seem to be of the "fly-by-night" variety, staying about six months or less in a place, "skimming the cream" and then departing for pastures new. They come armed with a few letters from banks or other alleged real estate men in the last preceding place where they have operated but I have never known one to show letters from their "clients."

I trust that the Michigan Farmer will lend some space in its widely read columns to sounding a warning on this subject. Doubtless the class of purchasers which are brought in from Indiana, Ohio and Illinois are reliable men and up-to-date farmers who, having sold their original holdings at from \$100 to \$250 per acre, know a bargain in Michigan land when they see it, but the other side of the question should engage the attention of Michigan farm owners.

INTERESTED FARMER.

THE DEVELOPMENT AND ADAPTATION OF THE AUTOMOBILE.

The wonderful development of the automobile industry is the marvel of the present century. Fifteen years ago the automobile was a novelty in its then crude form. Ten years ago it had been developed into a pleasure vehicle, which was still more generally recognized as a novelty than as a dependable conveyance for either business or pleasure. In its later and varied forms of development, however, the automobile has not only become a thoroughly practical vehicle for both business and pleasure, but perhaps the most marvelous thing about its development has been its adaptation to every man's business and pleasure. In its specialized types, from the modern, high-power, heavy touring cars, built for the comfort and pleasure of those who can afford them or to whose use they are adapted, to the lighter yet equally efficient types of moderate first cost and inexpensive maintenance; from the heavy commercial trucks to the light utility cars which are quickly convertible from pleasure vehicles and adapted to the rapid transportation of moderate loads, the modern automobile will provide a type suited to every man's needs. Likewise during the early history of the automobile aside from thinking it a mere plaything the average man believed it would continue to be a plaything for city use only. This general idea has long ago been proven an error and today the automobile in its various types has become recognized to be as well adapted to country as to city use and a large part of the automobile trade now has its origin in rural districts.

An increasing number of farmers are buying automobiles each year and are

finding them almost uniformly well adapted to their needs for such a vehicle. We have interviewed several farmer owners of automobiles who have uniformly declared the machines to have been a satisfactory investment to them. While the farmers of Michigan have not yet purchased automobiles to the extent that the farmers in the western states, where a more sparsely settled country and poorer transportation facilities have made them an even greater necessity, yet the time is right at hand when Michigan farmers will purchase them in much larger numbers. At the present value of good horses and an equipment of rigs which an automobile will largely displace, the investment represented will be but little more for the automobile and the saving of time made possible by the automobile will go a long way toward making the additional investment a profitable one, to say nothing of the comfort and pleasure which will be derived from this means of conveyance by the whole family.

The very number and variety of automobiles now manufactured is, however, a source of perplexity to the prospective auto purchaser. It is quite essential for best results, that a type of machine adapted to the needs of the user should be selected, but the natural law of evolution tends to simplify this complex question. As the manufacturers of certain types of automobiles have found their machines to be adapted to country conditions and to have given good satisfaction to country users, they have sought to bring them prominently before country people by advertising them in agricultural journals. Thus the readers of this paper will find the types of machines which have given the best satisfaction to farm users advertised in its columns, so that the problem of selection may profitably be narrowed down to the types or makes of machines so well adapted to farm use that their manufacturers have found it profitable to so advertise them, which is just another method of saying that they combine a desirable degree of simplicity and efficiency, of moderate price and low maintenance cost. Undoubtedly the next ten years will see a far greater development in the automobile industry than has been noted in the last decade, and an increasing number of farmers will use them as their adaptability to their needs is more forcibly demonstrated.

PLEASE SIGN YOUR NAME.

We have recently received quite a number of communications requesting information, without the name and address appearing on the communications. We are obliged to make it a rule to require the name and address to accompany every such request, since that is the only means we have of knowing that the applicant is a subscriber and entitled to the time and space required in answering his inquiry. Names will not be published where request is made to have them omitted, but we can not answer inquiries where both name and address does not appear.

FRUIT CROP DAMAGED.

We can give no absolute data regarding the effect of the recent cold wave that extended from the Canadian line to the gulf and affected practically every part of the country, upon the fruit crop. But reports that have come to hand are sufficient to suggest that the damage is large and the fruit which a few days ago promised not only to be coming along in large quantities but to be here many days before it is usually on hand, will be considerably delayed, if not destroyed entirely. While it is true that the first reports of such a disaster are apt to be exaggerated, the records of the weather man are incompatible with any hope of blossoms and fruit coming through without injury. Illinois, Indiana and Ohio are all large sufferers and in the southern part of the fruit belt of Michigan the damage is reported large. Van Buren county was heavily struck—the damage there perhaps will run up to the million dollar mark. The apples, plums, pears and cherries of that county are all held to be practically ruined. Peaches in certain protected localities are thought to have passed the cold hours more or less safely. In the northern section of the belt the damage is claimed to be small in lieu of the fact that blossoming is detained by the later season prevailing. It is predicted that the fruit growers of this northern section and indeed all growers just above the lower counties of the state will be greatly benefited, for there is going to be a great demand for the fruit that is matured, and the increased prices will more than cover the loss from damage through the frost.

THE SHETLAND PONY CONTEST

Closes Saturday, April 30. Last subscriptions must be mailed on or before that date. You will have time to get in one more order if you can see them as late as Friday or Saturday morning.

If the watch you have now is nearing the end of its usefulness, or is disappointing to you in any way, get an **Ingersoll-Trenton**. From the minute you put it in your pocket you will be sure that you have at last found a watch that will not fail you—the only watch you will need for the rest of your life, barring accidents. Every Ingersoll-Trenton is finely jeweled and keeps time to the minute. **We guarantee this; you prove it through long years of use.** It is a joy to carry such a watch.

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JEWELLED WATCHES

If you want to spend only \$5.00 you can get an Ingersoll-Trenton in a durable nickel case. Make it \$7.00 and the case will be ten-year gold-filled. For \$9.00 you can get an Ingersoll-Trenton in a twenty-year gold filled case—a superb watch fit for the most critical user.

Possibly you are ready **right now** for a practical demonstration in watch-economy and watch-satisfaction. In that case do two things: first, **rely on this advertisement**; second, **go straight to your jeweler and tell him what you want.** INSIST on Ingersoll-Trenton. There!—that is absolutely the best thing we can tell you about watch-buying.

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We also manufacture the famous **INGERSOLL** Watches at \$1.00, \$1.50 and \$2.00. We have been doing this for seventeen busy years. Ingersoll models are sold by 60,000 dealers.

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"I have compared my Ingersoll-Trenton watch with Standard time daily for fourteen days. It has apparently not varied even a fraction of a second."

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Small picture of an Ingersoll-Trenton Watch showing side view of movement.

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Special rates on large lots. Three \$2.00 packets of Cooper Sheep Dip may be substituted for Milk Oil if preferred. 5 gallons Milk Oil Dip, without tank, \$5.00. F. O. B. Chicago.

Our line includes **Summer's Worm Powders, Toxaline Worm Remedy, Ear Labels and Buttons, Branding Liquid, Tattoo Marker, Sheep Shears, etc.** Illustrated catalogue of all Stockmen's Supplies free by mail.

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HORTICULTURE

WORK WITH SMALL FRUITS.

We left the mulch on the strawberries as long as we dared, perhaps a little longer than we ought, but we did not wish to uncover them a month earlier than usual unless we were certain that the weather really meant business. But the mulch had to come off early in April and we are now readjusting it about the plants so as to get it as near to them as possible and cover all the ground. After the growth starts a few weeks one can work the mulch up closer to the plants than it was put when removed from the rows; and, too, much of the weeds and grass that are trying to struggle through the mulch where it is thin will be suffocated by covering them more deeply. Some early plants on a south slope that were not mulched are in blossom, but the others have barely begun to push out fruiting stalks and I hope they will keep in until danger of frost is over.

The red raspberries of the Cuthbert variety were killed more than usual the past winter, as usual the larger canes dying farthest down, and the older plantations being injured worst. The rows will not average more than two and one-half feet in height after the dead tops are cut off. We are now ready to rake out the brush, plow shallow with a vineyard plow, and cultivate and hoe.

The black raspberries and blackberries stood the winter well and are starting nicely. We have these about ready to clean out also. The old canes and surplus new ones were taken out last fall and early this spring.

The new plantations are not set yet as we have been too busy with the spraying, and we now have an orchard of 1,800 trees to set before we can get at this work, as the plants will be set in this young orchard. I always like to get the planting done early in the season, before the growth starts too much, but in this case we must wait, as the trees are of more importance.

Calhoun Co. S. B. HARTMAN.

TRANSPLANTING CABBAGE PLANTS.

The transplanting of cabbage plants is an important part of the work connected with cabbage growing. They are grown in beds and must be transplanted to the large field as soon as they are of a desirable size and the field is ready for them, weather conditions, time of year, etc., favorable.

For the late crop the plants should be transplanted from the middle of May to the first of July. Quite a bit depends upon the plants, weather and other conditions. We have transplanted as late as the 15th and 20th of July with good results, but it is taking a big chance, for, unless one has a very strong soil or is favored by a late-growing fall, the crop is likely not to mature before winter and cold weather set in. It is also a mistake to set too early so that the crop will mature too long before fall, especially if the cabbages are to be held for the spring market. Then sometimes the early crop is more apt to suffer an attack of the blight, and sometimes if they are in early the blight does not injure them. Taking everything into consideration, the last week in June is perhaps the most favorable time for transplanting the late crop. For the early crop, they should be transplanted as soon as the plants can be grown to a proper size, any time during the latter part of May or first of June.

Plants for transplanting should be stalky, bushy and strong. The exact size is not important and may vary from three or four to six or eight inches. If they are grown where they are crowded for room, they will be spindling, weak and undesirable for transplanting; while, on the other hand, if they are sown broadcast and scattered thinly and uniformly over the ground, they will be strong and stalky. This latter method of sowing gives room not only for stalk and leaf development, but for the development of a strong root system which is just as essential, if not more, as the part of the plant above the ground. So a desirable plant for transplanting is one that has a fibrous root system, a stalky, bushy stem and is about five inches in length. If one of these conditions are lacking, the other is also apt to be, and in buying plants it is wise economy to pay a little extra if necessary to procure the best.

They should be forked from the plant bed with a manure fork, and not simply pulled out by the stem, as so many prac-

tice. When they are forked up, the dirt around the roots is loosened and few of the tiny rootlets are broken off in pulling. As many of these rootlets as possible should be retained, because it is only through these that the plant is able to take up its food and moisture. If the plant is stripped of these in pulling, it has a slim chance of recovery after transplanting, especially if soil and weather conditions are slightly unfavorable. Pulling by the stem is sure to break off more or less of these roots and should never be done unless the soil is very loose and plants uneven in size. If they are to be pulled by the stem, grasp the plant as close to the root as possible and gently pull until the plant is out of the ground. In pulling the plants should be sorted and kept of as uniform a size as possible. Discard all poor plants. Shake the dirt from the roots, keep them straight with each other and place in a cool, shady spot until ready for the field. They may be laid in a bushel basket, wash tub or box with roots to the bottom, the tub or box standing on its side and backing the sun until full. If the plants are to be so kept a day or so, as sometimes one is prevented from setting them the day pulled, keep them in a cool cellar and the plants will be none the worse for having been pulled a day or two previous to transplanting. In fact, when properly kept, it is better for them to have been pulled a day or two before transplanting.

If to be set by hand, the fertilizer should be drilled in the ground with horse power, and the field marked out with rows three or three and one-half feet apart. Then the plants should be dropped about 22 inches apart in the row. One man with water and a small cup should go along with the setter and when he has made an opening in the ground for the plant and placed it there, a small quantity of water should be thrown around the roots. Then the setter brings the loose earth up around the stem of the plant and packs it down, leaving the plant in an upright condition. Water should be kept in the field and the men change about in doing the work which will make it less tiresome and monotonous. Care should be taken to keep the plants in line with each other, so they will not be torn out by the cultivator. A small cultivator tooth or similar piece of iron with a sharp point, is a desirable method of making the opening in the soil for the plant. If done by hand, one's fingers will soon get sore. When set by hand, it should not be done during the heat of the day, but in the afternoon and evening.

It is cheaper to own or hire a machine for the work. A little experience will soon teach one how to handle it. The plants should be uniform in size and straight with each other on the lap. They are held on an apron on the lap with roots pointed towards the feet. While one hand is placing the plant in the furrow made by the shoe, and guiding it beyond the pressing rollers, the other hand is separating a plant and getting it ready. The depth to set the shoe depends upon the condition of soil and size of plants. It should be deep enough to get the plants well down in the soil. It is very important that the plants be placed in the furrow and in position before the click of the watering device. When it is not there at the time the water is released, the beneficial effects of the force of the water is lost, the force of which tends to set the roots in the fine soil. Always have the water strike the roots instead of placing the plant in the water before of placing the plant in the water after it is in the furrow. Use two or three barrels of water to the acre and more in hot, dry weather. See that the team keeps a rather slow uniform pace and that the shoe and other parts are properly adjusted. Strain the water that enters the barrel or use it from a pump, because a small stone in the valve will cause lots of trouble and waste of time. A transplanter soon pays for itself, and the cabbage grower cannot afford to do without one. For doing outside work, three dollars an acre is charged, fifty cents an acre allowed to each of the two setters required and a dollar for driver and team. From two to four acres per day can be set, depending upon length of field, convenience of water and other conditions. L. J. HAYNES.

Blossoms are out, but few insects are to be seen. What effect is this going to have upon the fertilization of the flowers? Will the resulting crop be impaired by this situation? It would seem to be an opportunity to make observations along the line of insect benefits and the advisability of keeping bees in the orchard.

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GRANGE

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THE MAY PROGRAMS.

State Lecturer's Suggestions for First Meeting.

"The kitchen and dining-room have as much to gain from science as have the dairy and the orchard."—K. L. Butterfield.

Ten-minute song service.

In the Home—II. Helpful Yeasts.

Short dialogue.

The Halley Comet—Where, what, when?—A paper, or talk.

Care of little things on the farm:—

1. Lambs. 2. Pigs. 3. Calves. 4. Colts. Some things we can get along without. Discussion led by a man and a woman.

Songs interspersed throughout this program from "School Song Knapsack," selected by a teacher or pupil of some school.

LECTURERS' CONFERENCES.

The holding of district conferences for subordinate Grange lecturers is a step in advance, but the value of this movement will not have been fully demonstrated until it shall have led to lecturers' conferences in every county.

The difficulty with the present method is that it is too expensive for the subordinate Granges. It costs too much for the Grange to transport the lecturer to the conference. The strong Granges, or those having the best lecturers, appreciating the great value of the work, will be represented at the conference, but weak Granges, without any adequate appreciation of the lecture work, will not generally send their lecturers to these meetings.

Please note that I am not objecting to the district conference. There is not a lecturer in Michigan so competent that she could not be benefited by attending a meeting of this kind. In fact, it seems sometimes that very competent lecturers get even more out of a conference than those who are not so capable.

But we must in some way reach the weak lecturer. She must understand the bulletin. She must know something of the plans and purposes of the State Lecturer in this great field of work. The county conference will furnish this opportunity. Many Patrons who are not lecturers will attend and carry home impressions that would prove very helpful in future Grange meetings.

The weak Grange is a problem, but its solution lies alone in work along distinctive Grange lines. If the weak Grange is to do good lecture work it must be taught how, and if the State Lecturer is to give assistance, the conference in most cases must be brought closer to the Grange. The county meeting may not be so large nor enthusiastic as the district meeting, but the opportunity to do individual work will be the better. And, after all, it is not so much enthusiasm that is lacking in so many Granges as a knowledge of what to do and how to do it. The State Lecturer and the subordinates should be one in a common ideal and a common purpose to realize it. This cannot be until the work indicated in the bulletin is thoroughly understood.

It may be urged that the county conference will consume too much State Grange money, but the State Grange can do no better, in my judgment, than to spend a considerable sum of money in the development of good subordinate Grange lecturers. For in no other way can public opinion be so well educated, nor so wisely directed, along Grange lines, and in no other way can as much be accomplished for the good of the order throughout the state. The money in the State Grange treasury came originally from the subordinate Granges, either directly or indirectly, and I cannot see that it makes any practical difference whether the subordinate Granges or the State Grange bears the expense of these meetings, so long as the work is done in the most economical way.

The county plan is the cheaper. To illustrate: We have fifteen Granges in Oceana county. For the lecturers to have attended the district conference at Grand Rapids would have cost about \$70. Including the Pomona lecturer, \$75 would have been paid by our county for its share of the benefits to be derived from this one conference. "But, is it not worth it?" you ask. Yes, without doubt. But only four out of the sixteen lecturers attended. Had the conference been in our own county, three times as many would probably have been in attendance, and

the expense to the State Grange would not have exceeded one-third of the cost of sending those four lecturers to Grand Rapids. I have favored the district plan from the beginning, partly because of the good that might result from it directly, but chiefly because of a still better system growing out of it.

With a system of Grange supervision adequate to meet the needs of the Granges it should be possible for the supervision deputy to co-operate with the State Lecturer to the extent that the influence he has been able to exert might be increased in the county conference. In some counties it might be wise to make the conference a "Round-Up" of the deputy's work. This would insure a large attendance of Patrons and the lecturer would have a splendid opportunity to acquaint all with her plans for the year. We have thought seriously of securing a county conference here in Oceana county and defraying the expense ourselves, and I believe we shall do so in the autumn. If dates were arranged consecutively and conveniently throughout the state, a conference could be held in every county at an expense of not to exceed \$600.

Whatever may be the possibilities of the Grange as a business, social or fraternal organization, its chief mission is education. Its lecture hour is its opportunity. It is, therefore, our duty, and it ought to be our pleasure, to afford those whom we have placed in charge of this great work all possible assistance.

Oceana Co.

W. F. TAYLOR.

AMONG THE LIVE GRANGES.

New Members at Every Meeting.—Iron-ton Grange, of Charlevoix Co., which has rapidly forged to the front in membership and activity the past year is keeping up the gait. At its last meeting in March, with an attendance of 48, it took in five applications and initiated six candidates in the first and second degrees. At its next meeting, on April 12, degrees were conferred upon a class of 17 in the presence of 75 members.

A New One in Jackson Co.—Another Grange has been organized in Jackson county. It was started in West Summit with 41 members. The following temporary officers were elected: Master, Frank Ayers; overseer, John Burchard; lecturer, Mrs. C. M. Brown; steward, John L. Hutchins; assistant steward, Byron Peterson; lady ass't steward, Carrie Brown; chaplain, Joseph Frey; treasurer, W. B. White; secretary, Georgianna Pratt; gate keeper, J. William Hutchins; Ceres, Alida Frey; Pomona, Mrs. W. B. White; Flora, Myrtle Hutchins.

A Six Months' Contest.—Horton's Bay Grange, of Charlevoix Co., has just begun a contest for new members, better attendance and better lecture hour. It is to continue for six months, with points allowed for new members, attendance and for excellence in program work. The membership has been divided and the contesting sides are known as the Reds and the Blues. The Reds opened the contest with an excellent program on April 15.

Allegan Pomona.—The April meeting of Allegan County Pomona Grange was held in Wayland, Thursday, April 22, with a good attendance. The morning session was a closed business meeting with Master L. C. Root in the chair. A resolution was adopted after considerable discussion, calling for the establishment of a national health bureau in Washington, which is one of the matters being urged by the State Grange. At noon a delicious dinner was served by the ladies of the Wayland Grange. The afternoon session was open and largely attended. Mrs. Jane Estabrook again demonstrated her ability as a lecturer in presenting a most interesting program. The next meeting will be held in Monterey, June 9.

Patrons Favor National Health Bureau.

Resolutions favorable to the establishment of a national bureau of health have recently been submitted to the Granges of the state for consideration. Reports indicate that the proposition is looked upon with favor by many Patrons, a number of Granges having already adopted the resolutions, which read as follows:

Resolved, That the resolutions favoring the immediate establishment of a National Health Bureau adopted by the National Grange and approved by the State Grange are hereby endorsed, and

Resolved, That we desire that necessary legislation providing for the establishment of a National Health Bureau be enacted at this session of Congress, and that our Congressman and United States Senators should use all their influence to that end. And,

Resolved, That copies of these resolutions, duly signed and sealed with the seal of the Grange, together with copies of the resolutions adopted by the National Grange, be sent to our Congressman and United States Senators for this state, and to the local newspapers for publication.

COMING EVENTS.

Pomona Meetings.

Gratiot Co., with Star Grange, Saturday, May 21. L. W. Oviatt, state speaker.

Benzie Co., with Thompsonville Grange, Tuesday and Wednesday, May 31 and June 1.

Western (Ottawa Co.) with Conklin Grange, Saturday, June 11.

Lenawee Co., with Hudson Center Grange, Thursday, June 2.

FARMERS' CLUBS

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Associational Motto.—

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

Associational Sentiment.—

The farmer, he garners from the soil the primal wealth of nations.

THE GOLDEN AGE OF AMERICA.

Paper read by Mrs. A. E. Hartshorn, of the Maple River Farmers' Club, before the State Association of Farmers' Clubs.

In the mythologies of most people there exists a tradition of a better time, a time when earth was common property producing spontaneously all things necessary for an enjoyable existence.

Poets in singing of the decadence of the world have spoken of it as the golden, the silver, the brass, and the iron ages holding out at the same time the consolatory hope that the pristine state of things will one day return.

But at the words "Golden Age," one instantly travels back through time and space until he stands in the Imperial City, Rome, and, forgetful of the flight of centuries views the wonders of the age of Augustus. Augustus who, in the splendor of his power and the glories of his conquests, boasted that he had made a "Golden Age" for Rome. Indeed, looking at the mighty city we can well believe his egotistical statement to be true.

Governmentally, it was well nigh perfect. Roman law was and is a marvel of completeness and endurance. Their law was the foundation of modern continental codes and has exerted a powerful influence directly upon England and more remotely upon our own United States. They were lovers of justice and all enjoyed the same rights, that is, the power of legal marriage with the families of all other citizens; power of making legal sales and purchases and holding property; the right to bequeath and inherit property; the power of voting; power of being elected to office.

In art and sculpture the Romans copied mostly from the Greeks, but differing from the Greeks they began to represent scenes in flat paintings. The Romans gave their architectural structures a distinct character by the prominent use of the arch which the Greek builders seldom employed and these lofty arches are the most striking features of ancient Rome today. Augustus, with truth, said, "I found Rome a city of bricks, I left it a city of marble."

Recalling the literature of this period four names have cast an unfading lustre over the time covered by the reign of Augustus. Virgil, Horace, Ovid and Livy—all men whose works have come down to us.

Not all study was along intellectual lines, but much time was used and fruitful results obtained from research in physical and chemical lines. The Egyptian preservation of the body coupled with the alchemy of the Moors and the magic of the Hindu was beginning to have its valuable results in the production of drugs and medicines.

From the Greeks the Romans borrowed all that was best or what they understood the best to be. The Greeks had well nigh perfected physical development hence the Roman was taught to value the physically perfect man. To that end they built magnificent training schools and wonderful baths.

To amuse the people the celebration of many games, especially foot and chariot races, were ordered. These were the days of the gladiatorial combats. Theatres to seat many thousands were built and in their arenas heartrending combats took place.

Educationally the Roman was trained first to be a soldier—his education was practical—rhetoric and oratory were given special attention. The training of the child was principally in the hands of the father, the sons only receiving an education.

The religion of this period of Rome is

familiar to us all, the time when people stood in awe of deities who were thought to control all events. The chief gods worshiped were Jupiter, the god of the sky, Minerva, the goddess of wisdom, Apollo, the god of arts, and Mars, the god of war.

Thus as we review the "Golden Age of Rome," we realize it was nothing more than a barbarous country ruled over by despots whose one idea was personal luxury and glory.

Yet in this age of barbarous splendor there was born in an obscure Roman province, the humble Babe whose life outranks all other and whose influence has made possible our present Golden Age.

(Continued next week.)

CLUB DISCUSSIONS.

The Farmer's Wife and Her Duties.—The Ray Farmers' Club, of Macomb Co., met with Mr. and Mrs. Wm. Peters on the 14th day of April. Some 45 or 50 members were present and all partook of the dinner which was served by the farmers' wives. After the people gathered in the large sitting-room and parlor the meeting was called to order by an ex-president. Roll call was responded to by repeating April historical events. Select reading by Mrs. E. Frost was heartily enjoyed by all. Mrs. R. W. Coykendall read a paper on "Has the farmer's wife duties outside the house." It was thoroughly discussed and finally decided that she should be thoroughly acquainted with everything outside the house. The meeting was then adjourned until next month when it will be at the home of Mr. and Mrs. R. W. Coykendall.—Hazel M. Green, Cor. Sec.

Hold Last All-day Meeting of the Season.—The April meeting of the Washington Center Farmers' Club has held across the river at the home of Mr. and Mrs. J. Zigler. It was a busy day in Washington township, but about 40 members and visitors responded to roll call with their favorite work. The music was fine and was furnished by the club. "Highway work" was one question and was an interesting topic at this season. Mr. Carl Brattin, of Ann Arbor, was present and gave an interesting talk on his school work. Little Marita Zigler charmed the audience with a pretty recitation. The question, "Are our state laws what they should be," received considerable attention. This was the last all-day meeting until October and the dinner was one long to be remembered. The next meeting will be with Mr. and Mrs. F. J. Brattin in May at 1:30, Thursday, the 12th.

The Boy and the Farm.—The Thornapple Farmers' Club was very pleasantly entertained at the home of Mr. and Mrs. Giles Hatton, April 7. Following the excellent dinner, came the regular business meeting and a short literary program. That all were interested in the question, "Is our present educational system driving our boys away from the farm? If so, what is the remedy?" was very evident from the earnest discussion led by H. C. Helrigel. There was a slight difference of opinion, but all agreed that a good education was essential to the success of any vocation, environment and home-teaching had as much influence on our boys as the college training.

Name Favorite Birds at Roll Call.—The April meeting of the Columbia Farmers' Club was held at Meadow Brook, the home of Mr. and Mrs. E. H. Loomis, with a very good attendance, considering the day, which was so fine for farm work that it was a temptation to the men to stay home and improve it. As they were rather late in getting together, the forenoon session was short and occupied with the usual routine business, at the conclusion of which adjournment was taken to partake of a bountiful chicken pie dinner and to enjoy a social hour. The afternoon session was opened with roll call, "Names of favorite native birds," and was well responded to, almost everyone having some favorite among the feathered tribe.

High Prices and their Cause.—The subject for discussion, "What is the cause of the present high prices of farm products: may we look for them to be permanent?" was opened with an able paper by Charles Hewitt. He contended that with the exception of meats, prices were not high compared with the wages of laborers. One cause of the prices as they are, is that so many of the population are flocking to the cities while the proportionate rural population is steadily decreasing, making the consumers so much in excess of the producers that there is a prospect that present prices will continue. The discussion of the subject was opened by L. E. Palmer and was warmly entered into by a large number, some taking one side and some the other.

"Practical Poultry Raising" was to have been presented by Miss Belle Weeks but as she was not present Mrs. Wm. Palmer gave some hints from her own experience. One point she emphasized was the necessity for plenty of corn, sand and fresh water for the young chicks. She feeds commercial chick feed until about six weeks old, then wheat and cracked corn. Mrs. Hewitt gave an interesting paper on "Turkey Raising." One bit of her advice was, "don't spend your turkey money until they are sold." There are so many things liable to happen to them of a disappointing nature and yet if one makes a success of it it is so profitable that it is worth while to make the effort. She raises the early ones with hens, keeping them closely confined until they can fly over an inclosure a foot high. A sharp lookout must be kept for lice, the first symptom being a drooping look. Her remedy is to grease them with melted lard to which has been added a few drops of kerosene oil.

MARKETS

DETROIT WHOLESALE MARKETS.

April 27, 1910.
Grains and Seeds.

Wheat.—There is not much to be said of the condition of the wheat trade this week. Prices changed with the weather largely, but other news was used for its full value by both the bears and bulls. Receipts at primary points have fallen off heavily the past few days and it is generally believed that the holdings of farmers are pretty well cleaned up. Prices advanced with the reports that in Kansas and Nebraska there was still need of rain and in other states too much had fallen, and, also, on account of the recent cold wave which swept over the country and especially threatened the crop in the southwest where the plants have formed joints already, making them subject to frost. In the northwest the germinating spring wheat crop was also put in danger, but the market on Tuesday did not respond to the situation which leads to the belief that damage is not what it was thought to be. The cash wheat situation is not helping the bulls for millers are allowing their mills, in many instances, to remain idle for flour is not called for. The visible supply advanced a third of a million bushels. One year ago the price of No. 2 red wheat was \$1.37 per bu. Quotations for the week are:

	No. 2 Red.	No. 1 White.	May.	July.
Thursday	1.07	1.07	1.07 1/4	1.02 1/2
Friday	1.08	1.08	1.08 1/4	1.02 1/2
Saturday	1.08 1/2	1.08 1/2	1.09	1.03 1/2
Monday	1.09	1.09	1.09	1.04
Tuesday	1.08	1.08	1.08	1.02 1/2
Wednesday	1.07 1/2	1.07 1/2	1.07 1/2	1.02 1/2

Corn.—Better prices are ruling. The elevators report fewer receipts than they have been getting. The demand continues steady with the past several weeks. The local trade is doing a fair amount of business. The preparation of the ground for the new crop is progressing nicely and farmers are much ahead with the spring work as compared with former seasons. One year ago No. 3 corn on this market was quoted at 73 1/2c per bu. Quotations for the past week are:

	No. 3 Yellow.	No. 3 White.
Thursday	59 1/2	60 1/2
Friday	59 1/2	60 1/2
Saturday	59 1/2	61
Monday	60	61 1/2
Tuesday	60	61
Wednesday	60 1/2	61

Oats.—The lowest figure reached last week has been maintained. Receipts of oats have been heavier than any other grain although the visible supply shows a decrease. The consumption is good and the trade is firm at the present standard. One year ago the price paid for No. 3 oats was 57 1/2c per bu. Quotations for the week are as follows:

	Standard.
Thursday	44
Friday	44
Saturday	44
Monday	44
Tuesday	44
Wednesday	44

Beans.—There is no change in bean quotations as given out by the board. No trading is being transacted here. Primary elevators in the bean sections are doing some business at figures which correspond more or less closely to the figures reported out. The following are nominal quotations:

	Cash.	May.
Thursday	2.03	2.05
Friday	2.03	2.05
Saturday	2.03	2.05
Monday	2.03	2.05
Tuesday	2.03	2.05
Wednesday	2.03	2.05

Cloverseed.—Except for a reduction of a quarter for cash seed, prices for most of the week were the same as last week. The activity of this deal is on the decline as most of the seeding has been done and the call from the farms is almost over. Quotations for the week are:

	Prime Spot.	Oct.	Alsike.
Thursday	7.00	6.50	7.00
Friday	7.00	6.50	7.00
Saturday	6.75	6.50	7.00
Monday	6.75	6.50	7.00
Tuesday	6.75	6.50	7.00
Wednesday	6.75	6.60	7.00

Rye.—Market is dull and firm. No. 1 is quoted at 80c per bu., which is last week's quotation.

Visible Supply of Grain.

	This week.	Last week.
Wheat	29,836,000	29,495,000
Corn	11,825,000	12,774,000
Oats	9,864,000	9,973,000
Rye	563,000	595,000
Barley	2,331,000	3,236,000

Flour, Feed, Provisions, Etc.

Flour.—Market is easy at last week's values. Quotations as follows:

Clear	5.55
Straight	5.65
Patent Michigan	5.95
Ordinary Patent	5.75

Hay and Straw.—Prices are on a par with last week. Quotations: No. 1 timothy, new, \$17.50; No. 2 timothy, \$16.50; clover, mixed, \$16.50; rye straw, \$7.50; wheat and oat straw, \$6.50 per ton.

Feed.—Market steady at unchanged prices. Carlot prices on track: Bran, \$26 per ton coarse middlings, \$27; fine middlings, \$29; cracked corn, \$25; coarse corn meal, \$25; corn and oat chop, \$24 per ton.

Potatoes.—Potato deals are quiet with no improvement in values. Michigan grown are selling in car lots at 25@30c per bushel.

Provisions.—Family pork, \$27; mess pork, \$26.50; medium clear, \$26.27; pure lard, 14 1/2c; bacon, 19@20c; shoulders,

14 1/2c; smoked hams, 17 1/2@18c; picnic hams, 14c per lb.

Hides.—No. 1 cured, 11c; No. 2 cured, 10c; No. 1 green bulls, 8c; No. 1 green calf, 15c; No. 2 green calf, 14c; No. 1 cured calf, 16c; No. 2 cured calf, 15c; No. 1 horsehides, \$3.50; No. 2 horsehides, \$2.50; sheepskins, as to wool, 50c@52.

Dairy and Poultry Products.

Butter.—A general decline in the price of creamery butter throughout the country was followed by the trade here last Monday and values are about 3c below the price of a week ago. This is about the margin shown in other trade centers. Heavier receipts from the dairy sections have warranted the lower values. Quotations are: Extra creamery, 29c per lb; first do., 28c; dairy, 21c; packing stock, 20c per lb.

Eggs.—The adjustment of supply and demand has effected a steady trade in the local market and prices are on the same basis as prevailed last week. Other markets are showing about the same tone. Current receipts, cases included, are quoted at 20 1/2c per doz.

Poultry.—Prices are generally a little shaded from last week, but the trade continues steady and firm in tone. Quotations as follows: Live.—Spring chickens, 18c; hens, 18c; old roosters and stags, 12@13c; ducks, 15@16c; geese, 12@13c; turkeys, 17@18c.

Cheese.—Michigan, late made, 15@15 1/2c; Michigan, fall made, 13@13 1/2c; York state, 19@20c; Limburger, Wisconsin, 17@18c; New York, 18@19c; bricks, 16@16 1/2c; Swiss, domestic block, 21c; Swiss loaf, 23c.

Calves.—Steady. Choice to fancy, 11@11 1/2c; ordinary, 9 1/2@10c.

Fruits and Vegetables.

Apples.—Market easier and unchanged. Spy, \$4@4.50; Baldwin, \$3.50@4; Steel red, \$5; Greening, \$4@4.50 per bbl.

Onion Sets.—Tops, 75c@81; white, \$1.75 @2; yellow, \$1@1.25 per bu.

Onions.—Domestic, \$1.25 per bu.

Cabbage.—Higher. \$3@3.25 per bbl.

Vegetables.—Beets, 60c per bu; brussels sprouts, 25c per qt; carrots, 50c per bu; cauliflower, \$2.25@2.50 per bu; celery, 45 @50c per doz; eggplant, \$2@2.50 doz; green onions, 10@12c per doz; lettuce, hot-house, \$1.50@1.75 per doz; mint, 25c per doz; parsley, 25@30c per doz; radishes, 25@30c doz; spinach, 90c hamper; turnips, 50c per bu; watercress, 20@25c per doz; wax beans, \$3.50 per bu; pieplant, 35c per dozen.

OTHER MARKETS.

Grand Rapids.

More old potatoes are moving, but prices are no higher, running about 10c at loading stations. A few new potatoes are coming in but there is not much call for southern stock as yet. Great interest is being taken in the fruit situation in this section and while serious damage is feared it is pretty certain that there will be some fruit in spite of cold weather. Grapes are not far enough along to be hurt. Early peaches and cherries are probably damaged. The bean market is quiet. Grain prices are steady as follows: Wheat, \$1.02; corn, 61c; rye, 70c; oats, 44c. Dressed hogs are worth 11@11 1/2c. The live poultry market is steady at the following prices: Fowls and chickens, 16c; old roosters, 10c; ducks, 16c; turkeys, 16c.

Chicago.

Wheat, No. 2 red, \$1.10@1.12; May, \$1.08 1/2; July, \$1.01 1/2.

Corn, No. 2, 60@62 1/2c; May, 59 1/2c; July, 62 1/2c.

Oats, No. 3 white, 43@44 1/2c; May, 42 1/2c; July, 40 1/2c.

Butter.—A decline occurred here on Monday in harmony with lower prices in other parts of the country. Increased receipts are resulting from early pastures. Dairy goods steady. Quotations are: Creameries, 25@29c; dairies, 22@26c.

Eggs.—Prices are lower than last week. Offerings are heavy. Prime firsts, 20 1/2c; firsts, 19 1/2c; at mark, cases included, 17 1/2@19 1/2c per doz.

Hay and Straw.—Market steady. Quotations are: Choice timothy, \$17@18; No. 1 timothy, \$15.50@16.50; No. 2 do and No. 1 mixed, \$13.50@14.50; No. 3 do and No. 2 mixed, \$9@13; rye straw, \$9@10; oat straw, \$6.50@7; wheat straw, \$6@6.50.

Potatoes.—Trade is steady with last week except the poorer grades are in less repute. Receipts are liberal but much less than last week. Fancy and choice stocks are selling at 22@25c per bushel, while fair to good grades are quotable at 18@20c per bu.

Beans.—Market is lower for common beans. Choice hand-picked are quoted at \$2.07@2.10; fair to good, \$2@2.05; red kidneys, \$2.75@3.10 per bu.

Wool.—Values are being maintained and the trade is firm. For fine unwashed delaine, 25@27c is being paid.

New York.

Butter.—Increased receipts have worked prices down. Western factory firsts, 22@23c; creamery specials, 29@29 1/2c lb.

Eggs.—The market is weaker, owing to increased receipts of fresh stock, and prices are a shade lower. Fresh receipts quoted at 23@24 1/2c per doz.

Poultry.—Dressed. Market is unsettled. Chickens, 15@24c; western fowls, 15@20c; turkeys, 17@23c.

Boston.

Wool.—There is a decided tendency for buyers here to play the "waiting" game. They do not want to stock up with wool at prices asked by wool raisers, and by allowing the trade to feel the effect of their indifference, they believe they can cause the farmers to shade their prices. On the other hand, there is a firming of values for the holdings in the hands of brokers. The manufacturers are still after the product and the brokers are seeing that they pay high figures for it. The following are the leading quotations for domestic grades: Ohio and Pennsylvania fleeces—No. 1 washed 37@38c; de-

laine washed, 35@36c; XX, 34c; half-blood clothing, 33@34 1/2c; three-eighths-blood clothing, 33@34 1/2c; one-quarter-blood combing, 29@30c; delaine unwashed, 26@27c; fine unwashed, 23@24c. Michigan, Wisconsin and New York fleeces—Fine unwashed, 23@24c; delaine unwashed, 25 @26c; half-blood unwashed, 32@33c; three-eighths-blood unwashed, 32@33c; quarter-blood, 28@29c. Kentucky, Indiana and Missouri—Three-eighths-blood, 33c; quarter-blood, 29@30c.

Elgin.

Butter.—Market firm at 29c per lb., which is a decline of 3c over the quotation of a week ago. The sales for the week amounted to 537,300 lbs., compared with 519,400 for the previous week.

THE LIVE STOCK MARKETS.

Buffalo.

April 25, 1910.

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

Receipts of sale stock here today as follows: Cattle, 180 cars; hogs, 10,400; sheep and lambs, 13,400; calves, 2,800.

Receipts of cattle here today, 180 cars. All the good weight cattle of 1,200 lbs. and up sold 25c per hundred weight lower than last Monday. All other grades 10@15c lower, except cows and bulls, which sold full strong with last Monday's prices. Market closed active at the decline and about everything selling.

We quote: Best 1,300 to 1,450-lb. steers, \$8@8.40; good 1,200 to 1,350-lb. do., \$7.25@7.75; best 1,100 to 1,200-lb. shipping steers, \$6.75@7.50; medium butcher steers 1,000 to 1,100 lbs., \$6.25@6.85; light butcher steers, \$5.50@6; best fat cows, \$5.50@6.50; fair to good cows, \$4.75@5.25; common to medium do., \$3.50@4.25; best fat heifers, \$6.50@7.25; good fat heifers, \$5.75 @6.25; fair to good do., \$5@5.75; best feeding steers, \$5.75@6.25; medium to good do., \$5.25@5.75; stockers, all grades, \$4.50@5.50; best bulls, \$6@6.50; bologna bulls, \$5@5.75; thin light bulls, \$3.75@4.50; best milkers and springers, \$55@65; common to good do., \$25@45.

A few extra prime bulls sold for \$6.75 today.

With 10,400 head of hogs on our market today, the market opened about steady with Saturday's best time. About everything selling that was yarded in time for the trade, and a good clearance.

We quote prices as follows: Mixed and mediums, \$9.70@9.80; few choice decks of Illinois hogs selling as high as \$9.85, closely sorted. Yorkers, \$9.70@9.80; pigs, \$9.70@9.75; roughs, \$8.80@8.90; stags, \$7.50 @7.75. Prospects look fair for the near future.

The lamb market opened up slow today, with best lambs selling from \$9@9.35. The market closed dull, especially on coarse and heavy lambs. Most all the handy lambs sold. Look for steady prices the balance of the week. Sheep were in strong demand.

We quote: Handy clipped lambs, \$9.25 @9.35; heavy do., \$8.75@9; clipped wethers, \$7.75@8; clipped ewes, \$6.75@7.25; clipped yearlings, \$8@8.50; clipped cull sheep, \$3@5.50; skip lambs, \$5@5.50; veals, choice to extra, \$9@9.25; fair to good do., \$8.25@9; cull to common, \$7@8; light thin calves, \$5@6; heavy fat calves, \$5@6.50.

Chicago.

April 25, 1910.

Cattle. Hogs. Sheep.
Received today 23,000 19,000 15,000
Same day last year.. 28,098 50,561 14,695
Received last week.. 59,116 90,210 55,206
Same week last year.. 45,768 84,227 63,733

The week opened today with a good cattle supply and a fairly active demand, butcher stock and part of the steers selling at steady prices, but steers were largely a dime lower. Hogs started off about 10c higher, with sales at \$9.25@9.65, butcher weights going the highest and speculators and shippers responsible for the advance. Light hogs sold at \$9.25@9.60. Local packers were slow to operate on the new level, and later part of the advance was lost, with some sales 10c lower. At the low time last week hogs sold at \$8.75@9.15, and sales were largely 10c higher today than a week ago. Hogs received last week averaged in weight 228 lbs., compared with 214 lbs. a year ago, 219 lbs. two years ago and 235 lbs. three years ago. Sheep and lambs were largely 10c lower today, following last week's decline of 15@25c. Trade was slow, shorn stock being quotable as follows: Lambs, \$7.50@9.50; wethers, \$7.25 @8.10; ewes, \$7.25@8; yearlings, \$7.75@8.40. Choice woolled lambs were quotable at \$9.80@10, six cars arriving.

Cattle were weakened last week by the largely increased receipts, in spite of a fairly active local and shipping demand, and prices showed average reductions of 10@20c. A good share of the beef steers went at \$7@8, with inferior to fair light killers selling at \$5.85@7 and choice to extra shipping cattle of good to heavy weight at \$7.85@8.50. A good class of cattle sold at \$7.50@7.80 and medium steers at \$7.10@7.45. Handy-weight and medium-priced steers were apt to meet with the most competition from buyers, and local killers were disposed to leave the high-priced beeves to the eastern buyers. There is a strong desire to purchase cattle that can be converted into moderate-priced beef, and this explains the relative great strength for butcher stock, cows and heifers having been active sellers recently at \$4.35@7.85, while canners and cutters moved off freely at \$2.50@4.30. Bulls were active at \$4@6.50, and calves had a good demand at \$3.50@8.40 per 100 lbs., with large supplies, 8,172 head arriving on Tuesday. The stocker and feeder traffic has been on as large a scale as limited offerings and unprecedentedly high prices would permit, stockers selling at \$4@6.10 and feeders at \$5.50@7, few feeders selling below \$6.25. The best buyers of cattle to fatten are the central west and Pennsylvania, with

Ohio a good customer, and good cattle are mainly wanted by purchasers.

Hogs experienced another eventful week, prices undergoing further big reductions, with the customary reactions. Monday saw a large supply, 38,781 head arriving, but the sharp break in prices caused country shippers to send in much smaller supplies as the week advanced. Pigs have become unusually scarce in the market, and this is regarded as an indication that stockmen have not abandoned the belief that hog prices will remain at a high level for some months to come. Mixed hogs have shown the most activity on several days lately, and on rallies they were apt to undergo more gain in values than other grades. The general range of prices was unusually narrow, and the good hogs sold within a range of 10c. Hogs have been showing remarkably good quality, and recent gains have been unusually rapid, as is natural with cheaper corn and high market prices for matured hogs. In the provision market demoralization has prevailed, enormous declines in prices having taken place within a short period, but as yet consumers are not benefited much, and hence consumption is slow in picking up.

Sheep and lambs have been marketed for a week past in only fairly large volume, but liberal supplies at this time would result in a heavy fall in prices, as the continued dearthness of mutton greatly curtails its consumption throughout the country. Colorado lambs have still made up a big share of the daily offerings, and woolled stock is scarcer as the season advances and in poorer demand, although buyers were readier to take it during the recent cooler weather, and shearing and feeding lambs have sold readily at fancy prices. High prices for lambs and matured sheep and yearlings seem to be practically assured for several months at least, as there is known to be a serious shortage everywhere. Neither is there a large "crop" of spring lambs, and owners will undoubtedly be able to realize fancy prices when they are ready to be marketed, while sheepmen must prepare to pay extremely high prices next autumn for feeding lambs once more.

Horses have been in good demand as a rule recently, and good animals have sold especially well, with expressers moving off freely at \$175@215 per head, while feeders went at \$170@225. Wagon horses weighing 1,300 to 1,400 lbs. were good sellers at \$140@200, while drafters were active at \$175@275. Small chunks for southern shipment, as well as farm mares, were in poorer demand at irregularly lower prices, but there was increased activity in drivers at \$150@300, the greater part selling at \$175@225. High prices are inducing farmers to market a good many high-grade mares. F.

LIVE STOCK NOTES.

A short time ago the Standard Brewing Company, of Pennsylvania, made a stir in the Chicago horse market at the stock yards by executing an order for 28 head of select drafters, the purchase including seven pairs of show drafters that cost \$5,390. These horses will be shown at the eastern fairs this year, and it is hoped that the teams will develop sufficient class to justify competing at the International Exposition next fall. The horses were dapple gray and black Percherons of extremely heavy weights and splendid finish.

Exporters are buying very few cattle in the United States because prices are too high compared with Liverpool and London markets. The Canadians are getting most of this trade, as prices are lower over there.

The industrial departments of the eastern railroads are sending out literature on the subject of cattle raising and the production of feed in order to stimulate eastern farmers to raise and feed more cattle for the eastern markets.

Careful investigation by a prominent live stock commission house doing business at ten western hog markets indicates that the total number of sows bred is approximately 25 per cent less than a year ago. Encouraged to breed heavily, farmers were forced to use young sows mainly, as the number of mature brood sows left was unusually small, and experience shows that a small number of pigs to each sow is the best that can be expected when gilts are farrowing. Under these circumstances a large "crop" of spring pigs would appear to be out of the question. The firm making the report arrives at the conclusion that the number of pigs born this spring will not be in excess of 65 to 70 per cent of that of a year ago.

A short time ago a sheep dealer of Buffalo, N. Y., went to Oregon and Washington to buy a trainload of ewes for distribution in Yates and Ontario counties in New York, a region well adapted by nature for raising sheep. The present time is regarded as remarkably promising for growing mutton and wool all over the east, as well as in the west. Never before was there such a fine showing for feeders of sheep and lambs as that made this year.

Buyers in the leading western cattle markets have been looking forward to an early marketing of grass-fed cattle on a large enough scale to bring around a marked decline in prices, pastures nearly everywhere being reported as unusually good.

Light lamb "crops" in Texas and New Mexico are reported, and conditions in Wyoming are bad for a good supply this spring, owing to the hard winter, ewes coming through very thin, while many died.

Now that warm weather may be expected at any time, country shippers should use extra care in sending hogs to market. Cars should be clean and free of old manure, straw, bedding, etc., and it is a good plan to place sand in the cars. Overloading should be avoided, for dead hogs mean big losses.

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.

April 28, 1910.

Cattle.

Receipts, 1,207. Cow stuff, bulls and butchers' grades steady; heavy grades 25c lower.

We quote: Steers and heifers, 1,000 to 1,200, \$6.75@7; steers and heifers that are fat, 500 to 700, \$6@6.25; choice fat cows, \$6; good fat cows, \$5@5.50; common cows, \$3.50@4; canners, \$3@3.25; choice heavy bulls, \$6; fair to good bolognas, bulls, \$5@5.50; stock bulls, \$4@4.50; milkers, large, young, medium age, \$4@60; common milkers, \$3@35.

Bishop, B. & H. sold Bresnahan 2 canners av \$15 at \$3.50, 16 butchers av 553 at \$5.15; to Thompson 4 cows av 925 at \$4.25, 5 do av 1,013 at \$5; to Kamman B. Co. 17 steers av 809 at \$7, 1 do weighing 680 at \$5.50; to Newton B. Co. 3 cows av 1,020 at \$4.50, 5 steers av 1,150 at \$6.25, 12 do av 802 at \$6.85; to Graves 15 do av 900 at \$7.10, 3 cows and bulls av 1,193 at \$5.25, 1 cow weighing 1,170 at \$4.50, 1 bull weighing 1,700 at \$6; to Kamman B. Co. 1 heifer weighing 600 at \$8, 1 cow weighing 1,130 at \$6; to Mich. B. Co. 6 butchers av 980 at \$5.60; to Hammond, S. & Co. 13 steers av 991 at \$7.25, 1 do weighing 1,130 at \$5.50, 8 do av 795 at \$6.25, 4 heifers av 795 at \$5, 1 bull weighing 900 at \$4; to Capp 4 cows av 917 at \$4; to Sullivan P. Co. 3 bulls av 1,250 at \$5.60, 3 cows av 833 at \$4.50, 5 do av 1,035 at \$5.75, 2 steers av 820 at \$7.75; to Gerish 6 do av 885 at \$7.15, 7 do av 850 at \$6.85; to Kamman 5 cows av 934 at \$5.25, 16 steers av 902 at \$7, 4 do av 1,032 at \$6; to Fry 8 heifers av 775 at \$6.35, 1 cow weighing 1,040 at \$5.50; to Capp 2 do av 1,170 at \$4; to Hammond, S. & Co. 4 steers av 610 at \$6, 15 do av 825 at \$6.75.

Roe Com. Co. sold Sullivan P. Co. 2 bulls av 1,580 at \$6.25; to Hammond, S. & Co. 20 steers av 987 at \$7.15, 2 do av 875 at \$6; to Kamman B. Co. 10 do av 973 at \$7.15, 6 cows av 1,091 at \$5.75, 7 butchers av 603 at \$5.50, 3 do av 610 at \$5.50; to Sullivan P. Co. 1 bull weighing 1,080 at \$5.50, 5 cows av 1,100 at \$5.50, 2 do av 1,000 at \$4.50; to Mich. B. Co. 11 steers av 841 at \$7, 3 bulls av 1,393 at \$6; to Newton B. Co. 3 steers av 1,300 at \$7.40; to Sullivan P. Co. 1 cow weighing 1,270 at \$6, 1 bull weighing 1,150 at \$5.50; to Mich. B. Co. 1 bull weighing 1,460 at \$6, 20 steers av 1,047 at \$7.25, 13 do av 930 at \$6, 7 do av 821 at \$5.50, 18 do av 1,090 at \$7.25, 1 cow weighing 860 at \$3.50, 1 do weighing 1,050 at \$5, 4 butchers av 1,130 at \$6, 24 do av 893 at \$7.

Spicer & R. sold Breitenback Bros. 8 cows av 925 at \$5, 2 do av 825 at \$3.25, 8 do av 971 at \$5, 1 do weighing 1,120 at \$4, 2 steers av 965 at \$6.75, 1 heifer weighing 600 at \$6.50, 1 bull weighing 920 at \$6, 14 steers av 993 at \$6.65, 2 do av 885 at \$6; to Sullivan P. Co. 1 cow weighing 1,300 at \$4, 2 do av 1,025 at \$5.75, 1 bull weighing 1,800 at \$6; to Thompson 7 steers av 1,043 at \$7; to Sullivan P. Co. 2 cows av 1,010 at \$3.50, 4 do av 1,057 at \$4.25, 1 bull weighing 1,030 at \$6, 1 do weighing 1,550 at \$5.50, 2 cows av 915 at \$4, 1 do weighing 800 at \$3.50, 1 do weighing 1,280 at \$5.50, 9 butchers av 708 at \$6, 9 do av 575 at \$5.60, 2 stockers av 425 at \$5, 4 butchers av 730 at \$5.25, 5 do av 764 at \$5.50, 15 do av 817 at \$6.50; to Hammond, S. & Co. 27 steers av 980 at \$6.90. Weeks sold Graves 5 cows av 1,033 at \$5.65.

Same sold Mich. B. Co. 2 bulls av 1,100 at \$5.50, 13 butchers av 932 at \$5.75, 6 do av 703 at \$5.75, 2 cows av 1,055 at \$4.50. Same sold Newton B. Co. 2 canners av 765 at \$3.50, 10 steers av 1,000 at \$6.75.

Veal Calves.

Receipts, 970. Market steady at last week's prices. Best, \$8@8.75; others, \$4@7.50; milch cows and springers steady.

Bishop, B. & H. sold Nagle P. Co. 2 av 180 at \$5.50, 11 av 135 at \$8.25; to Sullivan P. Co. 9 av 110 at \$8.50, 3 av 125 at \$8.50; to Parker, W. & Co. 6 av 100 at \$6, 20 av 140 at \$8.50, 20 av 130 at \$8.50, 5 av 210 at \$5, 14 av 135 at \$8.50, 18 av 100 at \$6, 42 av 125 at \$8.35; to Hammond, S. & Co. 24 av 135 at \$8.75, 2 av 110 at \$6, 25 av 130 at \$8.50; to Strauss & A. 20 av 157 at \$8.75, 2 av 140 at \$8.50, 21 av 130 at \$8.25, 10 av 121 at \$8; to Nagle P. Co. 127 av 130 at \$8.50, 5 av 105 at \$6, 23 av 135 at \$8.50.

Spicer & R. sold Sullivan P. Co. 7 av 135 at \$8, 1 weighing 100 at \$6, 7 av 160 at \$8.25, 3 av 100 at \$7, 10 av 135 at \$8.60, 1 weighing 120 at \$7; to Breitenback Bros. 19 av 110 at \$7.75, 3 av 150 at \$8.75; to Thompson Bros. 3 av 150 at \$8.50, 4 av 150 at \$6, 20 av 135 at \$8.25; to Applebaum 1 weighing 130 at \$8.75, 7 av 120 at \$7.50; to Mich. B. Co. 14 av 135 at \$8.

Boyle sold Hammond, S. & Co. 4 av 95 at \$6, 10 av 163 at \$8.

Taggart sold same 2 av 105 at \$7, 6 av 125 at \$8.

Youngs sold Nagle P. Co. 3 av 90 at \$6.50, 9 av 150 at \$8.25.

Ardner sold same 20 av 130 at \$8, 4 av 135 at \$6.50.

Weeks Bros. sold Newton P. Co. 13 av 130 at \$7.40.

Fuller sold same 4 av 140 at \$8.60, 2 av 110 at \$7.

Wagner sold same 9 av 115 at \$8.

Stephens sold Burnstine 19 av 125 at \$8.25.

Duelle sold Sullivan P. Co. 24 av 130 at \$8.25, 4 av 95 at \$6.

Weeks Bros. sold same 9 av 135 at \$8.50, 2 av 210 at \$5.50.

Waterman sold same 11 av 135 at \$8.25.

Haley & M. sold Hammond, S. & Co. 9 av 145 at \$8.75, 1 weighing 120 at \$7. Roe Com. Co. sold Nagle P. Co. 26 av 130 at \$8.25 to Rattkowsky 14 av 130 at \$6.75 to Mich. B. Co. 50 av 128 at \$8.35; to Breitenback Bros. 14 av 130 at \$8.

Sheep and Lambs.

Receipts, 1,748. Market steady at about last Thursday's prices.

Best lambs, \$8.25@8.50; fair to good lambs, \$7.50@8; light to common lambs, \$5.50@6.50; wool lambs, \$9@9.75; fair to good sheep, \$6@6.50; culls and common, \$2.50@4.50.

Bishop, B. & H. sold Nagle P. Co. 16 sheep av 100 at \$5.75, 12 lambs av 65 at \$7.75; to Hammond, S. & Co. 21 sheep av 94 at \$6; to Sullivan P. Co. 31 wool lambs av 95 at \$9.75; to Nagle P. Co. 123 lambs av 65 at \$8.25, 110 do av 67 at \$8.50, 27 do av 85 at \$8.50; to Fitzpatrick Bros. 79 do av 75 at \$8.50, 26 do av 90 at \$7.50; to Breitenback Bros. 32 wool lambs av 70 at \$9.35; to Nagle P. Co. 25 do av 60 at \$7.50; to Fitzpatrick Bros. 32 sheep av 80 at \$6.

Spicer & R. sold Sullivan P. Co. 4 sheep av 130 at \$4.50, 1 wool lamb weighing 90 at \$9.50, 2 lambs av 75 at \$8.50, 12 do av 70 at \$8.50, 10 mixed av 117 at \$7.25, 2 sheep av 105 at \$5.50; to Thompson 3 wool lambs av 88 at \$9; to Nagle P. Co. 106 lambs av 70 at \$8.10, 1 sheep weighing 140 at \$5.50; to Fitzpatrick Bros. 3 do av 110 at \$6.40, 45 lambs av 60 at \$8.25; to Sullivan P. Co. 40 do av 75 at \$8.50; to Young 7 sheep av 55 at \$6.50, 2 do av 135 at \$5, 52 lambs av 65 at \$8.12.

Waterman sold Mich. B. Co. 10 sheep av 110 at \$6.25. Jedele sold same 36 lambs av 75 at \$8.20.

Sharp & W. sold Hammond, S. & Co. 48 lambs av 80 at \$8.50, 4 sheep av 90 at \$4.

Hogs.

Receipts, 2,784. Market 15@30c higher than last Thursday.

Range of prices: Light to good butchers, \$9.65; pigs, \$9.25; light yorkers, \$9.45 @9.50; stags 1/2 off.

Spicer & R. sold Parker, W. & Co. 80 av 180 at \$9.60, 235 av 200 at \$9.65.

Haley & M. sold same 65 av 190 at \$9.65, 82 av 170 at \$9.50.

Roe Com. Co. sold same 179 av 200 at \$9.65, 76 av 170 at \$9.50, 14 av 150 at \$9.65.

Haley & M. sold Sullivan P. Co. 47 av 170 at \$9.60.

Spicer & R. sold same 40 av 160 at \$9.40, 220 av 185 at \$9.50.

Bishop, B. & H. sold same 64 av 120 at \$9.30, 33 av 140 at \$9.40.

Sundry shippers sold same 280 av 200 at \$9.65.

Bishop, B. & H. sold Hammond, S. & Co. 1,210 av 185 at \$9.60, 55 av 150 at \$9.55, 174 av 200 at \$9.65, 144 av 170 at \$9.50.

Friday's Market.

April 22, 1910.

Cattle.

The run of cattle at the Michigan Central yards Friday was light and the market on all grades full steady with Thursday.

We quote: Best steers and heifers, \$7.15@7.50; steers and heifers, 1,000 to 1,200, \$6.75@7; steers and heifers that are fat, 500 to 700, \$6@6.25; choice fat cows, \$6; good fat cows, \$5@5.50; common cows, \$3.50@4; canners, \$3@3.50; choice heavy bulls, \$5@5.50; fair to good bolognas, bulls, \$5@5.25; stock bulls, \$3.75@4.50; milkers, large, young, medium age, \$4@55; common milkers, \$25@35.

Bishop, B. & H. sold Hammond, S. & Co. 21 steers av 1,005 at \$7.10, 6 do av 1,111 at \$7.10, 2 cows av 1,035 at \$5.50, 1 cow weighing 900 at \$4, 1 do weighing 1,200 at \$5.70, 1 bull weighing 1,730 at \$6, 1 do weighing 1,060 at \$5; to Mich. B. Co. 4 cows av 1,041 at \$5.50, 10 butchers av 955 at \$7.10; to Sullivan P. Co. 8 do av 915 at \$6.60.

Veal Calves.

The veal calf trade, quality considered, was about the same as Thursday. Best grades, \$8@8.50; others, \$4@7.50.

Bishop, B. & H. sold Street 1 weighing 160 at \$8.50, 13 av 130 at \$8.50, 18 av 135 at \$8.50, 15 av 100 at \$6.50, 27 av 125 at \$8.40.

Lucke sold Parker, W. & Co. 32 av 130 at \$8.50.

Sheep and Lambs.

The run of sheep and lambs was very light and the market held steady with Thursday.

Best lambs, \$8.50; fair to good lambs, \$7.50@8; light to common lambs, \$5.50@6.50; spring lambs, \$11@12; fair to good sheep, \$6@6.50; culls and common, \$2.50@4.50.

Bishop, B. & H. sold Street 7 lambs av 60 at \$7, 23 do av 80 at \$8.50, 10 do av 65 at \$7, 35 do av 80 at \$8.50, 2 sheep av 105 at \$5.50, 1 do weighing 110 at \$3, 9 do av 110 at \$8.50.

Hogs.

The hog trade was active and all grades were 10c higher than Thursday. Light to good butchers, \$9.40; pigs, \$9.10@9.15; light yorkers, \$9.15@9.25; stags, 1/2 off.

Bishop, B. & H. sold Hammond, S. & Co. 133 av 195 at \$9.40, 179 av 175 at \$9.35.

There have been generous rains in the Texas Panhandle, and crop prospects were never better. The movement of young cattle to northern pastures began in earnest some time ago, and several days ago it was stated that 1,500 cars had already been shipped out, mainly to Kansas. Many more will follow, but it is estimated that shipments will be about 25 per cent short of the normal. The Burnett steers sold recently at \$30@32.50 per head, but up to latest advices not a great many cattle have been bought by the far northern ranchmen.

J. S. Keller, of Illinois, a prominent stockman, says the unusually good weather for the past eight weeks, together with the lower prices for corn and plenty of it in the country, have induced stock feeders to feed it liberally, and both cattle and hogs are in better flesh than usual at this season of the year on this account.

VETERINARY

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

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

Pigs Have Sore Ears.—I have a sow that has 10 pigs that are two weeks old; nearly all of them are troubled with sore ears and some of them have sore tails. D. F. B., Walled Lake, Mich.—Dust on borac acid and after the raw sores heal apply one part vaseline and six parts of oxide of zinc daily.

Barren Mare.—I have a seven-year-old mare that does not seem to get with foal. What can be done for a case of this kind? C. B., Silverwood, Mich.—Try the yeast treatment prescribed in this column, or dissolve one oz. bicarbonate of soda in three pints tepid water and wash out vagina once a day, but not the day you have her served.

Acidity of Stomach.—My 12-year-old mare is inclined to eat and drink rubbish; what ails her? H. C. M., Farmington, Mich.—Give her a tablespoonful of ground gentian and a teaspoonful of powdered fenugreek and a tablespoonful of cooking soda and two tablespoonfuls of powdered charcoal at a dose in feed three times a day.

Goitre—Indigestion.—I have a mare that has a swelling in throat which may require opening. I also have a cow that was giving ten quarts of milk daily that is now only giving two. I am inclined to believe she has tooth trouble as she is only eating part of the feed put before her. B. E. B., Holland, Mich.—Open into swelling and allow the pus to escape, then wash out sack, using one part carbolic acid and 30 parts water twice a day.

Hernia.—I have a three-year-old colt that has a rupture about the size of a walnut; this is a thoroughbred, and I would like to know if it will hurt her for breeding purposes. E. P., Laingsburg, Mich.—A surgical operation performed by a competent person will make your filly well; however, a small hernia such as she has, will not injure her for either work or breeding purposes.

Cows Fail to Get with Calf.—I am having trouble to get my cows with calf, although they seem to be in perfect health. These cows have been served by different bulls without result. M. P., Hillsdale, Mich.—Dissolve 1 oz bicarbonate soda in three pints tepid water and wash out the vagina daily for two weeks or even longer, but do not inject the cow closer than eight or ten hours before service. If this fails try the yeast treatment.

Splint.—My 11-year-old horse goes lame on left fore leg. The only unnatural thing I can notice is a small hard bunch situated between the knee and fetlock. H. C., Bravo, Mich.—Your horse has a small splint. Apply one part red iodide mercury and eight parts lard every four or five days to bunch and he will recover from his lameness. However, it is best not to drive him much on hard roads, and notice that he does not hit his shin with the opposite foot.

Enlarged Knee.—My 10-year-old gelding has a big knee. The bunch is as hard as bone and causes some lameness; he has been in this condition for the past two years. He is worse now than he was several months ago, but is lame all the time. A. H. W., South Haven, Mich.—A chronic ailment of this kind is incurable and as you are working him every day, it is a good plan to let well enough alone. Applications of iodine would give better results than any other; however, I question whether it is worth while to try to cure him or not, as his lameness is a mechanical trouble.

Leaking Navel.—I have a colt two weeks old that leaks at the navel. Colt seemed to be all right until it was ten days old; this colt came nine days too early. C. E. B., Niles, Mich.—The navel is the natural channel for fluids to escape from the body during foetal life, but after birth this opening should close and should always be tied or healed as quickly as possible for fear of the animal becoming infected. It may be necessary to stitch or tie the opening, then apply equal parts powdered alum, oxide of zinc, borac acid and tannic acid two or three times a day.

Worms.—I have a flock of sheep that are unthriftly and wormy. Several of them have died and every one that I have opened were wormy. N. T., Lewistown, Mich.—Give each sheep 2 ozs. of a one per cent solution of coal tar creosote after the sheep has fasted for 15 hours and repeat the dose in three days until three doses have been given, or give a teaspoonful of turpentine in two ozs. of either raw linseed or sweet oil twice a week until three doses have been given. Feed the sheep some powdered coppers and salt in their feed daily.

Laminitis (Founder).—My seven-year-old horse was foundered two weeks ago and treated by our local Vet. and has recovered only partially. I am working him but he is stiff, his feet are feverish and I am keeping them wet with sacks, also giving some medicine that our Vet. left for him. Should the horse be worked? R. C., Ithaca, Mich.—Moderate work on soft ground will do him no harm. Sand him in wet clay an hour or two daily. Shoe him with a rolling motion shoe and put a teaspoonful of powdered nitrate of potash in his feed night and morning.

Bruised Pastern—Bone Spavin.—I have a mare that met with an injury to left pastern. I have succeeded in healing the sore, but sometime later a spavin devel-

oped causing her to show some lameness when stepping over in the stable or when first driven. Is there any cure for spavin if treated early, and what should I use? O. C. O., Baraga, Mich.—It can be safely stated that the principal reason for failures in the treatment of bone spavin is on account of the animal not having sufficient rest after they show lameness. It is all nonsense to expect a recovery if the animal is subjected to the same exciting cause that produced this ailment. Give your mare absolute rest and quiet for two months, blistering the hock once a week with one part red iodide of mercury and five or six parts lard.

Contagious Abortion—Question Regarding Breeding.—Is a cow more liable to abort at any particular time during pregnancy than at others, and if she is bred to a bull that is infected with contagious abortion, how soon after will she miscarry? Also, what is the best preventative treatment and how long should it be continued? Is it advisable to breed a 12-year-old mare that has never been bred? Will a cow, after a miscarriage, give as much milk as if she carried her calf full time? Also, would it be advisable to breed a mare weighing 1,000 lbs. to a horse that weighs 2,000 lbs.? L. A. G., Shelby, Mich.—The first time a cow aborts it usually occurs between the third and fifth months. The following year she may lose her calf at about seven months and the third year she may carry it about full time. No matter what treatment you give or apply it is uncertain as to results. By using disinfectants and antiseptics about your stable and the hind parts of your cattle you may be able to prevent the disease from spreading. A 2½ per cent solution of carbolic acid will kill abortive germs, or one to 20 parts of a good grade of coal tar disinfectant should be used about your stable, besides white washing the stable is helpful in killing infection. Dissolve one dram permanganate potash in three quarts tepid water and wash out each cow daily for at least two weeks. Giving one dram doses of carbolic acid or the same quantity of creosote at a dose in feed after being thoroughly diluted once a day has a beneficial effect and is supposed to prevent miscarriage; however, I doubt it somewhat. Cleanliness and careful disinfecting has a good effect. A cow that aborts seldom produces as much milk as if she went full time. You need not hesitate to breed a 12-year-old mare even if they have never been bred before; however, it is not always a good plan to breed a mare weighing 1,000 lbs. to a 2,000 lb. horse; better breed to a horse that weighs 1,400 to 1,500 lbs.

Hernia.—I have 33 fine pure Chester White young pigs, but several of the males are ruptured or deformed, having only one testicle. Can you tell me what to do? J. B., Orion, Mich.—If you have several hogs that are suffering from hernia and you do not understand operating on them, call a veterinarian who is competent to operate. It may be that they are ridgings, only one testicle having appeared in the scrotum. Very often one testicle is larger than the other and the animal perfectly sound.



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HOME AND YOUTH

THE TWO CLOCKS.

BY MILDRED M. NORTH.

A sturdy old farmer of Puritan stock
Drove into the village to buy him a clock.

The store-keeper set out his wares on a
table
Explaining their merits the best he was
able.

He showed him a round one with case
all of gold,
A "mission" that looked to be centuries
old.

A square one that seemed to be marble
indeed,
On which there was prancing a gilt-col-
ored steed.

Some tall and some short, some thin and
some stout,
An odd one of wood where a cuckoo
popped out.

Some told off the hours with long meas-
ured stroke,
While some at the quarters the long
silence broke.

The farmer was puzzled and shook his
gray head;

He looked them all over and finally said:
"This little round shiner would be drestful
handy,
And then, I am sure it would please my
wife Mandy."

"I'm partial to this one, it's finer and
bigger—
It's queer-like to me they're both the
same figger."

The store-keeper, anxious to please the
old man,
Proposed what he thought a most excel-
lent plan.

The farmer should take the two clocks
home to try,
And use each a week with the other
not by.

So off he drove home with the clocks by
his side,
And showed his good wife the transaction
with pride.

They put the big clock on the sitting-
room shelf,
While the little one ticked off upstairs by
itself.

This happened on Friday, and next
Thursday morning
The farmer appeared at the store without
warning.

He said, "I've brought back this here big
clock to you,
For Mandy and I have agreed it won't do.

"For one so nice-lookin' it's really sur-
prisin'
What a passel of troubles it started
a-risin'.

"To start with—'twas late when I got
into bed—
I picked up the paper and sat there and
read,

"For there was that clock settin' up on
the shelf,
A-talkin' away kind of low to itself,

"Sayin' over and over a sort of a rhyme,
"Take-ye-time, take-ye-time, take-ye-
time."

"And then the next mornin' of course I
slept over,
And wantin' to cut down ten acres of
clover!

"Now my boy, Leander, I count quite a
goer,
But that day it seemed like he couldn't
be slower.

"We lost the best part of the sermon on
Sunday;
Joe Smith's wife beat Mandy with wash-
in' on Monday,

"And Mandy won't stand that, so what
does she do
But bring down the small clock before
the week's through.

"She'd thought it the nicest right from
the beginnin',
And now she decided to give it an innin'.

"She set it a-goin' and talked of its
graces,
And the clock started in to show off its
paces.

"It set there as proud as the bold little
sparrow
Who'd just killed cock robin with his
bow and arrow.

"I thought after dinner I'd rest for a bit,
But that little clock said I'd no time to
sit,

"For there it was ticking away on the
shelf,
Sayin' 'Git-there! Git-there!' quick to
itself.

"So I went to work, and from that time
to this
That little clock has kept us all right
to biz.

"You smile—O the fault was our own!
Yes, of course;
But then, that old clock tickin' made it
lots worse.

"It's best to keep wholesome examples in
stock
If tain't nothin' more than the tick of a
clock."

IN PERIL OF FIRE.

BY MRS. EVELYN ALLEN AITCHISON.

As the heavy open farm wagon, which
served as a stage coach between Pine-
ville and Merrill, pounded over the rail-
road crossing and lurched heavily down
into the frozen ruts of the road beyond
the track, both the driver and the solitary
passenger, a mere slip of a girl, wrapped
from head to foot in a fur coat much too
large for her, looked back at the hamlet
they were leaving.

The driver's look was the careless
glance of familiarity, the girl's a mingling
of relief and longing. She was glad to
be out of sight of the group of idle men,
congregated to watch the departure of
the stage. When, impeded by the long
coat, she had stumbled in climbing into
the wagon, their low chuckle had been
felt rather than heard. Why had her
mother insisted on lending her that coat?

But the longing in her glance came
from a far deeper cause. The tiny village
they were leaving, with its weather-beat-
en station and the long line of glittering
rails stretching into the distance, was
the last link between her and home, and
although home was only twenty miles
away, she was but a child of sixteen, tak-
ing her first step into the world of work,
and all things looked to her like the
March day and the scene around her—
cold, hard, grey and dreary.

The driver's drawing tones broke in
upon her fearful thoughts.

"I suppose you're the new teacher at
Bailey's Bridge. I d'n know as I've heard
y're name."

"I am Mina Gleason," the girl hastened
to tell him, forcing back the tears and
feeling very, very young.

"Is Bailey's Ridge as small a place as
Pineville?" she asked.

"O bless yo', there ain't no town at
all. Why, th're ain't even a bridge th're
now. High water last spring took that
away. Th're's a good many farmers live
round near the schoolhouse though, 'an
I guess children do belong in the district
fr'm way across the river, though I don't
know how they can git t' school after the
ice goes out, unless they cross on the logs
when th're's a jam in the river, an' that's
perty risky f'r children, even f'r them
as has lived all their lives by the side of
the old Tittabawassee."

"Is it all as—dreadful looking as it is
around here?" faltered the girl, looking
about her as she spoke, at the partially
cleared land, where only occasionally one
saw a cultivated field, and for the rest
there were blackened stumps and partly-
burned trees, in the midst of a wild tangle
of second growth.

The driver looked at her keenly.

"Ye' ain't going t' git homesick are
ye'?" he queried. "Ye'll git used t' this.
Trouble is, its jest betwixt and between
now. The big lumber companies hev bin
through here and they hev stripped off
the best of the timber, an' then the forest
fires got started an' they hev left it perty
sorry lookin'. Ever see a forest fire?"
he asked.

"No," said Mina, with a shudder.

"Well, I hope ye' won't hev the expe-
rience, though if y're here along in sum-
mer, an' it happens t' be dry, ye' may
ketch it. Plenty of stuff t' burn round
here yet.

"Don't look much now as 'f we'd hev
any summer this year," he rambled on.
"Last 'f March an' everything froze up
again tight after that warm spell's taken
most 'f the snow off. I ain't much 'f a
weather prophet; but I b'lieve, when it
does come, it'll be a dry, hot summer;
'f it is folks'd better be careful about how
they start fires round in the woods."

In the dreary weeks that followed her
arrival at Bailey's Bridge, Mina often
thought of the old stage-driver's words.
The backward spring was followed, as he
had prophesied it would be, by an in-
tensely hot, dry summer. The attendance
at school was irregular, and Mina felt
herself out of touch with the parents.
Only her great desire for a college edu-
cation and the letters a busy mother found
time to write, enabled her to endure it.

The heat increased as the season wore
on, and became almost unbearable. Re-
ports of fires in the surrounding woods
began to be heard. The sun was con-
stantly obscured by smoke or showed
itself only as a ball of fire. The whole
country cried for rain and the days went
by and none fell. Water became a pre-
cious thing, for many wells had gone dry.

The river, low and muddy, and covered
always with logs, ran sluggishly between
its hot sandy banks where, too, lay many
stray monsters of the forests left by the
early floods. Later in the year there

would be "the drive" and these, the rear-
guard of the season's work, would be
floated down to join their earlier com-
panions.

The last day of school came and with
the near prospect of escape from her
weird surroundings, Mina grew almost
gay. She was not seriously alarmed at
the nearer presence of the encircling
fires; not even when the low underbrush
near the log schoolhouse was found to be
on fire and school had to be hastily dis-
missed, while stolid men, hastily sum-
moned from near-by homes, beat out the
approaching flames. One more day and
she would be safely out of it all, she
thought.

It was after noon of the following day
when, the last details of reports and other
school matters attended to, Mina and Mrs.
Clark, with whom she had boarded, strol-
led down the lane to the road to await
the coming of the stage. Mr. Clark and
the children, laden with her belong-
ings, followed.

As the stage drew near they saw that
the horses were plunging wildly and their
red-rimmed eyes were full of fear. The
driver presented a strange sight. An old
blanket covered his head and shoulders.
Everything was covered with cinders and
the blanket was burned in many places.

"The fires 're pretty bad back here
'bout a mile," he said, reining in the
frightened team with difficulty. "I didn't
know whether I'd make it through this
far or not."

"Well, Miss, so y're going t' git out of
this country. Don't know as I blame y'
much. Jump in, and we'll see 'f we can
git t' to the station."

As he spoke, suddenly a terrible, almost
indescribable change came. In one blind-
ing flash the air seemed filled with a
fiery glowing heat, like a blast from a
monster furnace. The grey, smoke-laden
atmosphere was lit by a strange red glare,
and great blazing brands fell here, there,
everywhere. As they looked about them
there was no large fire in sight, only the
little brush heaps that had been smolder-
ing all day; but from far away across the
river came a sullen roar, striking terror
to their souls.

They looked at one another with pallid
faces, but the stage driver's drawl was
unchanged as he said, "We'll not be able
t' make it now, my girl! There's no tell-
ing what lies between here an' the rail-
road. Let me git these fool critters int'
the barn, Clark. Then I guess it's up t'
us all t' make a fight f'r our lives."

Plunging and rearing, the almost un-
manageable team was led under cover.
Then began an anxious siege of watching
and fighting the falling brands that mo-
mentarily threatened their destruction.
There seemed no hope. The river was
full of logs. The house and other build-
ings were dry as tinder. The little clear-
ing that reached to the road was edged
with clumps of low second growth. It
needed but a breath to set the whole
ablaze.

So the afternoon wore slowly away. To
Mina, wandering, half-hysterical, from
one to another, they seemed caught in a
fiery trap. There came no other change.
The falling brands continued, the sul-
phurous light, the distant roar.

Night came and with the darkness
they saw the main body of fire advancing
toward them. Across the river that was
no barrier, it marched, like an army
spread out in battle array, an army of
fiery demons, irresistible, terrible, with
a long banner of smoke and flames wav-
ing over it far in advance. That they
should escape such a force seemed pre-
posterous.

Still these people fought for their home
and their lives. With wet blankets they
beat out the burning pieces when they
fell on the roofs, and stamped out the
grass if it caught near the buildings.

Hour after hour passed. The line of
fire was always in sight, always steadily
advancing toward them, but with a cer-
tain slowness, as if it knew its power
and did its work of destruction too thor-
oughly to make great haste.

It was midnight, and they were nearly
worn out, when their wondering eyes saw
a great miracle. They saw the mighty
column of fire halt as at a word of com-
mand from some higher power. They
saw it turn as sharply as at a second
command, "Right Face!" It took a new
direction and passed them this time safely
by. Nor seemed it any less a miracle
when Mr. Clark decided that it was only
a change in the light summer wind that
had carried the danger away from them.

"I fear," he added, "that our safety
means great danger to our friends, the
Greens. You see the fire is now headed

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directly toward them and must be very near."

Their relief was changed into anxiety for the neighbor's fate. The house could not be seen from the Clark's, but from their knowledge of its location, the danger seemed greater than their own had been.

Mrs. Clark put the worn-out children to bed, but there was no sleep for their elders. The short summer night was nearly over when, with solemn, thankful hearts, they saw their second miracle.

They saw the raging fire forces cower and fall back, utterly defeated; and the mighty power that had conquered them was that simple ordinary thing, the dew from heaven. Mr. Clark assured the awe-struck Mina that the forest fires always died down toward morning when the dew began to form. Their night of terror was over and they lay down to rest with subdued hearts.

It was good just to be alive after her short sleep, even though Mina found the same smoke-laden atmosphere of the previous day. How she hurried her preparations for departure, and when, from on board the train that was bearing her toward home and safety, she waved her last good-bye to the old stage-driver, how she marveled at the courage and determination that held those hardy settlers to their homes through such dangers.

This courageous spirit of the pioneer has had its reward, for now, twenty years after Mina's night of terror, well-kept farms and happy homes lie in the midst of a cleared and settled country.

A HOSPITAL FOR ANIMALS.

BY A. A. C.

Some cynic has said that old London is noted for three things—society, slush and slums. If he had not been a cynic he must surely have included its very numerous philanthropies, for in no other city in the world are massed together so many institutions and agencies for the relief of every form of human distress. London has even gone farther, for it has now a well-equipped and excellently managed hospital for infirm, disabled or suffering animals of all kinds. This new institution was opened a few years ago. The Duchess of Teck showed her interest in it by being present at the formal opening exercises, and there is as formidable an array of titled vice-presidents connected with it as could be desired for any institution.

The demand for this form of philanthropy in London will be appreciated when it is considered that in the first month after it was opened 350 animals, birds and fowls, received treatment.

The service of the hospital is entirely free, but, of course, grateful owners are frequently unwilling to accept the service without substantial remuneration. The great majority of the patients, however, are "free patients." Ten ambulances are kept in different sections to respond to calls within a given area. One or two ambulances are kept at the hospital. These ambulances are rubber tired; the body is about fifteen inches from the ground, and has an inner shell lined with matting, and with sides which drop down. This shell is drawn out when a patient is about to be put into it, and forms a sloping gangway. When an accident happens to a horse (and accidents are always happening to London horses) its feet are quickly secured, and the animal, placed on its side, is speedily landed in the ambulance and hurried off to the hospital.

The operations on horses are in many respects more difficult to manage than on human subjects, and anesthetics are rarely employed. One of the very essential points in horse surgery is to ensure the safety of the surgeon. The patient must be secured so that he cannot kick or bite the operator. At the same time he must be prevented from doing injury to himself. In some cases, even in the simple sewing up and dressing of a wound, the animal has to be thrown, but as a rule it is possible, by a skillful use of straps and ropes, to bring the hind foot so far forward that it cannot touch the ground. With the hind foot in this position, the patient can neither kick, strike with his fore feet, or rear, and the operation can proceed with comparative safety. In the case of an ordinary incised wound, the hair is clipped close, or shaved, so that it cannot interfere with the healing process, and the wound is sutured with carbolyzed catgut or silk. The post-operative treatment of these cases consists of careful feeding and frequent dressing of the wound. Carbolic acid or creolin solutions are commonly used for cleansing. The patient is kept in a comfortable

stall and tied so that he cannot bite, rub, or irritate the wound. The temperature is taken twice a day till the danger period is safely passed. The charts on which were traced the temperatures of the patients, the diet prescribed, name of owner, date of entrance, etc., were not markedly different from the temperature charts one sees in ordinary hospitals. These charts were hung at the entrance to the loose stalls.

Each set of animals had its own ward, and each donkey, horse, cat, dog and bird had its own pathetic story. Evidently there were no restrictions as to discussing the diseases or private affairs of the patients, such as prevail in well-regulated hospitals for human beings, for the courteous matron, who would pass anywhere as a trained nurse, gave most interesting accounts of her charges. There were bunnies who had the distinction of having had tumors removed, bunnies with broken legs beautifully done up in splints and bandages, bunnies that reclined gracefully and properly on their little beds of hay, bunnies that skipped around as though they surely had reached the convalescent stage and found life worth living once more.

As in most other hospitals, most of the patients seemed to be surgical cases. In the cat ward there were a number of very beautiful and interesting animals, and a great many forlorn-looking specimens of the feline race. A number of these cats had been operated on; abscesses had been drained, growths had been removed, wounds of all kinds dressed, and the results of the cat surgery seemed to be very satisfactory. The bandaging on these surgical cats and rabbits was very cleverly done, and was in itself well worth going to see. One cat was very ill from influenza, and she looked as disgusted with life as the ordinary sufferer from that disease. Another cat was recovering from pneumonia.

The bird ward contained a motley collection of feathered pets, peacocks, and parrots, wrens and robins, canaries and orioles, as well as numbers of fancy and common chickens. These birds were from homes of the rich middle class, and even the very poor tenement dwellers seem to have their share of household pets. Many of these bird patients, as were those in the other wards, were visited regularly by their owners, and the keenest interest taken in their progress. Quite a number of the birds were suffering from parasitic diseases and received external applications.

In the dog ward, there were little petted pugs and large fat ugly looking pugs that had evidently been overfed. At any rate, digestive ailments were quite common among the dogs. There were Scotch terriers, and hounds, and spaniels, dogs of all grades and sizes and breeds, dogs with pedigrees, and dogs with no special claims to birth or breeding or training. This ward is always well filled. Fractured legs are common. The helpless, bandaged little patients in splints had about them an air that was positively pathetic, and likely to appeal to the hardest heart. They did want to be petted so badly and looked up with such appealing eyes.

There are doubtless those who will scoff at this form of benevolent work, and think the money might be expended in more useful ways, but the need is nevertheless very real, and such work is sure to eventually be developed in all large centres of population. There are comparatively few who have not felt some attachment to some faithful animal or household pet, and who would not have gladly paid for such service, that suffering might be relieved or life prolonged. Even among the very poor, and in all walks of life, this love for animals is found—an ennobling trait, akin to the love of flowers and other growing things. The bond of a common love for these dumb friends is a very real bond. Lonely lives either in city or country are rendered a little less lonely. The sense of companionship in some instances seems almost human. Children find a never failing source of pleasure in their dumb pets, and the old world would be poorer, less worth living in and clinging to if they were not here, and if these humanitarian impulses were denied expression.

OMNIPRESENT.

BY EUGENE C. DOLSON.

If God's mystery transcend
All our skill to comprehend;
If God dwell remote, alone,
Otherwhere, unseen, unknown—
Be not in this world of ours,
But in reachless realms above—
What, I wonder, are the flowers,
What are beauty, truth and love?

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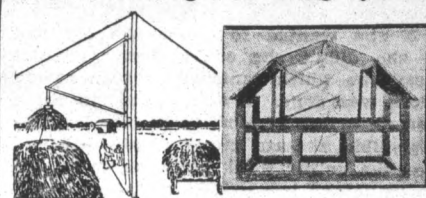
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Closes Saturday, April 30. Last subscriptions must be mailed on or before that date. You will have time to get in one more order if you can see them Friday or Saturday morning.

WOMAN AND HER NEEDS

DON'T BE TOO UNSELFISH

It Sometimes Works Out Wrong.

THEORETICALLY, we are all firm believers in the beauty of unselfishness. From our baby days we are warned against the iniquity of selfishness and taught that a reward awaits the one who "esteems others better than himself," and gives his life up to the service of others. But doesn't it seem sometimes that unselfishness, like virtue, is its own reward, and that whatever recompense is meted out here below in the shape of benefits, goes to the one who thinks of herself first, and if she has any time left after her own wants are supplied, devotes it to worrying about other people's.

For instance, here is a little tale which illustrates the point. A certain family boasted of two girls, one six years older than the other. From the time they showed any character at all, the older one evinced a disposition to take things easy and let the rest of the family do the fussing; the younger, with her first tooth, began to worry for all the relations on both sides of the house. As they grew older, the mother began to train them to help her with the work and of course dishwashing was the first task turned over to them.

Now, the older sister hated to put her hands in the dishwater, and being constitutionally opposed to doing anything she didn't like to do, she soon thought out all sorts of schemes to turn that part of the work over to Sister Mary. Her favorite method was to complain of a cut or bruise on her hand and get out of the work by telling her mother the hot water hurt her hand. Little Mary didn't like to wash dishes either, so not being original enough to think up anything new she tried the sore hand excuse. Big sister promptly told her that hot water was good for sore hands, and Mary washed the dishes!

This principle followed them through life. Big sister, as she grew older, became of that class who not only "want what they want when they want it," but who get what they want if it is at all possible, and crawl out of what they don't want.

If she wanted to work, she did and if she didn't she could always have a headache which vanished as soon as the work was done. If she wanted to eat a certain article of food, no matter how indigestible, she ate it and, if you will pardon the vulgar word, she even descended to "stuffing" her small stomach at every opportunity. She broke every rule of dieting, sleeping, exercising, in fact, every hygienic rule ever made she tread upon. Only one rule of right living should be omitted, she never, never worried. If things went all right, well and good; if things went all to smash, what of it? She couldn't help it, so why worry? If work piled up in the house so that everyone else was wondering how it could ever be done, Big Sister didn't bother a mite.

Little Mary, on the other hand, lived a directly opposite sort of life. She was so hygienic it made her uncomfortable. She was always afraid of overeating or under-eating or of sleeping too much or of exercising too little. And as for eating a bedtime lunch, as Big Sister did, it was absolutely beyond her idea of living. She was always fussing about the work for fear it wouldn't be done rightly, or wouldn't be done at all. She worked from morning until night, and explained it by saying, "Someone must do it, you know. The work is here and even though it isn't my duty to do it all, I don't see anyone else offering to help, so I must keep at it."

Now, according to theory, Mary should reap a substantial reward for her devotion to right living and duty. We ought to expect to find her in middle life a happy, healthy, contented beautiful woman, and Big Sister, who has always put self first, should be suffering from ill health, bad complexion and discontent. But not so. Mary is thin, fretful, anaemic and unhappy. Big Sister is fat, jolly, handsome and contented. No one will believe Mary is six years the younger, and strangers look politely incredulous if she casually speaks of her "older sister."

Now, doesn't that look as though unselfishness is its only reward? Of course, Big Sister is selfish, there is no getting around that, and a selfish disposition is not a beautiful thing. But neither is a discontented one. While I wouldn't advise anyone to be an absolute self-seeker, yet I would like to say that one can go to the other extreme, too, and give up too much to others. Parents should see that in every home there is absolute fairness; that there is a fair division of labor, and that no child does the work of another any more than one be allowed to shirk his honest share. It has been my observation that in any family where one shows a willingness to do things because "there is no one else to do it," the rest of the family always see to it that everything is left for that one to do. Let each one do a part, and there will be neither selfishness nor overwork.

DEBORAH.

MICHIGAN COUNTRY WOMEN AS MONEY EARNERS.

Broilers at Thirty Cents a Pound Fill Mrs. Napier's Purse.

On the farms there seems to be two main avenues through which women can seek a business which they can follow and at the same time attend to their usual household duties. One of these avenues is raising and selling small fruits, tastes and locality having much to do with that business, and the other is raising and selling poultry products. The poultry business seems to suit the tastes



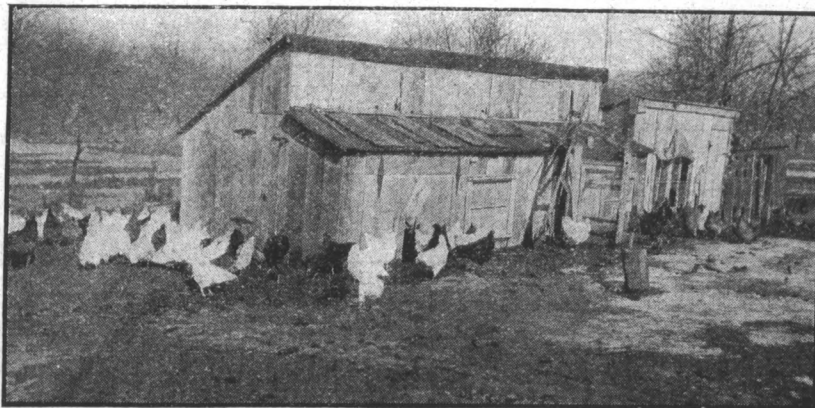
Mrs. Fred Napier.

of very many women for the reason that it furnishes a continuous income throughout the whole year.

On the Grand River road, that was once the stage route between Detroit and Howell, about four miles west of Novi, lives Mrs. Fred Napier, who has proved that women can, under ordinary conditions, not only make a success of poultry raising on the farm, but can make money enough at it to lay by a snug sum each year as a reward for the expense and trouble bestowed in handling it. She plans and executes independently of any outside help.

There are about 100 hens kept in the laying flock. The breeds kept at present are the Rhode Island Reds and White Wyandottes. She is planning to keep only the Reds.

These hens are excellent layers, both in summer and winter. During the past winter they have shown their "metal" by laying 430 eggs during the month of



With this Unpretentious Outfit Mrs. Napier is Making a very Liberal Income.

January and 530 eggs during the month of February. These eggs were shipped to Detroit and sold for from 30 to 42 cents per dozen. During the spring and summer of course the number of eggs laid per month is much greater, and the prices are not so high. By shipping to Detroit in such liberal quantities she secures the highest prices for strictly fresh eggs.

There are two incubators that are used for hatching chicks, and Mrs. Napier makes a specialty of raising and shipping broilers. These chicks are hatched and crowded along for about eight weeks when they weigh about two pounds each and generally sell for from 25 to 30 cents per pound. An annual output of 500 broilers per year in addition to the large quantities of eggs sold, makes a liberal income, and big dividends on the amount of money invested in the business. Such results offer encouragement to those who are casting about to find something to do that will enable them to busy themselves about doing a business of small magnitude that will bring good returns.

In this case the henhouse, parks and yards, are not any more pretentious than can be supplied on any farm. It has often been said that a woman with a small henhouse, a few extra boards, boxes and barrels, a small sum of money with which to purchase stock to begin with, will make, in most cases, a greater success, and more money than the majority of men can with a large sum to begin with, and an elaborate equipment with which to operate.

N. A. CLAPP.

AUTOIST ANSWERS MRS. B.

Dear Editor:—The subject of the automobile has been brought to our notice by Mrs. B. She asks "If the women ever drive to town since the advent of the automobile?"

I can answer for myself, yes, in our auto, and I think I may safely add that I dislike to meet horses as badly as she does the autos. I believe, as a rule, the autoist is very anxious not to frighten horses or cause trouble, but he can not always tell how to avoid it.

In meeting horses, some will prance and dance and be very nervous but that is all it amounts to, while others show very little excitement, but they would do something serious. A large amount of fault has been found with the person driving the auto, there are also a few things that might be said about the person driving the horse. Many people seem to think it is not necessary for them to turn out when an auto comes up behind them and wishes to pass, so they keep the middle of the track and the auto may get by or not, as it can. The law says they should turn to the right and give opportunity to pass.

Many times, too, the driver of the horse could select a good place to pass but many times he does not do it. Mrs. B. would like to make the owners of autos willing to keep out of the way of the horses. I for one, would be very glad to do so, but so far in my traveling I have not found any roads set apart for the special use of the auto, so have been compelled to use the public highway and meet the teams thereon.

As to relieving the situation, that is rapidly being done. The machines are so common that the horses are becoming accustomed to them and are not easily frightened.

But if the horse is frightened, signal the car to stop so that you may pass. The law is very plain on this point. Simply putting up the hand commands the auto to stop, and any one ought to be able to do that. I believe the solution of the trouble is for each driver to respect the rights of the other.

MRS. WARD.

Postum For Mothers

The Drink that Nourishes and Supplies Food for Mother and Child.

"My husband has been unable to drink coffee for several years, so we were very glad to give Postum a trial and when we understood that long boiling would bring out the delicious flavour, we have been highly pleased with it.

"It is one of the finest things for nursing mothers that I have ever seen. It keeps up the mother's strength and increases the supply of nourishment for the child if partaken of freely. I drank it between meals instead of water and found it most beneficial.

"Our five-year-old boy has been very delicate since birth and has developed slowly. He was white and bloodless. I began to give him Postum freely and you would be surprised at the change. When any person remarks about the great improvement, we never fail to tell them that we attribute his gain in strength and general health, to the free use of Postum and this has led many friends to use it for themselves and children.

"I have always cautioned friends to whom I have spoken about Postum, to follow directions in making it, for unless it is boiled fifteen or twenty minutes, it is quite tasteless. On the other hand, when properly made, it is very delicious. I want to thank you for the benefits we have derived from the use of your Postum."

Read "The Road to Wellville," found in pkgs. "There's a Reason."

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

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SHORT CUTS TO HOUSEKEEPING.

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

Dear Editor:—Hens don't like to have their nests robbed and will keep you hunting for new nests if you continue to rob them. On the other hand, we don't care to run the chance of breaking a bad egg that has been left in the nest too long. So, when mamma was baking a cake the other day, she had me take the half shells which were not too badly cracked, wet up a little plaster paris in a tin can, fill each half shell. Then press together, carefully fitting the edges. I wiped the whitening from the outside of the shell, holding firmly in place and in a few minutes had a bunch of very nice nest eggs. Never mind if the cracks do show some, for hens are not very discriminating. Mother tells me that one of our humorists has written of a hen who sat all summer on a white door knob trying to hatch out a house. Five cents worth of plaster paris will make several dozen nest eggs.—L. M., Decatur.

I recently heard of a way of making milk toast, that was new to me. The bread isn't really toasted at all, but the toast is good and is easier to make than the usual kind. You put your milk on, heat it, thicken it, and season it as for ordinary milk toast gravy. While the milk is heating you put the slices of bread into a steamer and steam them. Then pour the gravy over the steamed slices and your milk toast is all ready for the table.—M. C. R.

When taking layer cake out of the pans turn it onto a tin kettle-cover, right side down and then onto the plate. When removed in this way it does not break or crumble.—Mrs. C. L.

THE IMPORTANCE OF VEGETABLES IN THE DIETARY.
No. 13.

BY MRS. ALTA L. LITTELL.

UNLUCKY is the housewife whose family cares "nothing for vegetables." And most unfortunate is the person who is of that class, for vegetables contain certain salts which the human system craves, and which it takes up cheapest and best from these vegetables. The person, male or female, who does not eat vegetables but confines himself or herself to a diet of potatoes, salt meat and pastry, is laying up a train of ills, which will lead to much suffering in later life. More and more doctors are coming to believe that much of the sickness of mankind is due to improper feeding, and to depend upon proper dieting to restore health, rather than upon drugs. An ounce of prevention is worth a pound of cure, so if you are suffering from indigestion and its kindred evils, constipation, sick headaches and the like, try a change of diet under proper medical direction, and see if it will not do you more good than medicine.

There are many vegetables which are easily raised, and while they contain little nourishment in the way of starch or protein, yet fill a place because of their medicinal value, or effect on the blood. Squash, beets, turnips, carrots, onions, cabbage, parsnips and cauliflower all may be raised with little trouble, and celery is being cultivated more and more largely all over the country. All these vegetables should be used by the cook and eaten by every adult. Children under ten are better without the coarser vegetables. They contain a substance called cellulose which is hard to digest and young stomachs are often injured by trying to assimilate these vegetables. However, young children seldom like turnips, carrots, squash and the like, so mothers will have little difficulty in keeping them away from the little ones.

Tough vegetables are often softened considerably by adding a bit of cooking soda to the water. They should be placed in boiling salted water, and if cooked uncovered will keep their color better. Contrary to the general custom, cabbages and onions should be left uncovered if you wish to avoid the strong odor encountered in cooking. Cover both with boiling water, and be sure to see that they are actually covered and kept covered with boiling water. Then leave off the tin

cover of your kettle and the disagreeable odor is practically eliminated.

Celery is usually served by the average housewife raw, and the outer tough stalks placed with the inner tender ones. Instead, use the tender hearts raw and cut the outside stalks and the roots up into inch long pieces. Boil one hour in salted water and serve with a cream sauce. Or the stalks may be boiled until tender, put through a sieve, and made into a delicious cream of celery soup. The pretty green leaves make as effective a garnish as parsley and add a dainty touch to a platter of cold meat.

Parsnips and carrots are usually washed, scrubbed and scraped before cooking. If they are wilted this process becomes difficult. Soak for an hour or two in cold water, scrub thoroughly, and then boil without scraping. The skins may be removed after cooking as you remove the skins of beets.

The strong odor of onions makes them so objectionable to many, that some authorities have gone the length of declaring them unfit for food and intended only for flavoring. Others say that onions are nutritious, and should be eaten by everyone. Be that as it may, onions are eaten by many people and greatly enjoyed, either raw, in salads, boiled, scalloped or fried. A dash of onion flavor improves many a dish, as the cook who has tried it has learned. If you do not want to use the onion directly, you can buy the juice bottled, or extract it yourself by rubbing an onion over a grater with a rotary motion.

The composition of all these vegetables is shown by the following table, compiled by W. O. Atwater, Ph.D.

	Protein.	Fat.	Carbohydrates.	Minerals.	Water.
Beets	1.6	.1	9.6	1.1	87.6
Cabbage	2.1	.4	5.8	1.4	90.3
Carrots	1.1	.4	9.2	1.1	88.2
Cauliflower	1.6	.8	3.5	1.8	90.8
Celery	1.4	.1	3.5	1.1	94.4
Onions	4.4	.6	5.5	1.2	93.5
Parsnips	1.7	.6	16.1	1.4	79.9
Squash	1.6	.6	10.4	.9	86.5
Turnips	1.4	.2	8.7	.8	88.9

Day After Day

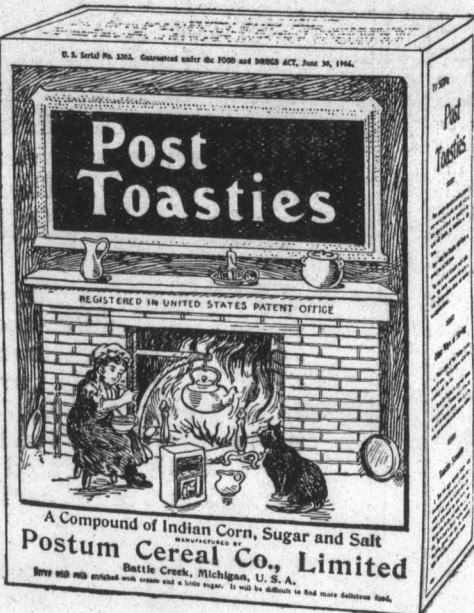
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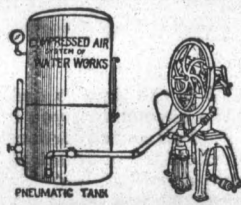
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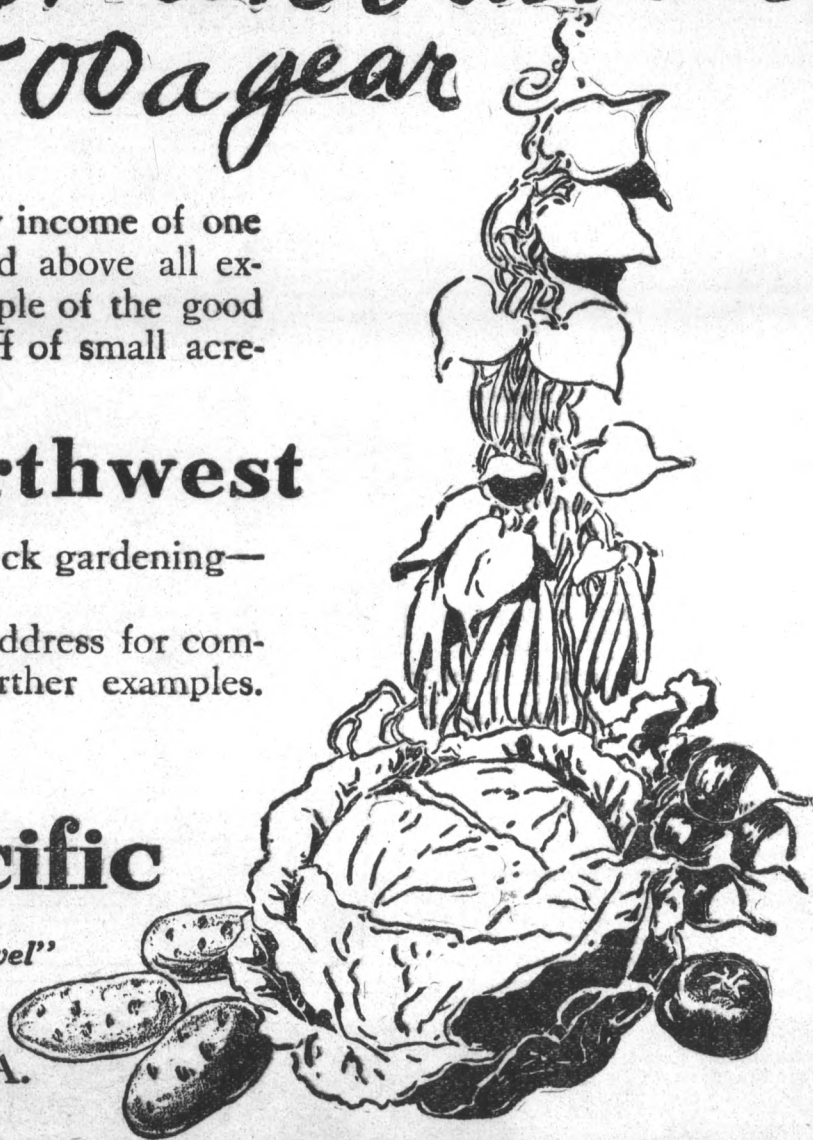
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HOME QUERIES EXCHANGE.

Dear Editor.—I have received some good advice through The Farmer and would like to ask if white linen suits will be worn this summer? If so, what will be the style of same? Are the plain eleven-gored skirts fashionable?—A. M., Davison.

The stores are not showing any white linen suits so far this season, and those which you will see worn will probably be last season's suits. White serge suits are good, especially when trimmed with the "chantecler" colors, red and green. The fashionable skirt is pleated, not gored.

Dear Editor.—Would you please tell me through your paper, the receipt for ice cream in which gelatine is used?—R. D. S.

Ice cream with gelatine is made as follows: Two qts. cream, 2 qts. milk, 1½ lbs. sugar, 2 ozs. gelatine. Flavor to suit. Put gelatine in part of the milk and set vessel in hot water over a fire until gelatine dissolves. Add cream, rest of the milk, sugar and flavoring, and when sugar dissolves, strain and freeze.

THE SPRING HOUSECLEANING.

After the carpets have been well beaten during the annual spring cleaning, try this method of removing grease spots and restoring the colors. Eight ounces of sal soda; four ounces of borax; four ounces of Fuller's earth; one cake of white soap; half pint of alcohol. Shave soap thin and dissolve in one gallon of boiling water, then add all the ingredients except the alcohol. Add the mixture to nine gallons cold water, then add the alcohol. Spread the carpets out flat and scrub a small place with the mixture, using a stiff scrubbing brush. Then wash with cloth and cold water, wiping as dry as possible. Have carpets spread out and do not put anything upon them until they are dry.

If you have kept your woodwork in parlor, sittingroom and bedrooms well dusted throughout the year, try the experiment of not washing it with soap and water this spring. Put a few drops of turpentine or kerosene on a soft cloth and wipe the woodwork with this. If you use kerosene, be sure to rub well with a dry cloth afterwards so that none of the kerosene remains or it will catch the dust and the last state of the woodwork will be worse than the first. If you do the job carefully and rub well, you will be rewarded by bright, shining woodwork with less labor than washing would involve.

If you have never used whiting on your windows, do it this year. Make a paste with alcohol, water will do, and rub over the glass. When it is dry, rub off with a cheese cloth and polish with old newspaper. Some like kerosene to clean windows, a tablespoonful to a quart of water, but it is disagreeable to work with. Do not be afraid to rub the windows hard, this is what gives the glass a good polish.

If the piano case looks cloudy, wash a small spot at a time with good soap and tepid water. Rinse the soap off quickly with clean water and wipe dry. If the polish is scratched off anywhere, use rotten stone and oil on those spots as the soap will turn the wood dark. After washing, polish well with oil.

Olive oil is recommended as a cleaner for leather, or imitation leather furniture. It does fine work but as it is so expensive try a few drops of kerosene on a cloth instead.

A SUGGESTION FOR A MAY DAY PARTY.

No gathering of young people is hardly complete unless some method of telling fortunes is devised. For the May Day party arrange a sheet upon the wall, and attach to it a huge daisy cut from yellow and brown cloth. The brown should be used for the center, while each petal should be of the yellow. On each petal a fortune is inscribed with pen and ink. These inscriptions may include, Riches, Fame, Honor, Power, Love, Poverty, Notoriety, Many Lovers, Spinsterhood or Bachelorhood, as the case may be, Broken Vows, Misunderstandings, etc. To learn her fortune the guest should either shoot arrows at the petals, the motto hit being applicable to the party shooting, or else, blindfolded, she may be turned around two or three times and allowed to point out the fortune for herself. Still another way of deciding the momentous question will be to throw a flower at the daisy, the petal hit in this process being the fortune of the thrower.

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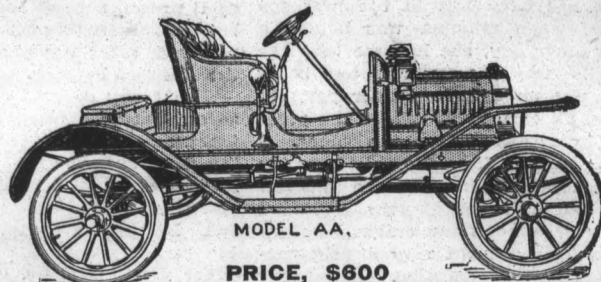
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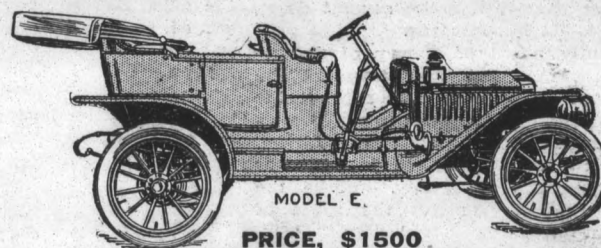
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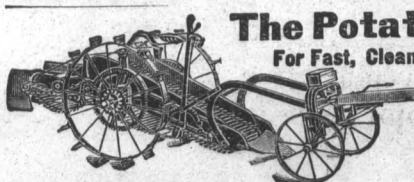
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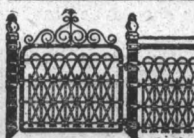
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