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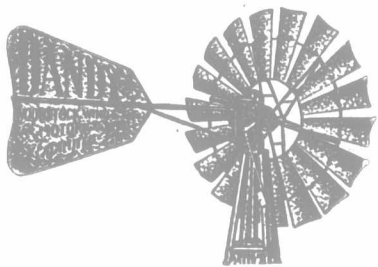
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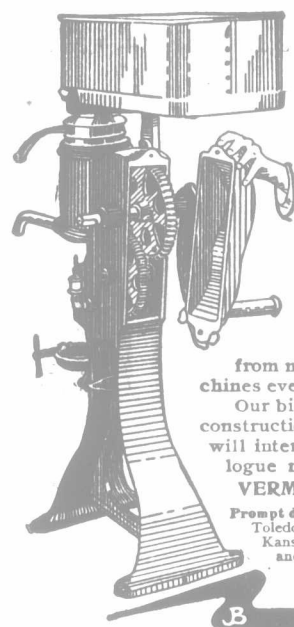
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"I'll bet my case of samples," he said, "that I've got the hardest name of anybody in this room."

An old farmer in the background shifted his feet to a warmer part of the stove.

"Ye will, will ye?" he drawled.

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Vol. XLII.

LONDON, ONTARIO, JUNE 6, 1907.

No. 767.

EDITORIAL.

BRIGHT FUTURE FOR DAIRYMEN AND STOCK-RAISERS.

"In view of the increase of immigration involving smaller farms of higher-priced acres, what is likely to be the relative standing of beef-raising and dairying thirty years hence?" The above question, submitted to us by a reflective reader, was referred to Prof. G. E. Day, of the Ontario Agricultural College, Guelph, who, while not undertaking to answer it positively, sets forth in another column a very well-balanced consideration of the probabilities based upon available data. The impression he leaves is that, while the dairy cow is a far more economical converter of coarse farm products into human food than is the steer, and tends, therefore, to supersede the latter as population becomes dense, on the other hand, the Anglo-Saxon appetite for meat asserts itself and insists on beefsteak, even though it does cost more per meal than milk or cheese. Moreover, the fact that beef-making is more congenial than dairying to the general run of farmers, makes us willing to engage in it for less remuneration than we require in dairying, hence the tendency is to preserve a condition of narrower margins in beef-raising than in dairying. The latter is usually, therefore, the quickest and surest way for the poor man to get ahead. One marked feature of the situation is the foolish tendency of many to rush from one line to the other, snatching at momentarily high prices, and thereby retarding the progress of their bark by continual rocking. Sizing up the whole question, we are left with the writer's inference that there will for a long time to come be room in Canada for both dairying and beef-raising, though in sections where land values are highest the cow may be expected to continue ascendant over the steer, beef production (except perhaps the finishing process) being relegated more and more to cheaper lands, so long as such are to be found. In this connection we will be reminded that Great Britain is devoting a considerable part of her high-priced land to beef production. In reply, it may be said that Britain is raising a very superior quality of beef that outsells ours on the British market, yet, in spite of this fact, there are some clear thinkers who believe the British farmer would consult his best interests by going in more largely for dairying and leaving to the Colonies and the corn-belt States the filling of her butcher stalls. However that may be, in Canada it is found the dairy districts are the most progressive and prosperous we have, as a general rule.

There is much encouragement all round in a contemplation of the future live-stock and dairy industry. There are also a few practical conclusions which present themselves. The first two of these are, improve quality and cheapen the cost of production. Fancy products always sell. An increasing number of consumers are willing to pay a fancy price for a top-notch article. Demand for finest is always ahead of the supply. It is for us, as producers, to make the most of our opportunities and demand and get for our wholesome food products an increasing amount of rich men's money that would otherwise be squandered on enervating luxury. There are splendid possibilities in catering to the gilt-edge trade, as well as more modest promise in supplying high-grade products to the larger volume of middle-class trade, which also may be educated to pay a much higher price than it now does, provided it is assured of a first-class article.

Cost of production is a problem which many of us feel we have already done our best to solve, and

yet there is room in most cases for considerable saving here. The dairyman must make regular use of scales and Babcock test so as to increase production intelligently by better feed and care, and then weed out his unprofitable cows. Many a herd would yield more profit on feed consumed, with less labor, if half the cows were butchered. Both dairyman and beef-raiser must study system and economy of labor in crop production, thereby cheapening the raw material. The beef man also must learn the lesson of early maturity, and how to feed calves so as to keep them growing from birth to block. Baby-beef from steers not over two years old, should be the aim of those catering to our home demand, while the export bullock of the future will be not over thirty months, and probably not much over twenty-four. Labor will be reduced by feeding large numbers loose in cheaply-constructed pens or sheds. One mistake many of us have made is in thinking we must tie every bullock by the neck in a cellar. Economy of production is not accomplished by such methods, and keener competition will eventually compel us to forsake them. By doing so, the enterprising stockman will be lining his own pocket, while at the same time helping to solve what is bound to become at no distant date a very serious problem, namely, the world's food supply.

Since the foregoing was put in type we have received an article from our esteemed correspondent, Geo. Rice, who discusses the same subject submitted to Prof. Day. Substantially, their arguments agree. Mr. Rice is a man who has made a conspicuous success of dairying and dairy-stock breeding, and looks upon this line as much more profitable than beef-raising for the average farmer of to-day, especially when we consider the far greater opportunities for increasing the production per animal. His opinion is that many are blindly adhering to the business of beef-making who will change to dairying when they receive enough light on the subject to compare the two branches intelligently under the stress of keen competition for farms, with the inevitable advance in land values.

Of course, such a development would tend to increase the price of beef, hence those who studied the business of beef-making so as to shave down cost of production would be able to continue at a narrow margin of profit. The law of supply and demand is bound to determine the balance. Beef-raising will always be the more congenial branch of husbandry to the majority of people, because less exacting in point of "chores," but by way of compensation, dairying will be found, as a rule, to show much the larger margin of profit.

CARELESS INQUIRERS.

A bad memory is an expensive failing. We are reminded of this day after day as questions are laid aside unanswered, because the inquirer has omitted to comply with our simple rules. One of these is that "Anonymous communications and questions will receive no attention. In every case the full name and address must be given." We have often explained that the name is not necessarily for publication. In our Questions and Answers Department we seldom print more than the inquirer's initials, or possibly some nom de plume, such as "Subscriber" or "Reader." Evidently some people infer from this that we do not mean what we say about requiring name and address. They find their mistake when they look in vain for the reply to their questions. We require the name as a means of determining whether the writer is a subscriber or not. His mere assurance that he is

on our list is not accepted. Before any question is considered, the editors are informed by the circulation department whether the inquirer is on our subscription list at the point from which he writes. Our rule is simple enough, and we insist upon it. We require the full name and post-office address of every inquirer, not necessarily for publication, but as an evidence of good faith.

HOW TO UNDERDRAIN ROADS.

"How would you tile drain an earth road?" was a question put recently to Mr. A. W. Campbell, Provincial Highways Commissioner. "Drain the road," was his terse response. Proceeding, he explained that you cannot drain all roads in the same way. Where a road skirts along a hillside—the natural drainage being, therefore, across the road—the proper place for tile is on the upper side of the driveway, so as to intercept the moisture as it soaks down the hill, and prevent it from reaching the roadbed. There are other cases where a line of tile in the center of the road is sufficient for best results, while again others require, for best results, two rows of tile, one on each side of the driveway.

Where should these two rows be placed, under the ditches or nearer the center? Put them within the shoulder of the road. The idea is to keep the roadbed dry and firm. Tile at each side of it will not only carry away any moisture that may work down from the surface of the driveway, but will intercept the moisture that soaks in laterally, so that between the rows of tile will be a solid mass or wall of earth fit to bear the weight of traffic. The closer the rows of tile, the more quickly and more thoroughly will they drain the center of the road. Tile under the ditches would be more cheaply put in, perhaps, and would certainly do much good, but it stands to reason they would be charged during part of the time with water that would otherwise find its escape in the open ditch. To obtain the best and most economical results, Mr. Campbell's opinion is that the drains are best placed within the shoulder, rather than beneath the open watercourses.

One other point is important to note. A road is different from a field. The latter is more or less porous, and, except in very stiff clays, water readily percolates down to the drain. On the other hand, a road, under the effect of traffic, becomes compact and more or less puddled, and water reaches the drains slowly, unless precaution is observed to fill the trenches over the tile with some loose foreign material. For this purpose, gravel is the proper thing, if obtainable, and it is safe to say that a thousand loads used in this way would give vastly better results than double the quantity dumped on the surface of an un-drained road. Under no circumstances should the trenches be filled with the clay removed from them.

Size of tile is another point to consider. This will depend upon the character of the road, the length of drains and amount of fall, and it requires the exercise of judgment. A three-inch tile, however, if properly laid, with uniform grade, will carry a large amount of water, and for ordinary stretches of road will probably answer all probable requirements. It is not wise, however, to spoil the job by stinting the expenditure for tile.

A good deal more might be said on the method of underdraining roads, but with these salient principles we shall, for the present, at least, leave readers to offer further suggestions.

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JOHN WELD, MANAGER.

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CLYDESDALE REGISTRATION.

The action recently taken by the Clydesdale Horse Association of Canada, in requiring a more stringent standard of registration in the case of imported horses and mares, while it is in a sense an anomaly, the daughter making rules of conduct for the motherland, if she would continue to do business with her, is calculated to improve the standing of the breed in the eyes of the world, and the pity is that such action had not sooner been taken. While it is true that those animals whose recorded pedigrees show a lack of ancestors bearing registration numbers are no worse individually for such lack, they have been and will be handicapped in their sale by the rules of the pedigree records of the breed in Canada and the United States, two of the largest and most profitable fields for export trade. And since it is probable that the Canadian customs regulations will, after the first of July, be so altered as to require that imported horses and mares must be eligible to registry in the Canadian Studbook, under the amended rule, in order to enter duty-free, importers will require to exercise due caution in their purchases to see that the requirements are fully met. The parsimony, or perhaps we should rather say overcautiousness, of the canny Scot in saving a few shillings by neglecting to register his brood mares under record numbers, has proved a penny-wise-and-pound-foolish policy, and should serve as a warning to breeders everywhere to avoid such consequences by keeping a careful private record of the breeding of their stock and attending at the proper time to the registration of their pedigrees and transfers, so that there need be no hindrances to the ready transaction of business when business comes their way. The extension of the time limit under which imported horses are to be accepted for registration under the old rule to July first, and which was suggested by the agricultural press, will be accepted as an assurance that there was no disposition to cause unnecessary inconvenience to

importers who have consignments en route, and will give time, if promptly used, for breeders in the Old Land, as well as here, to take steps to put their houses in order before the amended rule comes into force, the only question being, whether, in view of the vastness of the area of country interested and the difficulty of giving due notice, the time for closure should not have been still further extended.

THE CULTURE OF AGRICULTURE.

The following sentiments, by a correspondent of Hoard's Dairyman, harmonize so well with the recent editorial, "Our Irrational School Systems," issue April 25th, and with the appreciative comment, "Educational Needs Changing," by A. H. MacKay, issue May 16th, that we give them prominence on this page:

"Agriculture should be taught in the schools, not only because it is a practical subject, but because it is a cultural subject as well. When properly classified, the foundation factors in agriculture are as strongly educational as those of reading, arithmetic and grammar. There is just as much knowledge, just as much thought, just as much inspiration, from a study of soils, of plants and of animals as there is in a study of foreign rivers, countries and foreign activities. What makes education so distasteful to so many boys and girls is the fact that it is altogether out of the limit of their experience and knowledge. I have no objection to my boy and girl knowing something of King Charles and King Henry, but I want them to know something about "King Corn" and "King Cotton" as well. I am willing they should know something of the laws of the ancient dead, but I am also determined that they shall know something of the laws that underlie plant and animal growth. Personally, I believe that clover and alfalfa roots are just as divine as Greek and Latin roots, and that the old hen is more worthy of study than some of the wicked men of destroyed nations."

Sound sense, and right to the point. On top of that, read these abridged lines from the concluding paragraphs:

"Agriculture in the school will fit the boys and girls on the farm not only to an understanding of the dignity of their own environment, but it will put into their hands the trained tools for unqualified success. And then, with the same idea of broadening, let agriculture be taught to all boys and girls, without regard to vocation in life—the lawyer's, the doctor's, the minister's, and the merchant's. The city man and the city woman are interested in the soil, for they have the lawn and often the garden. They are interested in grass, for it clothes their lawn; they are interested in the fruits of the field, for from them they are fed; they are interested in the animals of the farm, for from them they receive much of their food and much of their pleasure."

"There can be little culture in poverty. Pleasant homes, well-tilled farms, well-bred and well-fed animals, well-kept lawns, country homes with books and magazines, and other influences for good, must all be included in the equipment of the well-trained and well-educated man and woman."

AN ARDENT ADMIRER.

As soon as "The Farmer's Advocate" enters the house it is at once opened by some member of the family, and it is only by chance that I get at it. There is not \$1.50 which I pay out in any other way for which I think we receive better value than we do in "The Farmer's Advocate." I wish you every success in your staunch and fearless support of the farmer's best interests, not catering for political patronage or support from those who have axes to grind.

Brome Co., P. Q.

A. P. HILLHOUSE.

SAVED THE BULL.

Please find enclosed a post-office order for \$1.50 for my renewal of "The Farmer's Advocate," which I have only taken for one year, and it was well calf.

Oxford Co., Ont.

W. E. THOMSON.

HORSES.

CARE OF STALLIONS IN SEASON.

Editor "The Farmer's Advocate":

For some little time past I have noticed articles in "The Farmer's Advocate" and elsewhere concerning the care of stallions. Perhaps a few ideas passed over by others may interest readers of "The Farmer's Advocate." By the time this article appears in print, almost every farmer, and certainly every owner of a stallion, will be taking an active interest in the management and care of the stallion when on the road.

Well, we will suppose that by this time of year the horse is up in good condition, has been exercised in some way daily for the last month or six weeks; that he has been freshly shod, in front without toe or heel calks, and behind with fairly long heel calks. These preparations are necessary for all stallions, heavy draft or light bred. We now come to the man himself, on whom so much depends the success or failure of the horse's season. As a rule, I should prefer a man not much younger than thirty; by that age he has steadied down, but he has not become too "set" in his ideas, and will absorb new ones more easily than an older man. I don't know a more stubborn type of man than your old stud groom, and what some of these men know about horses, and what they don't know, would fill a book. Is it not Mark Twain who says that it is not so much what you know that counts as what you know correctly? Anyhow, get the best man you can, and because a poor man can be hired a few dollars cheaper, don't lose the chance of a good man; but no matter how good a man he may be, don't hire him if he is liable to get drunk. How is that, Mr. Editor, for a race-horse man's advice? Now, you have your horse and you have your man. Next you want the outfit. I shall mention just a few things which are not always remembered. You will perhaps think some of these things are unnecessary, if the horse travelled is a Clyde, Shire or Percheron, but I use the same things for a heavy horse which are necessary for a Thoroughbred. No pains must be spared on either class of horses, and the more comfortable you can make your horse, the more colts he will leave.

You have, I presume, got hold of a nice quiet horse to hitch in the cart. He should be a good fast walker, and quiet enough to stand still without being tied. The latter point is very important, as so many things may happen which may require you to leave the cart and attend to the stallion when on the road, and it is always pleasant, when you have fixed up the difficulty with the stallion, to find your cart and outfit where you left them.

Now for some of the smaller articles which should always be taken along. First of all, always carry a couple of feeds of oats. Sometime you may be delayed by a storm or some other unforeseen circumstance and not make your regular stopping-place; but if you have your feed along, you can stop anywhere. Next, you should have two blankets, one made of heavy duck, that will shed water in case you strike a sod roof for the night, the other a large sheet to keep off dust and flies when the horse is feeding.

For the next items, a pail, sponge and scraper. On hot days, when the horse comes in tired and sweaty, fill the pail with hot water—as hot as you can nicely hold your hand in—sponge him over, lather him with your hand, and scrape him off quickly. Put on your light or heavy blanket (according to the day), put him in the stable, and run over him with a brush or cloth, and in a couple of minutes you have your horse as fresh as when he left the stable in the morning. Now, if your horse is a light-bred, get those bandages out, put them in a pail of cold water and put them on your horse. A little practice will make you expert. Take them off in about three-quarters of an hour, and either brush or hand-rub his legs off. Do this, no matter how foolish it may seem to you, and you will be rewarded by having your horse's legs clean and cool in the morning. If your horse is one of the draft breeds, I should merely rub and brush his legs off. If muddy, don't wash them unless you are prepared to rub them quite dry.

In the feeding line, remember never to give a horse more oats than he will clean up at once. If he won't eat enough to suit you, divide his feeds. Say you want him to eat four gallons of oats per day, and he won't eat more than one and a third gallons at a feed, give him the four gallons, but divide it into four feeds. You will find that there is then no difficulty in getting him to eat the amount you consider necessary. But be sure not to allow him to leave any grain in the feed box. If he leaves only a handful, next feed give him a little more than a handful less than he was getting before.

Watering, I think, depends entirely on what a horse is used to. A horse, however, is never too hot to drink half a pailful. Some horses shiver after drinking; for them, water oftener, and don't give much at a time. I like to feed a little

bran with the oats, so as to make a horse chew his grain.

Every horse, stallion or work horse, should get a bran mash, with a little flaxseed meal, salt and a teaspoonful of saltpetre every Saturday night.

Be sure, in dry weather, to "stop" his feet at least twice a week with mud, cow manure, or a poultice made of bran and flaxseed meal.

Wash the stallion's sheath out every Saturday night and grease with lard or vaseline, into which you have put a little boracic acid. After every service use the sponge with a weak solution of either boracic or carbolic acid. I should always allow an hour to pass between services. Should any rubs appear, bathing the part daily with methylated spirits will be found useful in hardening the skin and removing inflammation.

Some of these last details the groom may consider superfluous, but remember, "a stitch in time saves nine," and through one of these insignificant little rubs poison may enter the horse's system and lay him off for the balance of the season.

G. H. BRADSHAW.

Horn Creek Ranch, Man.

PRINCIPLES OF BREEDING.

But few occupations possess the exquisite fascination of animal husbandry. The breeder is brought into immediate relation with nature, and has the opportunity to watch the unfolding and operation of the laws of heredity. If ambitious, there is no impossible achievement in developing perfection in quality of the different breeds of domestic animals. There is always a rich pecuniary reward to encourage the supreme effort of the breeder in the improvement of any class of live stock. The breeder may commence experimentation as a mere child in understanding of the fundamental laws of methodical selection and breeding.

The common-sense law that "like produces like or the likeness of some ancestor," is the basic principle on which the evolution of breeds has been consummated, and at no stage in breeding operations is this primary law to be eliminated. Without a reasonable certainty of the operation of this primordial law, there could be no uniformity in the production of domestic animals. Evolution of breeds is predicated on like produces like. The truth of this law makes the breeder master of the class of animals that he chooses to raise.

An apparent contradiction to the primary law of breeding is the principle of variation in the progeny of the sire. Without the potency of the law of variation, there would be no possibility of improvement in animal husbandry. Inferior animals would always produce low-grade offspring, and choice animals would never produce progeny superior to themselves. To follow the law of variation, is one of the fascinating functions of live-stock improvement. The progeny may bear a striking resemblance to the parents, or it may represent some ancestor.

In breeding horses, the sire is more than one-half of the harem. A prepotent sire must be a full-blooded animal of the breed which he represents. A stallion needs to trace for at least five generations to pure-bred ancestors to possess the characteristics of the breed to a degree that he will transmit with uniformity the leading qualities of the breed to his offspring. A mixed-bred stallion will show an inclination in his progeny by the law of atavism to reproduce characteristics of different breeds.—[Drovers' Journal.]

SEE THE CANADIAN PEDIGREE CERTIFICATE

It has been the custom of a number of importers to both sell and stand for service Clydesdale stallions on their Scottish export certificate only, without going to the trouble or expense of obtaining a Canadian pedigree certificate for them. The great majority of the fillies imported from Scotland during the past three years were sold the same way, and in either case the buyer or the breeder usually believes or is made to believe that this is all he requires, and that the progeny will record in Canada at the cost of one or two dollars. The prevalence of this belief is hardly fair to either buyer or breeder. To record the produce of an imported filly, it is necessary to record the filly herself and have her ancestors recorded in the Scottish Books, unless this is already done. This may cost no more than one or two dollars, but it may cost five or six. Should the colt be also sired by an imported stallion not yet recorded, this will have to be done and paid for as well, and may cost an equal amount. After this the progeny can be recorded at a cost of one dollar to members and two dollars to non-members of the Clydesdale Horse Association of Canada. But most important of all is the fact that, under the new regulation regarding the registration of imported Clydesdales, many of those not recorded before the first day of July, 1907, will be ineligible for registration. All breeders of Clydesdales should take the precaution before buying or breeding to imported Clydesdales to request to be shown the Canadian Clydesdale registration certificate.

J. W. SANGSTER, Secretary.

THE CANADIAN CLYDESDALE RULES.

The intimation that the Clydesdale Horse Association of Canada has adopted a regulation similar to that in force in the United States has caused quite a flutter in the dovecots of horse-breeders. The sensation has not come a moment too soon, and good has already resulted. The educative value of this movement will be considerable. The breeders who have been neglecting registration are now endeavoring to make up for lost time, which is more easily said than done; but the demands of the Canadian authorities are so slight that anyone who takes pains to search out the pedigrees can, in most cases, have them so adjusted as to meet all the requirements of Canada. Several buyers in this country at present are very anxious to know whether the pedigrees of animals they have purchased will pass muster at the custom house, although they may not accord with the standard fixed by the Clydesdale Association. The only possible answer to this question at present is that these buyers had better run no risks. The Clydesdale Horse Society has received no information on the subject, but an inquiry has been addressed to the proper authorities on the subject. The safe thing is to proceed on the assumption that the Canadian Studbook rules and the customs regulations will be identical.

It may be useful to recapitulate the rules which come into force on 1st July, 1907. Every animal exported to Canada or the United States must, in order to secure duty-free entry, be registered in the Clydesdale Studbook of Great Britain. But mere registration in the home Studbook is not enough. Every animal so registered must have a registered sire and a registered dam, and the sire and dam of its sire, as well as the sire and dam of its dam, must be registered. No animal got by any of the horses out of the famed Pandora can secure duty-free entry, because the dam of their sire (that is, Pandora) is not numbered, and cannot be numbered. No animal whose dam was got by Prince Lawrence, Moneycorn, or horses of like mixed breeding, can secure duty-free entry, because these horses are not and cannot be numbered here. As a rule (although this is

A FAIR DEAL FOR HORSEMEN ADVOCATED.

Editor "The Farmer's Advocate":

The perusal of your most excellent farm journal has proved a great benefit to me and thousands of other farmers, and we appreciate your many added improvements. With all due credit to our mining, timber, fish and manufacturing industries, farming is by long odds our most important industry, considering the numbers engaged and the capital invested, and yet the remuneration for time, effort and capital invested in and on the farm do not equal the attractions offered in other callings. Now, it is a fact that the great majority of our farmers are struggling to pay for their homes and raise and educate their families, and the struggle is becoming increasingly severe. Do not add to his burdens, but allow him to accomplish his purpose in his own way. A cheap horse or colt will assist him greatly; he is not clamoring for stallion inspection nor stallion license. Give him fair play, and no favors. Some men are specially adapted for breeding, matching and fitting horses successfully. Give them fair play, and no favors. They are quite competent to choose their own material and plans. I would advise those having suitable mares to use the best stallions they can afford, and let those who think they cannot afford the best do the best they can. Do not tax the many who have to struggle for the benefit of those few who don't have to. I am decidedly opposed to the idea of Government interference with the horse-breeding industry; but if the Government decide to give this industry a lift, let them give it a square lift, by providing a sum of money, one-half of which shall be apportioned to those farmers who succeed in raising colts of a well-defined standard of excellence, and one-half to those who own the sires of these same colts. I consider it an insult to the farmer and a slur on his intelligence to try to maintain that the best stallions require Government protection from the scrub stallion.

A. HARWOOD.

Oxford Co., Ont.

TRAINING THE COLT.

There should be only three commands for the colt, says an expert horseman in Outing. First, to halter-break the baby, he is from birth pushed about with the attendant's hand under his neck and behind his quarters for a few minutes every time one goes near the dam. As you push him ahead always say "O'lk" a few times; as you halt him, say "Whoa!" sharp and loud; as you push him back, say "Back!" at each step. He associates the words with the action; what seems to him play is really a lesson; he takes the idea at once, and like all first impressions, it is indelible. At about three weeks put on him a little halter of soft leather, fitting snugly about the nose and under the throat, that he may not catch a hind or fore foot in it, and for a few days push him about just a step or two by this; then run a cord through the jaw-piece (better than a snap hook, as it can be at once released), and as you lead the mare, use this also on him, but never let him fight it, or make it irksome to him. At about this time really halter-train him to lead, and to do this have someone hold the mare; put the rope through his chin-strap, start to lead him, and when he hangs back, as he will, brace yourself, and let him "pull it out." At this age you can easily handle him; never snatch or jerk him; never look at him (this is very important, as the fixed gaze of the human eye is terrifying and disconcerting to all animals); just let him "pull it out," convince himself that he cannot get away, and sooner or later he will come to you with a rush. Pat him now over the forehead where his brain is (always caress the parts of the members involved; indiscriminate caress is worse than none: "If your son learns his lesson, don't reward your daughter," as a well-known teacher once said); let him stand a few minutes, have the mare led, and lead him with her, behind, beside, away from, and back again, and in two days you have a baby you can tie up with a string. Be careful to hold his head up if he throws himself, and if he does it several times, hold him down a little while and let him think it over. Remember his mind contains but one idea at a time, and give him ample opportunity to get an indelible mental impression of every step you take, especially when the time comes for punishment drill.



Slowburn.

Thoroughbred stallion. Winner of King's Premium, London, England, Show, 1907.

a rule with exceptions), no animal whose dam has only two registered crosses can secure duty-free entry, because, as a rule, the dams of such animals cannot be numbered. Therefore, as a rule, a colt or filly intended for free entry into the States or Canada, should be out of a mare having three registered crosses, and the sire of such colt or filly should be got by a registered sire out of a registered dam. Setting aside the produce of the Mains of Airies horses, and others similarly bred, which, for reasons assigned, cannot be passed on the other side, any Clydesdale having a pedigree which reads like the following will register. (The female names are fictitious):

ANNIE LAURIE.

Brown; foaled 1904.

Sire—Baron's Pride (9122).

Dam—Nelly Bly (32965), by Hiawatha (10087).

Grandam—Twinkling Star (45841), by Top Knot (6360). G-grandam—Moonlight, bred by John Smith, Meadowslands; foaled 1880, by Druid (1120).

A pedigree which passes muster for the Canadian or States trade should tabulate as follows:

Annie Laurie (Registered)	{	Baron's Pride	{	Sir Everard (5353)
		(9122)	{	Forest Queen (7233)
		Nelly Bly (32965)	{	Hiawatha (10087)
			{	Twinkling Star (45841)

—[Scottish Farmer.]

Mr. Arch. McNeilage, of Scotland, writes us that the report of his coming this season to judge horses in the Canadian Northwest is incorrect; he never judges horses anywhere.

LIVE STOCK.

BEEF PRODUCTION VS. DAIRYING.

Editor "The Farmer's Advocate":

To predict the relative standing of the two great industries of beef production and dairying at the close of the first quarter of the present century would call for greater powers of penetration than I possess. I shall not attempt to prophesy, therefore, but merely call attention to a few facts which may, or may not, have a bearing upon the subject.

In the first place, it must be remembered that the cow is a much more economical producer of human food than is the ox. Lawes and Gilbert show that in the case of a cow giving ten quarts of milk per day, and an ox gaining fifteen pounds in weight per week, the cow produces nearly six times as much nitrogenous matter, about six times as much mineral matter, and the equivalent of an equal amount of fat. The cow does not produce so much fat as the ox in the comparison cited above, but if the milk sugar produced by the cow is reduced to its fat equivalent and added to the fat, the sum will be equivalent to the fat produced by the ox. Of course it is an exceptional cow, or, at least, one a long way above the average, that will average ten quarts of milk per day for a whole year; but even if we make deductions for the time the cow would likely be idle, it would be a very poor cow indeed which would not excel the ox in economy of production.

Thorne, of the Ohio Experiment Station, concludes that steers will gain three pounds in live weight upon a consumption of food which would produce one pound of butter-fat if fed to a dairy cow. When we consider the relative value per pound of butter-fat and the increase in live weight of the steer, and make allowance for the casein and milk-sugar produced by the cow in addition to the butter-fat, it is not difficult to decide which of these animals makes the better use of the food it consumes.

In connection with the matter under discussion, Prof. W. A. Henry says: "When population grows dense, the ox will be the first to disappear from our agriculture, because it is not an economical producer of human food, while the dairy cow will remain an economical instrument for that purpose." No man can say what the future has in store, but it is reasonably safe to prophesy that the time which witnesses the passing of the ox is still a long way off. We have watched with interest the marked extension of the domain of the dairy cow in our own country, and we see her encroaching upon ground which has long been sacred to beef production in the United States, but there are factors which tend to limit the aggression of the dairy cow, and to prevent the extinction of the ox.

Those who look for the disappearance of the ox are apt to assume that the present market values for dairy products and for beef will continue, but of this we have no assurance. It is generally conceded that there is less labor connected with beef production than with dairying, and the dairy cow must show herself considerably more profitable than the ox in order to hold supremacy; therefore, should there be depreciation in the market value of dairy products, or appreciation in the market value of beef, the dairy cow is bound to lose a considerable number of her supporters, and will be forced to retrace some of the steps in her all-conquering march.

There is another factor in this problem which cannot be ignored, and that is the taste, or demand of the consumer. It is one thing to demonstrate to the consumer that beef is an expensive article of diet, that the amount of money required to buy a pound of beef would purchase for him a great deal more nutriment, in the form of dairy products, but it is quite another thing to so educate his taste that he will be willing to substitute dairy products for meat in his daily bill of fare. English-speaking people are noted as meat eaters, and the place they occupy in the world to-day indicates that the diet agrees with them pretty well, so that it seems fairly safe to predict that until the juicy sirloin loses its charm for the hungry consumer, the prime butcher's bullock will continue to play an important part in the markets of this and other beef-producing countries.

A glance at the agriculture of Great Britain may be worth while. Here we have a country more densely populated than Canada can hope to be for a good many centuries to come, yet no place in the world do we find finer beef than that produced in Great Britain. Unfortunately, we have no figures relating to the relative profits from beef production and dairying in Britain, and figures showing the relative importance of the two industries are not easy to obtain. The Journals of the Royal Agricultural Society show that during 1901 and 1902 there was a decrease in the milking stock of Great Britain, attributed to an increase in the price of beef. Since that time, milking cows have been on the increase, and the probability is that history will repeat itself in the near future, and that the pendulum will again swing the other way. As in other lines of business, the factors of supply and demand play an important part. When there is a comparative shortage in dairy products, prices begin to soar, and many farmers are induced to take up the more remunerative business. By and by the desertion from the ranks of beef-makers makes itself felt in the shortage of beef, and prices for this commodity begin to rise, while, owing to the large accession to the ranks of dairymen, dairy products ease off in price. When this happens, we find many deserters re-enlisting under the beef-makers' banner, and they will remain loyal until dairying once more regains the

ascendancy with regard to profits, when we may expect to find them shifting their allegiance once more. In Great Britain, therefore, we probably see these two great industries about as nearly in a state of equilibrium as they are likely to attain, and the fluctuations are within comparatively narrow limits. It is fairly safe to assume that farmers will stick to beef production in preference to dairying until driven out of it by force of circumstances, because less labor is required in the first mentioned business; and, in consequence, the probability is that dairying will always continue to show a larger profit than beef production. In other words, on account of the larger amount of labor involved in dairying, it must be able to show considerably larger profits than those obtainable from feeding beef animals, before farmers will give up their beef cattle to engage in it.

I am well aware that what I have said does not answer the question which has been submitted, but I intimated at the outset that I would not attempt to answer it. The question reads: "How are the industries of beef-raising and dairying likely to compare in profit during or at the end of the present quarter century?" I have attempted to show that dairying owes its existence to the fact that it affords larger profits than beef-raising, and that it will continue to develop so long as the difference in profits is sufficiently great to tempt men to engage in it in preference to beef-raising. Unless there is a marked change in the tastes of the consumer, there will eventually come a time when the two industries will reach a stage of comparative equilibrium, the fluctuations in their relative development being governed by the law of supply and demand, and the advantages of one over the other becoming temporary in character. Increase in population appears to favor the development of dairying, so that we may expect to see dairying gaining ground so long as our population continues to increase. This does not necessarily mean that less beef will be produced, but that the increase in production of dairy products will be more rapid than the increase in production of beef. Extensive methods of farming will gradually yield to more intensive methods, and the quality of our beef will gradually improve in response to the demands of the market. The prospect is not a gloomy one, but, rather, it seems to me, is full of encouragement to those who are interested in the improvement of either meat or milk producing animals.

G. E. DAY.
Ontario Agricultural College.

CONVULSIVE FITS IN PIGS.

Information concerning the cause and treatment of convulsive seizures, to which pigs are subject, has repeatedly been asked for by farmers in the last few months. This trouble appears more frequently in winter, or when pigs are confined in pens, and is rarely if ever seen when they are allowed to run out on the ground and on grass. The supposed cause, the symptoms, and the preventive and remedial treatment, given by a writer in the Farmer's Gazette (Ireland), may serve to throw some light on the question:

These attacks usually come at feeding time, when the animal leaves its warm lair and comes to the feed trough. The pig runs to the trough as if to feed, but instead of doing so it suddenly falls over on one side. It then sets up a continuous squealing for several minutes, its eyes start out and look bloodshot, it froths at the mouth, and kicks violently and convulsively. This is followed by unconsciousness, and after a short time the animal rises to its feet and slinks off to its lair without eating any food. It happens sometimes that the affected animal dies in one of these fits, but more often it recovers, and the trouble is that the seizures become more frequent and more violent as time goes on, and the animal grows gradually thinner and weaker, and seldom recovers its health so completely as to develop into a thrifty feeder.

Convulsions in young pigs are almost always due to indigestion, and consequently the steps to be taken to prevent them are to follow a judicious system of feeding, so that indigestion may not set in. If the affection has actually made its appearance, the affected animal must be treated promptly, before the ailment becomes chronic. Change of diet is the first step necessary, if the foods which have been used are of a heavy, luscious and indigestible nature, and it is advisable to feed for some time on the lightest foods, such as ground oats and shorts, mixed with sufficient sweet skim milk to form a paste. A small quantity daily of fresh green stuff may be allowed with advantage, and if the weather is not severe, the pigs may get some outdoor exercise every day. Food may be supplied four or five times a day, but only in small quantities, as it is imperative that the animals should have no opportunity of gorging themselves. The medical treatment consists in dosing with castor oil or Epsom salts and sulphur; and if there is acute constipation, it may be necessary to resort to injections of glycerine or warm soap and water.

While an animal is struggling in the throes of a fit, nothing can be done except to place it on a layer of straw, and not to suffer it to struggle on the hard ground, but the custom of throwing cold water over the pig, or immersing it in hot water, is to be deprecated as useless and unnecessary.

THE OXFORD COUNTY (ENGLAND) SHOW.

This year's show was held at Banbury, May 14th and 15th.

CATTLE.

There was a large entry of Shorthorn cattle, and a grand lot they were. Sir R. P. Cooper's white four-year-old bull, Meteor, was champion again for males, and Mr. G. Harrison's well-known Ursula Raglan took similar honors for females.

The leading two-year-old bull came from the latter's herd, Elvetham Sweetmeat, a choicely-bred bull, bred by Lord Calthorpe, whilst the winning yearling, Walton Victor, was owned by Mr. W. Hazel. Snow Queen, after a keen contest with Royal Lily, owned by Mr. H. Dudding, won first honors for Mr. J. Coleman, in the three-year-old class. Sweet Smilax was first in the two-year-old class for Sir A. Henderson, and Lord Calthorpe's well-bred Elvetham Sweetheart took leading honors in the yearling heifer class.

The competition in the Hereford classes was not large. The leading exhibitors were the Earl of Coventry and Dudley, Messrs. G. D. Faber, S. Smith and T. Thomson.

A small but choice selection of Aberdeen-Angus was present. Mr. J. J. Cridlan won for bulls, and Mr. W. B. Greenfield for cows, the latter taking champion honors.

Lord Rothschild's herd came well to the front in the Jersey contest. Choice and typical animals owned by his lordship won both male and female championships, the former a yearling bull, Protector, and the latter a three-year-old cow, Oxford Snowdrop. The Earl of Rosebery, Sir E. D. Stern and Mrs. McIntosh were also amongst the leading winners.

A small entry was made in the classes for Guernseys, Kerrys and Dexter Kerrys. In the first, Mr. E. A. Hambro won the principal honors. In the second, Lady Greenall and Mr. T. Waite; and in the last, the Duchess of Devonshire and Mr. B. de Bertodano.

The dairy classes for Shorthorn cows had an excellent entry. In the cows over four years of age, Mr. C. Adeane was first with Ingram's Rose, Mr. Taylor being second, and Lord Rothschild third.

In the younger class, the Marquis of Winchester was first and Lord Rothschild second.

In the family class, three Shorthorn breeders took leading honors, in the order named: G. Harrison, Dyke Bros., and T. Thomson.

HORSES.

The horse classes were fully up to the average, and although exhibited under most unfavorable weather conditions, the result of the competitions were, as a rule, generally satisfactory. The older Shire stallion class had for its winner Dunsmore Iron Duke, owned by Sir P. A. Muntz. The leading two-year-old was Ratcliffe Conquering King, owned by Mr. F. Farnsworth, Mr. F. E. Muntz taking second with King Forest. Dorothy of Waresley, owned by Mr. J. G. Williams, won first in the mare-and-foal class. Sir P. A. Muntz's Dunsmore Nougat took a similar position in the four-year-old class, and in the classes for three-year-olds, two-year-olds and one-year-old fillies first honors went in each case to Mr. W. T. Everard—a notable series of success, and particularly so as each of these three were sired by Lockinge Forest King. The names of these three winners were Bardon Raisin, Ashley Royal Duchess, and Bardon Flower of the Forest.

SHEEP.

A fine collection of Oxford Downs were forward. Mr. J. T. Hobbs won first and champion for yearling rams, first for yearling ewes, and also champion for same, and first for yearling ewes in full fleece. Mr. J. Horlick was second for yearling rams and second for yearling ewes, as well as fourth in this class; typical and excellent sheep in each case. Mr. Brassey was third and fourth for yearling rams, and second for two tegs in wool. Mr. G. Adams was winner all through the lamb classes. Messrs. H. W. Stilgoe, W. J. P. Reading and J. P. Hobbs also won in these classes.

The Hampshire Down section was a good one. Mr. James Flower won first and champion for his pen of ram lambs; he was also first for yearling rams and first for ewe lambs. Sir W. G. Pearce, Bart., the Hon. D. P. Bouverie, H. C. Stephens and Sir A. Henderson were the other winners.

A choice collection of Southdowns made up fully an average entry. First and champion honors, as well as r.n., for rams went to Mr. C. Adeane. Sir T. V. S. Gooch won first for ram lambs, the Duke of Devonshire for yearling ewes, and Mr. J. Coleman for flock ewes. The Duke of Devonshire won champion honors for yearling ewes.

SWINE.

The Berkshire pigs were represented by a thoroughly typical entry. Mr. Hudson's Oakford Emperor took champion honors, and the Duchess of Devonshire's Polegate Dorcas 2nd, r.n., for champion honors. These breeders, together with Lord Calthorpe, Messrs. J. Lawrence, J. Jefferson and G. T. Inman, were the principal winners.

In the other breeds, Mr. C. Spencer took the leading awards.

W. W. C.

CAUSE OF LOSSES OF SPRING PIGS.

Editor "The Farmer's Advocate":

I sincerely believe that lack of exercise is the main cause of the weakness and early death of so many of the pigs born in the spring as compared with the small losses experienced in the case of fall litters. No doubt there are other causes, such as improper feeding, damp and muggy weather, etc., but it is next to impossible for a sow that had no exercise during pregnancy to drop a strong litter of pigs. Besides, a sow which is kept in a pen all winter does not generally breathe the purest of air, as piggeries are hard to ventilate and keep warm at same time. If she is kept in the stable with other stock, she is generally put in the darkest and most out-of-the-way corner, where it is so inconvenient to go that the pen is left weeks at a time without being cleaned. She lies on muck twenty out of twenty-four hours, breathing the foulest of air. The feed she eats cannot be well digested, because she has no exercise, and with the carbonic acid gases which are continually inhaled by her, she soon gets feverish, and the young which she carries suffer. Lack of ventilation in an incubator will kill the embryo chick, and we do not suppose that mammals carrying their young can be penned up in a tight box without injury to their offspring. These experiments at the Minnesota Experiment Farm were all right, perhaps, as far as the individual animals experimented with were concerned, but I have no doubt that with breeding stock lack of ventilation is bound to tell after a few years. The progeny is a little bit weaker than the parents, and gives life to young ones weaker yet than it is, and it keeps on thus for a few years, the stock more and more debilitated, till at last the owner is surprised to find out that his herd has been wiped out by cholera, and that his stock in general is apt to "catch" any disease which passes. If the stock was stronger, the fatal disease germs might float in the air around them, and their natural healthfulness would be the best prevention; for it is now generally admitted that the weakest generally fall prey to any disease.

It is not easy sometimes to give the sows the exercise which they need. In the milder climate of the south of Ontario, the barnyard generally offers the best chance for this. The old straw stack, around and under which the in-pig sows used to take shelter, was not strictly according to our more modern ideas of keeping stock, but it is a question whether more pigs could not be saved from the sows thus kept than from those which are now housed in elaborate piggeries.

Even the straw stack, however, is too cold a spot to winter Northern Ontario or Quebec sows. A large covered shed, in which the hogs can be turned out every day, is what we use at Stadacona Farm, and with good results. This shed has to be very well lighted, but must be free from drafts. It does not matter if it freezes hard in it. A few oats lightly spread on the ground, for the shed is better for having no floor of any kind, encourages exercise. Some of the older sows, though, especially if they are inclined to be a bit troubled with rheumatism, will lie down in the shed and not move. There is then no other thing to do but to drive these around for a while. A good whip is as good as anything to arouse these lazy mothers out of their stupor. If a man has a piggery with no shed near it, he can turn out the sows during the mildest days, and give them a little exercise in the alley. But these are poor ways, as if it is blowing a cold wind, the sows will huddle together and not move when turned outside. They then soon get chilled; and in the alley, a boss sow will for hours bar the way and keep the rest fighting with each other in one end of the piggery.

I notice that some well-known authorities now advocate the individual farrowing pen out in the yard, 6x6 to 8x8, of the Bonham or Holme type, or of the A or Lovejoy fashion. I may say that these are all right where there is not too much snow, or where it is not too cold, but if these come into general use it will not be many years before the pig men find they are not raising many more pigs than heretofore. If the cold does not stunt the young pigs it will chill them, and they will scour; even if it is not cold enough for this, the youngsters will huddle together, and not thrive, if the sow does not tramp or lie on them. The pendulum swung a few years ago towards the elaborate, tight, stuffy hog barn, it has presently come right back to the other way, and any single boarded small shack will now do. Things will, however, right themselves. Breeders will build good substantial piggeries, ventilate them well, keep them warm when needed, and air them out occasionally, spring pigs will be dropped and live, and the millennium will have come—the day when the pig man has nothing to grunt about.

GUS. A. LANGELIER.
Quebec County, Que.

THE LATEST ALFALFA STORY.

We find the subjoined item in the New Zealand Dairyman. The eulogy of alfalfa is but little exaggerated, if at all, but the tick part of the story is pretty tall. We know, of course, that thrifty animals seem less subject to attacks of parasites than those which are in run-down condition, but even thrifty cattle have ticks sometimes. However, here is the yarn:
The report that tick-infested cattle in Queensland, turned into lucerne (alfalfa) paddocks, shed their ticks and come out cured, prompts the remark that a lucerne paddock will perform greater miracles than that. So great is the growing power of lucerne that it has been known to lift mortgages of the largest size off a farm. Lucerne

fills the milk pail, improves the flocks, fattens the porker, overflows the egg basket, enriches the soil, doubles the value of land, and swells the bank balance. So there need be no surprise that it will do a little thing like banishing the cattle tick."

THE STOCKMEN'S PROBLEMS IN WESTERN NOVA SCOTIA.

Editor "The Farmer's Advocate":

As a result of Institute teaching, good farm papers, and thought on the part of the farmers, we are, as a rule, giving more attention to stock, and working out the problems of profit and loss. There is more of the weeding process going on among herds, and the farmer of to-day does not send to the butcher the surplus chosen haphazard, but is looking out the unprofitable ones to dispose of. Heredity is taken into more account, and heifers from good sires or dams receive more consideration. The small size of the farms is a hindrance to large herds, so we will never attain fame as breeders of pure-breds. Possibly the best we can hope for, as a rule, is to work into small dairies, or raise as good steers as possible for beef, and get as near as possible the milking beef animal. The scrub cow is still strongly in evidence, and we venture that 99 per cent. of the cows in the county are not paying for their board, if we charge everything up to them at market prices. The Ontario and Western feeders have the advantage of us in the price of feeds; the difference being approximately five dollars per ton for most of the millfeeds in favor of the Western man. If, however, we charge up to the animal feed at about one-third to one-half price, as they do on the experimental farms, possibly 50 per cent. of the animals would pay for their keep.

types, no effort is made to breed any one kind of hog. At the present price of 9 to 9½ cents per pound, there is certainly money in raising hogs, and everyone who can is doing so. When the inevitable slump due to overproduction comes, many will drop out of the business. A white hog is most in demand. R. J. MESSENGER.
Annapolis Co., N. S.

THE FARM.

ALFALFA USED IN ROTATION.

An objection frequently raised against alfalfa is that it is not well suited to grow in a rotation of crops, requiring two or three years to come to its best, and being exceedingly difficult to break up, owing to its enormous taproots. Realizing the force of these arguments, "The Farmer's Advocate" usually recommends sowing alfalfa on land such as hillsides, where it may be left year after year. At the same time, readers must not get an exaggerated idea of the so-called drawbacks above mentioned, for it is by no means impracticable to plow alfalfa in the usual way, and there are farmers in the United States, if not in Canada, who grow alfalfa in regular rotation instead of clover, preferring it for its greater feeding value and its superior virtue as a soil improver. Ex-Governor Hoard, Wisconsin, is one of these, and we were greatly interested the other day by a brief description of his rotation and farm practice, given by T. B. Terry in the Practical Farmer. Like Mr. Terry, Mr. Hoard has been a farm-improver and pioneer of advanced ways. Eight years ago he bought a run-down farm of 193 acres, of clay-loam soil. It is now one of the most productive farms in the neighborhood.

The three principal crops on the farm are: Corn for ensilage and crib; alfalfa and barley as a nurse crop. From 175 to 200 tons of alfalfa hay are raised annually. About 25 pounds per acre of seed are sown in spring on a well-prepared seed-bed, along with three pecks of barley. About 60 acres of corn and 20 or 30 of alfalfa are put out each year. Forty-five cows are kept. Some are sold each year, and calves raised to keep the number good. The milk is run through a separator on the farm, and cream taken daily to a creamery. The skim milk is fed to calves and pigs. The separator is run by a tread-power driven by one of the herd bulls. Thus the owner gets a cheap power and the bulls get needed exercise—an excellent way of solving this problem. Silage is fed, and perhaps grain, whenever pastures get at all short in summer. But the cows are never crowded, summer or winter. The winter



Sir Spencer (13211).

Clydesdale stallion; bay; foaled 1904. Sire Sir Hugo (10924), by Sir Everard (5353).

This is the day of the cream separator, and several of the farmers are installing small hand machines. When they buy testers, also, and look to the records of individual cows, we will hope to see some profitable small dairies in the county. No particular breed is being steadfastly followed, and I imagine if we could know all the strains in some of our cows, we would have traces of all the different breeds that have ever been on the face of the earth. A few Shorthorns may be found in the county, and none of the herds over five years old, so it is difficult to predict what may result from the breeders' standpoint. Mr. Frank Bath has one cow that may well pass as a milking Shorthorn. She is well bred, of a fair beef type, and gives an exceptionally good flow of milk. Another factor in making good records, either in milk or beef production, viz., feeding intelligently, is very much neglected. The great majority of farmers give their cows and cattle little besides hay in the winter and what grass they can pick from our rough pastures in the summer. Supplementary feeds are scarcely thought of, and even roots are far from being universally fed. A thousand bushels of roots is looked upon as an enormous crop by many farmers. I think we are coming along, though. Although one of the oldest of Canadian counties in history, we are very young in some things, but we are hoping for better farther on. Some farmers are sending their milk to the creamery; others are separating and making their own butter, trying to build up a steady custom privately. Hog-raising is on the increase in the county. As the Halifax and local markets make little or no distinction between

ration is from 5 to 8 pounds of concentrated grain, 30 to 35 pounds of silage, 8 to 10 pounds of alfalfa hay, and as much corn stover as they care to eat. The calves and pigs get the milk warm from the separator, just as it should be. Brood sows are kept entirely on alfalfa hay in winter—the third cutting—from the time they are with pig until they farrow; no grain of any kind. The barnyard is surfaced with cinders, making it hard and free from mud. It is protected on the south, west and north sides by the buildings, and there is a tight-board fence on the east side. Now notice: Gov. Hoard says the day has to be very cold and raw when the herd cannot comfortably be turned into the yard for several hours. The man behind the cows. And he isn't at all dead at the top. Steady work for the sire and gentle exercise for the cows in fresh air and sunshine. That means strong, healthy animals and vigorous offspring. Not quite so much milk and butter-fat in the pail, but far more health and vigor and constitution in their hides. It means no tuberculosis, taken in connection with the excellent arrangements that are inside of the barn.

I take this opportunity of expressing my appreciation of your valuable paper. Although I have a daily and several weekly and semi-weekly newspapers coming to the house, "The Farmer's Advocate" is always looked for by all, as there is something of interest in it for every one, old and young, hired man and all. Wishing you every success, I remain.
R. A. INKSETTER.
Wentworth Co., Ont.

CONSTRUCTION AND USE OF A CEMENT SILO.

Actual use is the test of efficiency. Three years ago John Barons, Middlesex Co., Ont., erected a cement-concrete silo on the north side of his barn. He started the wall with a wooden curb, but that not proving satisfactory, he purchased for \$90 a set of the steel building rings used for this purpose. These, with the necessary ropes, pulleys, etc., he has since let out from time to time, receiving \$10 per silo for the use of the outfit from persons building. Mr. Barons has filled and fed from his silo for three successive seasons, and is in a position to pronounce it a complete success. In his judgment, the silo is the proper plan of handling the corn crop, and good ensilage an economical and wholesome food for dairy and other cattle stock.

For the benefit of readers of "The Farmer's Advocate," we examined his silo, in which several feet of ensilage remained over, the other day, and obtained a statement of how it was constructed. The dimensions are 29 feet high and 12 in diameter inside. The wall is plumb inside, 12 inches thick at bottom and 8 inches at top. During construction the outer rings were drawn slightly in as the wall rose. The rings are 2½ feet high, and two courses around were laid per day. Portland cement was used, mixed one part to 12 of good, clean, strong gravel and stone to about one-third the bulk of wall bedded in. Were the gravel not of extra good quality, more cement should be used, possibly one to eight parts. A circuit of 5-16 inch round iron was laid in wall every 2½ feet to add strength, 100 pounds being used. Rods are better than wire, as they stay in place when bent. Though not made sloppy, concrete for silos should not be too dry, as it sets harder. Twenty barrels of cement were used, and one-half barrel mixed with water for a wash, applied with brush to the inside as a finishing coat. This is cheaper and more easily applied than a coat of plaster. If need be, two washes could be given rather than one of plaster, and Mr. Barons considers it equally beneficial. He has had no trouble with the ensilage around the walls drying out or spoiling. It keeps perfectly right to the wall, and there is little or no trouble with frost, none spoiling in that way. If the doors are made to fit close there need be no waste there either. Excepting about four inches on the top, a wheelbarrow would hold what has spoiled in this silo in three years. Between the silo and barn wall there is a tile drain, and the bottom of the silo is cement-concrete, one part cement to 12 of gravel. The bottom is about 5 feet below surface of ground outside, and also lower than stable floor. Mr. Barons finds no objection in having silo bottom down a few feet, except throwing up some of the ensilage. More rough stone can be used, thus saving other materials and cheapening the lower part of wall. There is no trouble from water or silage juice running out, for the silo has a roof, which he deems essential. Roofing a silo keeps out rain and snow, which cause more or less inferior ensilage. The corn is well matured when put in. The silo site is naturally well drained. Foundation should be 2½ feet below surface to be clear of frost.

The conical roof is cheaply made. First, a circle of boards 4 or 5 inches wide is laid on top of the wall. For an upright center peak, a block of wood 5 inches square and 3 feet long is used. The roof is made of inch boards 14 feet long, cut in seven-foot lengths, and then ripped diagonally. Four of these are first set up on opposite sides, nailed at bottom to the circle and at top to the block. The others are fitted in till the roof is completed and battens of 1x1 inch pieces put on. On the east side of the roof is a gothic window, 22x24 inches, through which the silo is filled. A blower cutter, run by a 12-horse-power gasoline engine, stationary in corner of basement, is used. Incidentally, it may be added that Mr. Barons thinks very highly of this form of farm power which he uses for silo filling, cross and rip sawing, turning a lathe, corn shelling, pulping, gristing for his neighbors, and other odd jobs. With the blower the silo is filled to the peak of the roof. The work can be done in a day in ordinary practice, but there should be four or five men in the silo to do thorough tramping, a most particular part of the process. The boss himself should be in the silo. Having his own outfit, Mr. Barons puts in a couple of extra loads every day for four or five days while it is settling, and so has a well-filled silo. For taking out the ensilage there are three doors next the barn. The bottom of the lowest one, but on a level with barn floor, is 2 ft. 6 in. wide, and 4 ft. 6 in. deep; the two upper ones are 18x24 inches each. In building the silo scaffold poles were set up five feet out from wall and 12 feet apart, and scaffolding made of planks. The concrete was hoisted in a barrow with a derrick or gin pole, with ropes and pulleys.

Butler Dent and Yellow Flint, well matured, are the varieties of corn grown, with a preference for more of the latter, to ensure a richer ensilage. If any is left over from winter feeding it is covered with building paper and a little sawdust to keep it in good condition for summer feeding, in case of pasture shortage. Five men built the silo in six days, besides which there was the labor of hauling gravel and other material. Cement and other material cost about \$50. The labor bills were not closely reckoned up, but would, we presume, run as much more. Six or seven acres of corn, according to crop, fill the silo. In reply to a question, Mr. Barons replied that in case he were building another silo he would do it in exactly the same way. Octagon or square cement silos are not satisfactory, he says, on account of the corners, and tub silos are not durable, and as they grow older let in air at the cracks, causing more or less ensilage to spoil.

RED CLOVER SEED AS A MONEY CROP.

Editor "The Farmer's Advocate":

Probably no crop requires closer attention, and, as a rule, receives less than red clover. As there are fields better adapted for fall wheat than others, so also with red clover, especially when grown for seed. A rolling clay loam is more preferable than the rich lowlands. In seeding we sow eight pounds to the acre, always on barley or fall wheat. Choice seed only should be sown, as a low-colored, frost-bitten grade lacks vitality, and is dear at any price.

Care should be taken in the autumn not to pasture too close, and all high elevations or exposed places should be protected with a light dressing of coarse manure. The reason for this has been made plainly manifest during the past winter, as much damage has been done by freezing.

Closely and profitably allied with the growing of clover seed is the sheep industry. A flock of twenty-five ewes, with their lambs, may be turned in the early spring on an eight-acre field. If the growth be rapid, additional stock may be added to keep eaten back as evenly as possible. About the 15th to the 20th of June the stock is turned off, and the field left to its last and most interesting stage. If we have a field on which we use the first crop for hay, we do not delay cutting longer than the 20th of June. With the cutting bar well raised, an even growth of three to four



The Cross-roads Blacksmith Shop.

inches is left, leaving the roots less exposed, as well as helping to conserve and retain moisture.

From now on, especially after the 12th of July, the fields require close attention. With such favorable surroundings foul seeds will flourish and luxuriate. A little time and trouble spent at this period may mean many dollars when market day comes.

The most important factor in the production of red clover seed is the bumblebee. In its honest toil of gathering and storing honey, it carries with it from blossom to blossom that fine dust or powdery element called pollen, which fecundates, and, finally, under favorable conditions, produces seed. Every care should be taken for the protection and preservation of the bumblebee. This year, contiguous to the clover field, we have made nests of old cans and small boxes stuffed with refuse wool and old rags, out of reach of the field mouse.

The latter days of August, when the clover should be in full bloom, if not the most interesting, are certainly filled with the greatest expectancy. By taking the separate petals from the parent blossom and holding to the sunlight the dark form of the developing seed may be easily seen. If infested with midge, the experienced eye may also detect these salmon-colored gnats. By close observation from time to time the condition of the crop may be easily ascertained. If unsatisfactory for seed, do not make matters worse by letting it deteriorate. Where are your 40 or 50 lambs for winter feeding?

It is right here that the occasional grower of red clover becomes disappointed and discouraged. He cuts perhaps about the 10th or 12th of July—"not going to spoil the first crop for the sake of the second." Occasionally this may do all right, but nine times out of ten it is midge eaten, or destroyed by early frosts, the result being a big threshing bill and an empty purse.

The year '97 was our banner year for clover. This was the year that fall wheat was threatened with destruction through wet weather at time of cutting. This was followed with dry, sunny weather. We threshed 6 bushels per acre, and sold for \$4.00 per bushel. Last year our entire crop was cut, our yield being about 3 bushels, which we sold (uncleaned) to a Toronto firm of seedsmen for \$8.20 per bushel. To say nothing of 30 tons of hay, the seed yielded \$25.00 per acre, which at the time of selling was equivalent to 35 bushels of wheat, 50 bushels of barley, or 70 bushels of oats per acre.

The growing popularity of an inverted clover sod as a seed bed for fall wheat, combined with the feeding and fattening qualities of well-cured clover hay, are causing the Ontario farmer to sow double the quantity he did ten years ago. Last year our supply was inadequate

for the home demand; one dealer alone in Toronto importing sixty tons of English-grown seed.

With a growing market at our own doors, a splendid opportunity lies open for those who will specially interest themselves in the growing of pure red clover seed. York Co., Ont. W. D. WATSON.

FROM WORST TO BEST.

Editor "The Farmer's Advocate":

I had the pleasure of introducing the first split-log drag into this section. Now there are quite a number of them working, and giving good satisfaction on these clay roads. About the first of April we had two miles of the worst clay roads in Ontario, and I started at one mile for "The Farmer's Advocate" prize, and to-day I think I am safe in saying that I have one of the best miles of road in the Province; the other mile was worked with a split-log drag, but not for a prize. My drag was made out of cedar and faced with steel so as to make it cut a little. I had a little bother at first; the clay was rather too soft; it would clog up, and would have to be lifted up every little while. I think if the split-log drag is used just before the ground is quite dry it helps to fill up the ruts better.

HALTON COUNTY FARMER.

THE COUNTRY BLACKSMITH SHOP.

Who does not recollect with what curiosity in his boyhood he watched the movements of the village blacksmith, as he blew his bellows at the forge, bounced his hammer on the anvil, and brought into shape the horseshoes and other products of his skill, while the sparks flew hither and thither? It was a revelation to the youthful mind, as it still is, as one after another in the cycle of years makes his first visit to the smithy to see "Dobbin" and his mate have their shoes reset or new ones fitted to their hoofs. What boy does not admire and envy the man who can and does "make things"? And who does not respect and honor the honest toiler at the forge, who fills an important and valuable place in the business activities of the community in which he lives?

A CHEAP HOG TROUGH.

Mr. Wm. Linton, York Co., Ont., recommends the following method of making a cheap and serviceable hog trough: Take half of the spokes out of an old binder wheel, put a bottom in it, and it is complete. The hogs cannot upset it, and when you want to move it, just turn it up on edge and you can run it where you want it.

THE DAIRY.

AS TO RETURN SHIPMENTS OF BUTTER.

It sometimes happens that butter shipped from Montreal to Britain lands on a market lower than the one it left the week before. Occasionally the difference is enough to warrant reshipment to Montreal. Formerly this was easily accomplished with no charge except transportation, but under the new Canadian tariff the butter cannot enter Canada duty free unless returned to the exporter thereof. The old tariff read:

"Articles, the growth, produce and manufacture of Canada, when returned after having been exported, provided the proof of the identity of such articles and goods shall be made under regulations to be prescribed by the Comptroller of Customs, and that such articles and goods are returned within three years from the time of exportation without having been advanced in value or improved in condition by any process of manufacture, etc.—Free."

The 1906 tariff act specifies that the goods must be returned to the original exporter, otherwise they are subject to a tariff of 3 cents per pound under the preferential schedule, or 4 cents under the general and intermediate.

WARNING RE GREEN CHEESE SHIPMENTS.

Mr. MacNair, Canadian Commercial Agent at Manchester, in a report to the Department of Trade and Commerce, Ottawa, notes the prevalence of low prices for cheese, sales of Canadian product having been made at six pence. He observes that the reputation of Canadian cheese suffered somewhat last year from being shipped too green, and warns exporters that it is necessary that cheese should be adequately ripened before shipment.

DAIRYING AND MEAT PRODUCTION OF THE FUTURE.

Query.—“Having in view the prospective growth of Canadian population, accessibility of British markets for dairy products and meat, and our prevailing conditions and tendencies, how are the industries of beef-raising and dairying likely to compare in profit during or at the end of the present quarter century?”

This query certainly does open up a wide field for speculative thought. While it is not wise for anybody to go into the prophesying business, still it is wise for anybody to look ahead, and many a young man—and older one, too—starting out for himself, will likely find himself up against such a question. In fact, he will ask himself, “What are my prospects for success in either one of these industries?” The writer found himself up against just such a proposition over twenty years ago, when starting out to “hoe his own row.” Though brought up to feed beef cattle, it did not take long to realize that beef at 5½ to 6½c. a pound for live export steers was quite a different thing from selling those same steers at 4½ to 5c. a pound. In fact, it just means the difference between profit and loss. With the low price of beef and not a very cheering outlook for a raise twenty years ago, it seemed to the writer that the prospects were better in the dairy business. The consequence was the beef herd, or general-purpose herd, as they were sometimes called, were closed out, and dairy cattle put in their place. That is how the writer solved the problem, and it is a solution that worked out quite satisfactorily and profitably.

But what of the future? First, we will consider the cost of production. Are we producing either milk and its product or beef as cheaply as we should or can do? Take dairying, for instance—the production of milk. It can hardly be said that we have been doing “business” dairying. It has merely been a sort of side line. When we come to bring the product of the dairy cow up to two or three times what it has been, we will see how much more we increase our profit. What some are doing to-day, many will surely learn to do in the future, and we may therefore look for a greatly-increased production from the average dairy cow, and consequently a great deal more profit. We have, for instance, the example of the late E. D. Tillson. Sixty-five of his cows, mostly grades, and bred by himself, averaged over 10,000 pounds of milk yearly. Although this work was undoubtedly carried on with all possible correctness, it has not had the weight that it should have, on account of the records being private records; and on top of this, Mr. Tillson, as is well known, owned several flour and oat mills, and many had the idea that the large records were caused, not at big profit, but by heavy feeding. In fact, there are to this day many people who consider that large records are “forced” records. Anybody who understands the nature of feeding stock, if they would give the matter thought, would know there could be no such thing as so-called “forced” records, because, when we go to overload the animal's stomach, even the slightest, we interfere with the digestion and get less instead of more, but it would be idle to try to convince some that such is the case, and the only way we can come at the figures that are reliable would be to take the figures that are the work of the experimental stations; and that should be their object, not in trying to do average work, but in trying to do the very best possible to show the public what can be obtained in any branch. Then, to get at the cost of production, we will take one of the cows at the Agricultural College for an example. This cow has given, in five months, 10,693 pounds of milk, with 397½ pounds of butter-fat. Valuing this fat at what they are actually getting a hundred miles away from the market, we have in round numbers \$115, to which we should add \$20 for skim milk, making a total of \$135 in five months. The cost of the feed has been \$39.10, leaving a profit for the five months of \$95. This has been produced at the most expensive time of feeding—during the winter. While the cow will not give quite as much per month during the rest of the year, she will be on grass most of the time, and will be able to show even a less cost for production. These figures, though very large, are beyond question. They prove how profitable it is to feed a good cow, and that large records are not made by forcing, but simply by good care and proper feeding, and to feed such cows less or to give them less care, would certainly be cruelty. It also shows us the great possibilities for expansion in production of the dairy cow.

It may well be said that this is an especially great cow. True, she is a good one, but still there are others doing even better, and consequently making more profit. To compare with this work could we, under the most favorable circumstances or with the best beef animal, anywhere approach the profit the dairy cow is making? What is true of the best individuals would likely be true also of fair averages.

The next question is, can beef production be cheapened? It would seem, then, as if we had

about reached the limit of lowering the cost of producing beef.

The next question would be as to the values of the different products, the actual value. It has been determined by scientists that a quart of milk is of as much food value as a pound of beef, though, of course, it does not bring nearly the price, and a pound of cheese would be still more valuable. However, we cannot go altogether by the actual food values, because we see in the case of butter that although the butter-fat has comparatively little value as a food, still it sells for a much higher price than either cheese or milk. It is, however, used more as a relish than as a food. Beef, we must consider a good deal from its food value. Then, again, the question comes up, the tendency of the times seems to be changing in the demand for meat, and there is undoubtedly getting to be a great deal more pork consumed, and as a pound of pork can be produced for less than a pound of beef, it will no doubt have a tendency to keep down the price of beef. Another phase of the question is, it is true that there will always be a certain amount of beef wanted. It would seem, therefore, that the price of this product must eventually rise; because there must finally be a profit over the cost of production, or else, as this is a “figuring” age, there will not be many engaged in producing beef. It seems to me that the production of beef is about on a par now with the production of butter a few years ago. We know it is not very long ago that butter used to sell often at 12c. to 15c. per lb. This butter was produced at individual dairies, and the woman of the house getting the butter money, she, of course, considered there was good “profit” in it at that price, although the man that fed the cows, if he figured up the feed that they consumed, would find that he would be out of pocket. About on all fours was this with the story told of the Rev. Henry Ward Beecher, who at one time tried his hand at farming. He bought some hogs and

thirty to forty thousand at the end of a quarter of a century, which we may look for, we should certainly expect a greater home market for products. As the country gets more settled and land becomes dearer, dairying is about the only business that farmers can continue at a profit on high-priced land, and owing to the increased cost of living and the increased price of labor, farmers will have to do a lot of figuring and take up the branches that will yield the largest profit. The beef will likely be produced on cheaper land and where the facilities for combining in making up the products of the dairy are not so good.

With all the facts and figures and as to the profitableness of keeping better cows, surely at the end of a quarter of a century dairy cows will be producing 8,000 to 10,000 lbs. milk yearly. Shall the beef breeds be able to show such a substantial gain? If not it would seem that dairying must be by far the more profitable in the future as it is at present.

GEO. RICE.

GREEN CHEESE SHIPMENTS THREATENING TRADE.

Editor “The Farmer's Advocate”:

Referring again to the question of shipping green cheese, and to your editorial thereon in the issue of May 9th, permit me to add one more word on the subject.

I fully agree with what you say about the blame which rests on the buyer, and the temptation which the salesman has to face when he is urged to let the cheese go as soon as they are out of the press. I have no excuses to offer for the buyer, but I have been more desirous of suggesting a remedy for the evil than to discuss the somewhat abstract question of who is most to blame, because if we do succeed in reaching a decision on that point we will still be where we are now in regard to the main issue.

I notice that it is very generally assumed that there is a temporary gain to the factory which sells “green” cheese, and in your editorial you state that the buyer takes them because he is afraid of the price going down. Now, I take quite the opposite view of the case. I believe the buyer takes green cheese because he believes the market has an upward tendency, so that he will stand to profit by the increase. It does not follow that his judgment is always correct, but during the past year it more often turned out that way than otherwise.

No doubt a period of depression, with a falling off in the demand for cheese, would tend to cure the evil, as has been suggested. I am bound to say, also, that to continue the practice of shipping green cheese is one of the surest ways of bringing on such a depression, by lessening the

consumption and causing stocks to accumulate. That will be a very expensive cure, however, and will cost the patrons of cheese factories many millions of dollars through lower prices. By holding back the cheese we increase the scarcity, stiffen the prices, and at the same time encourage the consumption of cheese by giving it time to reach a better condition, and thus help to continue the active demand.

Canadian dairymen have been very fond of congratulating themselves on their wisdom in refusing to make skim-milk cheese, or filled cheese, even at a temporary gain, and have professed to have been content to lose that gain for the sake of a good reputation and the future welfare of the trade. They now have another opportunity for a display of foresight and sound business judgment.

I am not thinking of the fodder cheese, which has always been moved out early, for the question is much wider than that. Nor do I fail to take into account the injury which results when cheese are held for a lengthy period in a hot curing-room. Shipping the cheese green, however, is only getting “out of the frying pan into the fire,” and is a mighty poor way out of the difficulty, considering how easy it is to provide a cooling room.

Thanking you for your kind words of introduction to my letter on this subject, which appeared in the issue of May 16th, I am,

J. A. RUDDICK,

Dairy & Cold-storage Commissioner,
Ottawa.



Spicy Sam.

First-prize aged bull, and champion male, Ayr Show, 1907.

he bought some feed, and he sold the hogs for quite a bit more than he gave for them, consequently he figured he made on the hogs, but as the price of the feed and the hogs together was much more than the total selling price, he lost on the feed, and that is about the way the butter business has been carried on. However, it is changed now, and it is not likely the butter will be sold at such small prices in future. In fact, even now, butter should sell at about 30c. a pound to make as much out of the milk as can be made when the same milk is made into cheese, and as there are a great many producing beef at little or no profit at all it is the same as butter-production formerly.

The probable solution of the beef question will be that the losers will go out of business and thus diminish production, and beef will sell for higher prices, but we may be certain that it will take some years before this point is reached.

There is a lot of beef being produced from poor stock which comes under the head on the market as “butcher's stock.” As producers get wiser they will surely cease to produce this “butcher's stock,” thus leaving better prices for what is produced. In dairying of the future it is surely not possible that dairymen will continue to milk such poor cows, and when the production per cow is increased to two or three times what it is now the profit will be much greater. Added to this it is reasonable that we should look for an expansion in the production of dairy products, especially in regard to the consumption of cheese, as in proportion to meat it does not sell for its actual food value now. Besides the consumption of cheese per capita is now very small and is likely to increase, and with the increase of population to, say,

COMMERCIAL VALUE OF A GOOD NAME AND STANDARD PACKAGE.

J. B. Jackson, Canadian Commercial agent in Leeds and Hull, writing in the Weekly Report of the Dominion Department of Trade and Commerce, explains just why it is that many exporters of Canadian creamery butter are so anxious to have choice Canadian butter packed in casks instead of boxes. The householder in the North of England (which is the stronghold of the Danish trade), from long experience with Danish butter packed in kiels, has come to associate casks with reliability.

"The Danish butter is the only brand of butter received in England which is always good and uniform in color and texture. No buyer, be he buying wholesale or retail, desires to see or to sample Danish butter; the brand on the cask is sufficient. Let the buyer drop into the smallest grocery shop and buy his pound of best Danish, he can depend upon its quality without investigation. This butter, which is always right, and never rancid or off flavor, is known to everyone by its cask form. For these reasons not only the shopkeepers but the public are prejudiced against box packing, by reason of the fact that all inferior butters, and the legions of butter mixtures as well as margarine, are packed in boxes, and when they see butter on a shop counter of a square or oblong shape, like a box, they run away with the idea that the butter itself is inferior, or perhaps 'margarine,' or next door to it. When the housewife enters the store she is prejudiced right off against butter put up in the shape of a box, if it is standing side by side against some more butter in the shape of a cask. The former is something inferior in her opinion. This is a very old prejudice in the north of England, but it must not be supposed that this prejudice exists all over the British Isles; in fact, in the south of England box-packed butter is said to sell equally as well as cask-packed butter. Canadian butter also would appeal much more to the public in the north of England if it were not so 'highly colored.' It should be made as near approaching a very pale straw color as possible, and should not be salted more than one-half as much as in Canada."

CANADIAN BUTTER AND CHEESE IN WEST INDIES.

Canadian cheese is holding its own fairly well in the various West India markets, according to the weekly report of the Trade and Commerce Department at Ottawa. In Demerara its chief competitor is the Gouda, made in Holland. The Gouda, though of equal quality, is preferred, owing to being put up in 10-pound sizes, packed four in a shallow box, with partitions between. Canadian cheese, put up the same way, would have a better chance. The Gouda costs 15 cents per pound, f.o.b. Holland. In Trinidad some complaints were made as to the keeping qualities of Canadian cheese. American Unadilla is the brand most favored. In 1905-6 there were imported into Trinidad from England, 37,000 pounds of cheese; from Canada, 18,000, and from the United States, 225,000 pounds.

Canadian exports of butter show fair results in the better grades, but in many of the islands the trade calls very largely for a quality which can be sold to the populace at a very low figure. In Demerara and Trinidad this demand is supplied by French butter, which is of a quality and sold at a price with which Canadian butter cannot compete. It contains about 72 per cent. butter-fat, the balance being water and salt in equal proportions. It sells for 22 cents per pound. Americans are now making up a compound to compete with this. By far the greater proportion of the butter is sold by the pennyworth over the counter. It was stated that Canadian butter would not keep as well as French after being opened. In the other islands the demand for a cheap butter is filled by oleomargarine from the United States. 'Bluenose' butter shipped from Nova Scotia is well liked, though considered by some not quite equal to the Danish.

THE COW AND THE MILKING MACHINE.

Editor "The Farmer's Advocate":

With regard to the practicability of the Burrell-Lawrence-Kenedy cow-milker, I beg to say that we have tried this machine carefully, and have come to this conclusion, that it is practical for the practical dairyman. For the breeder of registered cattle, however, I doubt if it will be practical. Some cows do not seem to take to the machine, and will not produce as much milk in a year as if milked by hand. The practical dairyman who will weed out these cows and get those in their place which will, can do practically as well with the milking machine as by hand. The breeder, however, who has high-priced cows can scarcely afford to do this, and I think for the present are doomed to milk by hand. I think that a young heifer brought up to milk by this machine will respond to it much more readily than older cows; yet, as to whether a heifer could be developed into as good a producer on the milking machine as by hand, I am not able to state. I don't think anybody can answer this question positively. It may possibly be that it takes the hand manipulation of the udder in order to get the highest development. Nothing but experience will warrant in saying this.

Only a short time ago I had a chance to talk with Mr. Guerler, of De Kalb, Ill., about the milking machine, and he assured me that he considered it prac-

tical, and was milking all of his cows, some 200, with the machine, and would not think of going back to hand milking. However, Mr. Guerler is what I would denominate a practical dairyman, and when he finds a cow that does not respond to the milking machine he simply gets rid of her and takes another cow. Cows can be found that will give as much or even more milk milked by the milking machine than by hand, especially where one depends upon hired help to do the hand milking. Michigan. COLON C. LILLIE.

SPRING SCALES FOR WEIGHING MILK.

Editor "The Farmer's Advocate":

Please let me know if it is illegal to sell spring-balance scales in Canada, as I, thinking that farmers were permitted to use them for weighing the milk from their cows, tried to buy one, and was told it was against the law to sell them or keep them for sale.

B. C.

SUBSCRIBER.

In reply to your letter in reference to spring scales, I beg to enclose you a copy of a circular issued by the Inland Revenue Department in 1905, embodying an order-in-council authorizing the verification of the straight-spring scale, along with some others. The Weights & Measures Branch of the Inland Revenue Department require that the scale shall be stamped "Household Scale" or "Family Scale," that it shall bear a consecutive shop number, as shown in Fig. 1, and that it shall not be used for trade purposes.

The circular spring scale (Fig. 2) is admitted to verification for any purpose.

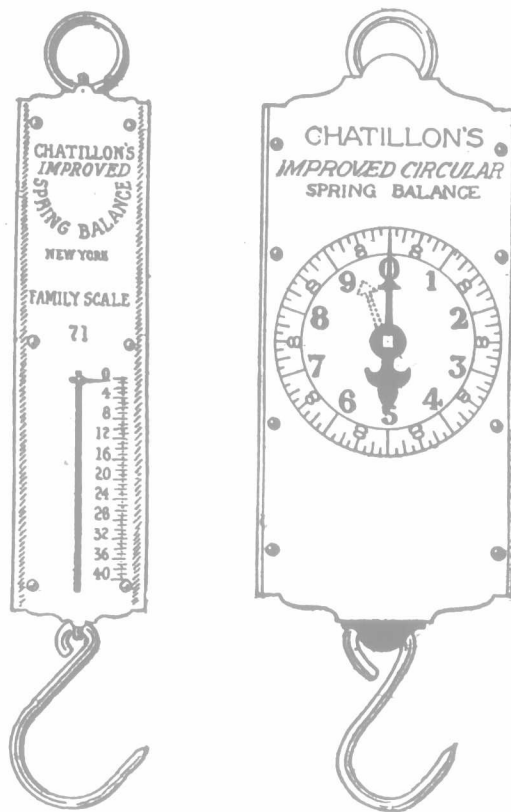


Fig. 1.

Fig. 2.

Spring Scales for Weighing Milk.

It has taken the local inspectors of Weights & Measures considerable time to get thoroughly acquainted with the new provisions governing this class of scale.

Following is the wording of the order-in-council:

"WEIGHING MACHINES of the following description, not exceeding fifty pounds capacity, when having cast, engraved or stamped thereon in bold, legible letters, the words, HOUSEHOLD SCALE or FAMILY SCALE, and having in addition thereto marked thereon the maker's name and consecutive shop number, shall be admitted to verification, provided they give true indications within one two-hundredth part of the load. The knife edges or springs of such scales must be of hardened cast steel, and the bearings such as will resist the action of a smooth file.

"Even Balance Scales, Unequal Arm Scales, and Suspension Spring Scales of the straight dial class.

"The fee for verification shall be ten cents for the first ten pounds and five cents for each additional ten pounds.

"These Scales shall be admitted to verification for household purposes only. Should any such scale be found in use for trade purposes of any description, it shall be seized and confiscated, and the penalties provided by law enforced."

J. A. RUDDICK,

Dairy and Cold-storage Commissioner.

Ottawa.

NATIONAL WINTER DAIRY SHOW.

At a well-attended meeting last week in Toronto City Hall, representatives being present from the Toronto Board of Trade, Toronto Agricultural Society, Milk Producers' and Dealers' Organizations, York County Council, and other organizations, it was unanimously resolved to inaugurate a National Dairy Show the last week in January next, if suitable arrangements can be made, in the St. Lawrence Market Building, granted free by the city. Mr. R. S. Steele, President of the Board of Trade, occupied the chair, and a committee on organization was appointed, and another to ask the Ontario Government to introduce educational features. The expenses of the proposed exhibition were estimated at \$4,500. The city and county councils and other bodies will be asked for grants, a considerable sum being reported already promised. As soon as the sub-committees are prepared to report, another general meeting will be held.

GARDEN & ORCHARD.

HORTICULTURAL PROGRESS.

Prepared for "The Farmer's Advocate" by W. T. Macoun, Horticulturist, Central Experimental Farm, Ottawa.

PROF. SEARS' REPORT.

The report of Prof. F. C. Sears, Horticulturist, Agricultural College, Truro, N.S., will be found in the annual report of the Secretary of Agriculture, Nova Scotia, for the year 1906. In addition to his work in instruction and experimental horticulture at Truro, Prof. Sears has charge of the county model orchards, established a few years ago by the Nova Scotia Government.

In his report the writer deals first of all with the work of instruction, explaining what methods are followed in the long and short courses at the Experimental College, Truro. He then takes up the experimental work, to which we shall confine our attention in this review. The College orchard was planted two years ago, and the trees have done well. As the land on which the trees were planted was badly infested with couch grass, one of the first experiments tried was to get rid of it. A summary of the methods and results was published in "The Farmer's Advocate," issue May 16th.

A comparison was made in the winter of 1905-6 between building paper and newspaper for wrapping trees to prevent injury from mice. Both kinds of paper worked satisfactorily. In order to prevent the newspapers from tearing off, they were wrapped around the trees by starting low down with one corner of the paper and winding it around. The paper is tied in three places with binding twine. A little earth is thrown about the foot of the tree and tramped down to prevent the mice getting under the paper at the base.

There are now 28 model orchards in Nova Scotia, and 4 more are planned for 1907, the object being to have ultimately three of these orchards in each county. A number of these orchards are visited by Prof. Sears each spring and pruned, and instruction given to the experimenter. Nine of the orchards were visited in the spring of 1906. These orchards are on the whole doing well, and the trees in the older ones are now coming into bearing. In addition to the model orchards, there is an older experimental plot at Wolfville which furnishes interesting fruits. Two especially promising plums are noted in 1906. One of these, the Shiro, is highly recommended. It is one of Luther Burbank's hybrids. "It is a large to very large, light-yellow plum, with a fairly abundant white bloom, and is very handsome." A report of this plum from Mr. Arthur C. Starr, Starr's Point, N.S., is valuable. Mr. Starr has one of the largest orchards in Nova Scotia. He states:

"The Shiro is one of the most profitable plums I grow. The tree is very hardy, not winter-killing at all, and makes a steady, vigorous growth, forming a nice, roundish top, not straight up like Wickson, nor all over the farm like Burbank. It needs shortening in or cutting back of the terminal growth, like any other strong-growing Japan plum. It is an early and regular bearer of large, handsome fruit, which is nearly all carried on wood two years or older. In consequence of this, it carries its enormous crop of fruit without any breakage. The fruit is of good quality for a Japanese plum, sweet and juicy, and it is a remarkably good shipper, standing up well during hot weather, and being early it is ahead of the rush, and always tops the market for price. Shiro is certainly the only Japan for me." Mr. Starr has twenty trees in bearing. The Late Orange is an English plum, of the Gage group, and the quality is very good. It is late in ripening, and is especially valuable on this account. It hangs well to the tree.

Prof. Sears is favorably impressed with the Perfection currant, one of the newer varieties. Wilder and Comet are two of the best.

Keepsake and Industry gooseberries have done well. The Langley Gage gooseberry is a promising variety from England. The Tussock Moth did considerable damage in Nova Scotia in 1906. Prof. Sears recommends gathering the eggs, which may be seen on the twigs, in winter, and spraying the trees with Paris green when the foliage is being injured in summer.

POTATO EXPERIMENTS—VARIETIES.

Four bulletins dealing with the potato have been

received lately, and as the potato is one of the most important crops grown in Canada, the information these bulletins contain should be of considerable value to Canadian farmers.

Potato Investigations—Ohio Agricultural Experiment Station, Wooster, Ohio; Bulletin 174, by W. J. Green and C. W. Waid.

This bulletin includes variety tests, spraying to prevent blight and rot, and selection experiments. Of 150 varieties of potatoes which were under test, the following are recommended especially for market: Early—Admiral Dewey, Bovee, Early Harvest, Early Ohio, Early Trumbull, and Irish Cobbler. Late—Carman No. 3, Ionia Seedling, President Roosevelt, Thorburn's White Peachblow, Vermont Gold Coin, and W. W. Mammoth. The following varieties are especially recommended for home use: Early—Bovee, Early Ohio, Early Manistee, and Maxima. Late—President Roosevelt, Thorburn's White Peachblow, Vermont Gold Coin, Vornehm and W. W. Mammoth.

EARLY AND LATE BLIGHT.

There has been considerable injury in Ohio from the early blight, as in some parts of Ontario. This disease is quite distinct from the late blight. It does not cause the tubers to rot, but destroys the foliage, although not so rapidly as the late blight. The early blight appears in late June or early July, while the late blight does not usually show itself until the latter part of July or early in August. Spraying is more effective in keeping the late blight in check than the early blight, but where the latter is troublesome spraying with Bordeaux mixture should be begun early. It was found at the Ohio Experiment Station that some varieties were much more subject to blight than others, and a table is given in this bulletin showing those which proved most resistant to early blight and those which had least resistance. Even individual hills of a variety showed marked resistance as compared with other hills of the same kind. An experiment was begun in 1903, by selecting from hills showing the greatest resistance to blight. A marked difference is now noticeable in the vines of those which have been selected and those not selected of the same variety. There was an increase in 1905 of 40 per cent. of marketable potatoes in the selected over the unselected. Work of this kind is in progress at the Central Experimental Farm in selecting for resistance from late blight, and the results were very marked in 1906. No variety has been found blight-proof, as is claimed for some potatoes, but some are certainly more resistant to disease than others.

Spraying with Bordeaux mixture for late blight has resulted in a gain of 36 per cent. at the Ohio Station. It is recommended to start spraying when the vines are about six inches high, and spray every ten days or two weeks throughout the season. The formula for Bordeaux mixture for potatoes is: Bluestone, 6 lbs.; fresh lime, 4 lbs.; water, 40 gallons; to which should be added 8 ounces of Paris green when there are beetles to kill. It is important to keep the vines covered with the mixture in Eastern Canada, from the middle of July until September. From four to six sprayings will be necessary. A good spray pump is needed. The increase in crop on one acre for one season should more than pay for a barrel pump if the work is well done. An account is given of an experiment in hill selection as affecting yield, and as a result of three seasons' work it has been demonstrated that by selecting from productive hills each year for a number of years the productivity of a variety may be materially increased.

Potato Experiments—Agricultural Experiment Station, Lincoln, Nebraska. Bulletin 97, by R. A. Emerson.

In this bulletin there are a number of different experiments described and results given, but as most of these represent only one year's work, figures might be misleading, hence are not given here. As the conclusions reached, however, are for the most part in accord with results obtained at Guelph and Ottawa, some of them may be mentioned. Seed potatoes which had sprouted badly in the cellar and had lost their firmness yielded 56 per cent. less potatoes than seed which had been kept in a shallow pit out of doors, and was firm, with short sprouts. Medium-sized potatoes quartered make about the best seed. Plant the seed about four inches deep in thoroughly prepared soil. Harrow once or twice before the potatoes are up, to level the soil and kill weeds. Harrow once after the potatoes are up before they are too large to be injured by the cultivator. Cultivate frequently but shallow, stirring the surface soil after every hard rain.

MULCHING POTATOES.

Experiments in mulching potatoes have been a fea-

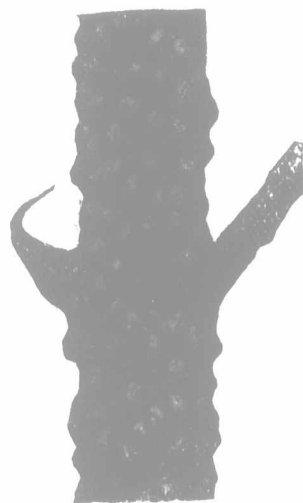
ture of the potato work at the Nebraska Experiment Station for seven years, and the results have been favorable to this system instead of cultivation, as far as yield is concerned; potatoes when well mulched having, as a rule, yielded more than those cultivated, the gain having been as much as 40 per cent. in some cases. In wet seasons or in damp ground, mulching has not given as good results as cultivation. To mulch thoroughly, a depth of four inches is required, which means from 15 to 20 tons of straw per acre. Where straw can be sold at a reasonable price it does not pay to mulch, as in addition to the value of the straw, the labor is considerable. The cost of spreading an acre of a four-inch mulch at the Nebraska Station was estimated to be \$15.00. The potatoes are planted just deep enough to escape the harrow, or about three inches deep. The mulch is spread just as the plants are breaking through the ground, and the plants will continue to grow through the mulch. Mulching is not recommended as a means of growing the general crop, but where potatoes cannot be kept thoroughly cultivated it is said to be better than poor cultivation. Once the mulch is put on no further labor is required until digging time.

What appears to be an important discovery was made in connection with the mulching experiments. For two years an experiment has been tried to determine the relative value for seed purposes of potatoes grown under a mulch and with ordinary cultivation. The results showed in 1905 an increase of 47 per cent. in favor of the potatoes which had been mulched the previous year, and 41 per cent. in 1906. The theory is that potatoes are a cool-weather crop, and need, for best results, fairly uniform conditions, especially in regard to temperature and moisture in the soil. The mulch or litter gives potatoes these conditions more nearly than cultivation. It is moister and cooler under a good mulch than where the surface is cultivated. We believe that the conclusions reached in Nebraska in this regard



On Dr. La Barr's Ranch, in the Kootenay Valley, near Nelson, B. C.

are correct. It has been well proved during recent years that seed potatoes from Scotland and Ireland grown in England will produce much larger crops than seed which has been grown in England, especially towards the south. The theory in Great Britain is that the climate being cooler and moister, the crop matures more slowly, and is hence better for seed than where the seed ripens rapidly. Seed potatoes from the Maritime Provinces are getting a good reputation for high yield in Ontario, and we believe that it is largely owing to the fact that in some parts of the Maritime Provinces it is cooler and moister than it is in some parts of Ontario, the potatoes grow more slowly and will produce larger crops than the same varieties grown in Ontario.



Terrapin Scale (Eulecanium nigro-fasciatum). Adult females on twig of peach. Enlarged about three times original. See article.

THE TERRAPIN SCALE

(Eulecanium nigro-fasciatum).

The following Associated Press despatch appeared in the daily papers on May 17th:

Washington, May 16.—From every State east of the Mississippi River, and from Missouri, Arkansas, Louisiana, Texas, Minnesota, and the Province of Ontario, Canada, the Terrapin scale, the enemy of the peach and other trees, has been reported to the Department of Agriculture. Specimens of the pests from all that territory have been received. The Department in a circular has called attention to the Terrapin scale, in consequence of its wide range of food plants, including both wild and cultivated trees, as a dangerous pest, "which may be controlled, but never eradicated." Small, parasitic four-winged flies are the greatest benefactors in the control of this insect, and a kerosene emulsion has proved an effective remedy. The Government experiments show that lime-sulphur wash, so effective with the San Jose scale, and the peach-leaf curl, is worthless for the Terrapin scale."

This scale insect is not very common as yet in Ontario. The only specimens that we have seen were found near St. Catharines and Walkerville, in both instances not very far from the frontier. In all probability it will come into this Province from the neighboring States at various points, and should be watched for by fruit-growers. It may be distinguished from other scales by its very convex oval shape and its red color, merging into black at the margin. It bears a general resemblance on a very small scale to a turtle, and has, on this account, received the name of "the Terrapin Scale." The color and markings vary considerably, from nearly all red to nearly all brownish-black, but in a mass of the scales many will be found with the characteristic appearance. Usually it occurs in immense numbers, completely encrusting the twigs, and can readily be seen with the naked eye, the winter scales being nearly one-tenth of an inch in length, and the summer ones somewhat smaller. The specimens that we have seen were upon maple trees, which, as soon as the species was identified, were promptly cut down and burnt to prevent the spread of the pest to the fruit trees in the neighborhood. Many of the scales were perforated, showing that they had been destroyed by a minute parasite. This insect is known to infest a large number of trees and shrubs, both wild and cultivated, viz., peach, plum, cherry, apple, pear, quince, hawthorn, maple, sycamors, blueberry (Vaccinium), spice-bush (Benzoin), etc. It is advisable, therefore, to examine trees in the neighborhood of orchards, and to destroy any that may be found infested.

It is satisfactory to know that kerosene emulsion, being nearly one-tenth of an inch in length, and the summer ones somewhat smaller. The specimens that we have seen were upon maple trees, which, as soon as the species was identified, were promptly cut down and burnt to prevent the spread of the pest to the fruit trees in the neighborhood. Many of the scales were perforated, showing that they had been destroyed by a minute parasite. This insect is known to infest a large number of trees and shrubs, both wild and cultivated, viz., peach, plum, cherry, apple, pear, quince, hawthorn, maple, sycamors, blueberry (Vaccinium), spice-bush (Benzoin), etc. It is advisable, therefore, to examine trees in the neighborhood of orchards, and to destroy any that may be found infested.

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VEGETABLE CROPS IN ONTARIO.

The cold weather this spring has not been favorable to the growth of market vegetables, report the crop correspondents of the Ontario Vegetable-growers' Association. All kinds of vegetables are from two to three weeks late. In some districts not much planting has been done as yet. Many growers have lost their young tomato plants by frost. It is probable that there will be only a small acreage planted. Transplanted early vegetables have damped off considerably, and will not be as plentiful as usual. A large acreage of potatoes has been planted, and a good crop is anticipated. The price of old potatoes is high, as new ones will be about a fortnight late. Present indications point to good prices for all kinds of garden truck.

In answer to the question, "When is the best time to prune a Norway-spruce hedge?" Prof. W. T. Macoun, of the Experimental Farm, Ottawa, writes: "The hedge should be pruned in spring, before growth begins. The top may be pruned back severely, but great care should be taken in pruning the sides, as if the trees are cut back to wood without foliage they will not throw out new leaves, as deciduous trees do. Prune to bring the hedge into shape, but leave sufficient green foliage all over the sides and top so that there will be enough buds left to furnish new growth all over."

POULTRY.

EGG MARKET IN NORTH OF ENGLAND.

The egg-importing firms situated in the north of England are already making preparations with Danish, Swedish and other European exporters for shipments of eggs for this country for delivery between the first of October, 1907, and the end of January, 1908, writes J. B. Jackson. It therefore behooves Canadian exporters to make similar preparations for shipments of eggs to the British market, as Canadian glycerined eggs are very acceptable here.

Messrs. Wallaces, of Huddersfield, who are amongst the largest provision dealers in the north of England, state as follows: "The reason Canadian eggs have not made the same headway on the British market as Canadian cheese and other products have done is due solely to the errors of a few certain shippers. The whole trade in Canadian eggs may be characterized as 'erratic.' One month a shipment may come in fine condition, the next shipment to arrive in the following month will be totally the reverse. I have seen Canadian eggs which were in such bad shape that they were sticking to the sides of the boxes."

This confirms my report on several occasions, that one shipper's false packing not only spoils his own reputation, but the whole reputation of the Canadian egg trade in the estimation of the receiving firms on this side.

HOPPER FEEDING SAVES LABOR.

Editor "The Farmer's Advocate":

Our feed hoppers are of the most ordinary kind found in general use, with upright backs and cut-away fronts, which gives the most pressure of feed against the back, leaving the outlet comparatively clear. When made in a reverse manner, as we have seen some, the pressure comes directly on the outlet, causing at times, with some kinds of feed, stoppage and clogging.

The height of the rim of the feed-box or trough at the bottom must vary according to the age and size of the birds for which it is required.

We use these hoppers for all classes of poultry except when fattening, as we then consider it necessary to crate and feed a milk mash to secure the best quality of flesh. We have been in the habit of filling daily, as we have been watching the daily food consumption closely. However, it is not at all necessary to do this, and can be made a matter of convenience.

It is well adapted for about all kinds of feed, but more especially for whole and cracked grains.

The greatest and almost entire advantage of the hopper system is the immense saving of labor, which is a factor to be considered at the present time. In economy of feed, we cannot see any material difference, when care and thought is given, in any manner of feeding.

For the rearing of our breeders, we prefer the hopper-feeding, free-range system, but to rush small chickens for broilers or early marketing, we find we can do better with other methods. We also find this system very satisfactory for laying hens, especially for pullets the first year. We think we can get a larger egg yield from yearling hens by feeding grain in a deep litter, giving them more exercise, as there is a tendency to get too fat.

A. P. HILLHOUSE.

Brome Co., Que.

HOPPER FEEDING AT THE O. A. C.

Editor "The Farmer's Advocate":

Replying to your questions about hopper feeding, issue May 30th, would say the first is a little bit difficult to answer, for the reason that we have tried several kinds. I have yet failed to get a hopper which will feed the "dry mash" satisfactorily. Such foods as chopped oats, bran, etc., appear to clog in the hopper. I think probably the most satisfactory hoppers we have used have been made with one straight wall and a deep incline on the front somewhat similar to the rough drawing I enclose for you.

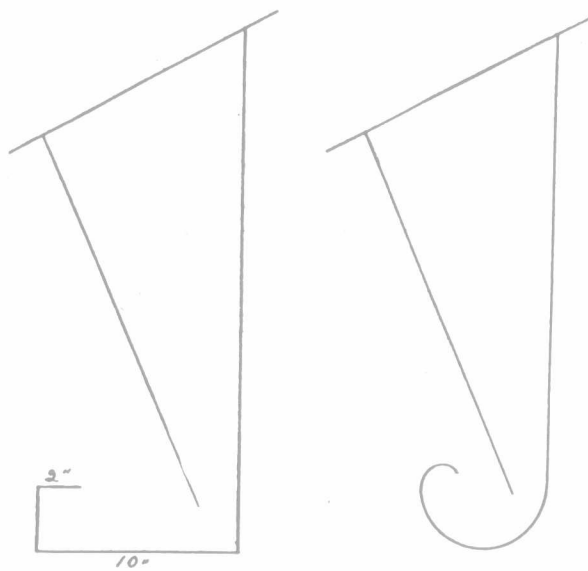
We use hoppers for laying hens and for chicks. The fowls which are being fed from hoppers, as layers, are fed at this season of the year once a day whole grain in litter. After dark the floor is covered with grain in much the same manner as you would sow a field, then forks are used to bury this in the litter. They receive no more whole grain until the next evening at the same hour. The balance of the feed they get from hoppers. These hoppers have two apartments, one of which contains the beef scrap and the other a dry mash, composed of equal parts of bran, shorts, oat meal and corn meal, and in the winter time clover meal.

There are some 200 Plymouth Rocks which are being fed in this way. These birds are not over-fat. In fact, out of over 200, I have had to kill only one with indications of being too fat. It must be borne in mind that over 50 per cent. of these were hopper-fed from chickhood up, which, I think, would make considerable difference.

For young chicks, we handle the hoppers differently. For instance, with a hen and chicks, when the weather conditions are such that we could not let them out a good deal, we would begin hopper-feeding right from the start, putting in a small hopper of cracked wheat or cracked corn, or any other feed which is small in size. We allow the chicks to eat all they like of this for about two weeks, then we begin to intermix whole wheat, and gradually introduce some beef scrap and dry mash.

We like to put the hens and chickens in colonies, so as to have about 100 chickens fairly close together; then, when the chickens get to be a month old, we can use a large hopper, one side of which contains whole grains and the other side dry mash. Sometimes we mix ten per cent. of beef scrap with the dry mash; other times we have separate apartments for beef scrap.

With brooder chickens, we do not undertake to hopper-feed them until they are about three weeks of age. We then put inside a colony house a hopper of whole wheat and cracked corn, and a trough or hopperful of mash and beef scrap. Of



Prof. Graham's Hoppers.

course, this hopper-feeding plan will not work satisfactorily for us until the natural hatching season comes on, or say until April.

The little chicks which are at first hatched with brooders, I would rather not hopper-feed from the beginning, for the reason that I like to develop their instinct to work. After they get large enough so that you can let them run, practically on free range, they may be hopper-fed all you like. You can hopper-feed whole grains more easily than dry ground grains, but I think the latter is the point to be obtained.

Replying to your fourth question, as to a comparison of the two systems, I have not been able to figure accurately yet, but on observation, would say that as far as the economy of feed is concerned, the hopper-feeding method is just as economical as any other method. As far as thrift of the stock is concerned, I think it is equally as good, and it is much more convenient at this season of the year.

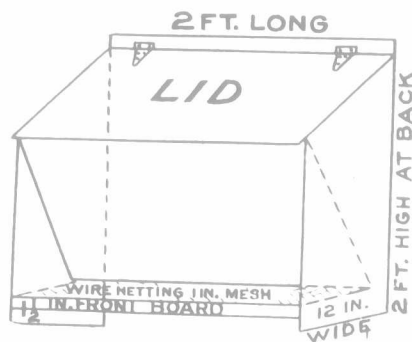
W. R. GRAHAM.

Poultry Manager.

Ontario Agricultural College.

A HOPPER FOR CHICKEN FEEDING.

The cut reproduced herewith was made from a drawing sent us last year by J. W. Clark, of Brant Co., Ont., in response to the request of a subscriber. It shows a hopper which is especially valuable for feeding chickens on the range. It will hold over one bushel of feed, which should consist of wheat screenings and cracked corn, the chickens being allowed to help themselves. The front opening is covered with wire netting (one-



inch mesh will answer), to prevent chicks wasting feed. A division may be put in to feed beef scrap, which is important when chickens are confined. This hopper requires about 13 feet of lumber, and can be made in a few minutes by anyone handy with tools. A smaller-sized hopper may be made from a soap box.

THE FARM BULLETIN.

H. S. ARKELL GOES TO MACDONALD COLLEGE.

The important Chair of Animal Husbandry at the magnificent new Macdonald College, fast approaching completion at Ste. Anne de Bellevue, Quebec, will be filled by H. S. Arkell, B.S.A., since early in 1905 assistant to Prof. G. E. Day, head of the live-stock and farm departments at the Ontario Agricultural College, Guelph. On the Guelph College staff, as lecturer on live-stock husbandry, Mr. Arkell succeeded Prof. Melville Cumming, when the latter accepted the Presidency of the new Agricultural College at Truro, Nova Scotia.

A son of the late Henry Arkell, of Teeswater, Ont., widely known as one of the most successful sheep-breeders and farmers on this continent, his natural inclinations led him along similar paths. Happily, practical experience was coupled with an excellent general educational course, supplemented with the advantages of all the special scientific training which the Ontario Agricultural College affords its students. After spending some time on the staff of one of the American agricultural colleges, he returned to his alma mater, where his work under Prof. Day has steadily improved in all those characteristics of breadth and precision of view, discernment of the problems that are vital to the husbandman, and in the application of scientific research thereto, coupled with just enough of the conservatism of thoroughness to give lasting quality to his undertakings, and a modesty of disposition that leaves results to tell the story of his patient work. He is a distinct acquisition to the strong staff that Dr. Robertson is steadily gathering about him at the new educational institution on the banks of the Ottawa.

SPRING NOTES FROM P. E. ISLAND.

P. E. I.'s greatest drawback is the long, cold, backward spring, and on account of it being somewhat later than usual this year there is a great shortage of feed for farm stock. Nearly everyone seems to be a little short, and the present prospect for next year's crop of hay is not very bright around the fences where the snow lodged. The new meadows are fresh and good, but out in the center of the fields, and especially in the flat places where the ice formed and stayed, the clover is almost completely killed. The old pasture fields seem to be the blackest and deadest of all. A great mistake with many farmers, and one which seems hard to remedy, is very close pasturing of fields in the fall. This has to be done in many cases, of course, in order to save fodder for the long winter and spring, which is sure to follow. This short cropping of the grass in the summer and fall leaves the surface of the ground bare and exposed, and nature steps in and provides a covering, in the form of moss. This moss is by far more noticeable on land that has been fertilized with mussel mud; and when a field gets in this state it is about useless for pasture, and it is best to plow it up and sow to grain again. Although feed is so scarce at present, those having any to part with are satisfied to take fifty cents per hundred for it. There is also quite a demand for seed potatoes, 46c. per bushel is now the price. Both wheat and flour are on the rise, and if reports are correct it will be very high before long. The joint worm has got such a hold along the northern part of this Province that the farmers of that section are compelled to give up raising wheat entirely. This is a great loss, as our Island is well adapted to growing wheat. Seeding has been late and wet.

The fruit buds are beginning to swell, and the prospect is good for an apple crop; other fruit not forward enough to tell. I am glad to see that in the month of July Prince Edward Island is going to have a series of horticultural meetings. Instruction as to the care of the orchard, the handling, packing and marketing of fruit, especially apples, will be given by practical men, who understand what they talk about. As this is perhaps the slackest month with our farmers, everyone interested should attend at least one of those meetings.

Our cheese and butter factories are getting into shape for the summer's work, and I think that this will be the banner year for the dairy industry. Never before did a season open with such high prices for all dairy products, and cattle everywhere have wintered well, and all that is necessary to make this branch of farming a paying one this season is an abundance of grass. Stall-fed beef is very scarce, and also a good high price, 5c. live weight is the ordinary price, and something choice will go higher, and even at this high price I doubt if it would pay to produce beef when feed of all kinds is so high. Oats are in or about the 50c. mark, and potatoes nearly as high, and other grain in proportion to oats.

Farmers would do well to see that their seed potatoes were not touched with frost last winter. We do not want to see a repetition of a failure in the potato crop again this year. Eggs are 14c. to 15c., and the biddies laying well.

Clear up your road front, farmers. Rub a little paint or whitewash on your fences and buildings, and so add to the appearance of your home and surroundings.

C. C. C.

The six Ontario high schools in which the Government will establish agricultural classes this season are Collingwood, Galt, Essex Centre, Perth, Morrisburg, and Lindsay.

IN THE MARKET HOUSE.

Editor "The Farmer's Advocate":

The great majority of farmers' wives thoroughly enjoy taking their produce to market. The pleasant ride to and from the city, the social chat with her customers and acquaintances, the pleasure of handling some cash, and the shopping tours, all tend to enliven and make the tired woman feel that life is worth living; especially when she has something to offer for sale that she is proud of—such as well-flavored, gilt-edged butter; large, fat chickens or fowl; fine, clean, fresh eggs, or lovely, thick separator cream.

In order to obtain good customers and keep them, we must always practice the golden rule—"Do unto others as we would have them do to us." When our customers are satisfied that we are honest and truthful, they will deal with us readily. They will also pay us a good price for our products when they know that we are selling a first-class article. I was in our market house recently. The center of attraction that morning was the appearance of an elderly lady, who attended the market regularly for many years, but had been confined to her room since last October. How glad her many customers were to see her again! Nearly every person in the market house came and shook hands with her, and welcomed her back again. Mrs. M— is a jolly, good-natured soul, kind, obliging, and not a bit stingy. This appears to be the secret of her success. She used to supply a number of our citizens with fresh vegetables during the summer season. After she measured them she would say, in her cheery manner, "Here are a few more, dear, for good measure." I had a chat with her recently, and she told me a little of her history. She said she was 75 years old on her last birthday, and is the mother of twelve good children. One faithful daughter, fifty years old, still remains with her to comfort and brighten her declining life. The best girl in the world, her mother believes her to be. "When I was laid up," she said, "I wanted for nothing, my children were so kind to me." Notwithstanding her age, Mrs. M— still looks hale and hearty.

I noticed several women in the market who were kept as busy as bees during the forenoon. They are always at their post, rain or shine, and their satisfied customers pay just what they ask for their produce. They are willing to pay a good price for a first-class article. Truth and honesty pay.

Farmers' wives read more agricultural magazines than they did formerly. The useful, interesting articles published in "The Farmer's Advocate" have aroused the ambition of many a woman, and when she has carried the suggestions into practice she has achieved success. Dairying and poultry-raising are surely profitable sources of income, particularly at the present time, when high prices prevail. A. R. P. E. Island.

COW-TESTING ASSOCIATION AVERAGES.

Some interesting figures are at hand from the Dominion Dairy and Cold-storage Commissioner's Branch, summarizing the reports for April of a number of the co-operative cow-testing associations. Almost all the duly organized associations are now at work, the members sending in their bottles of composite samples promptly. The figures available will form an interesting comparison, especially for members whose herd records are included in the averages.

At Cowansville, Que., the average yield of 119 cows for 30 days, ending 27th April, is 567 lbs. milk and 22.8 lbs. fat. The highest individual yield is 1,360 lbs. milk, testing 4.8.

The Shearer, Ont., association has an average yield for the same period of 624 lbs. milk and 18.9 lbs. fat. The best individual yield here is 880 lbs., testing 2.7 only.

In the association at Culloden, Ont., the average of 209 cows is 759 lbs. milk and 25.7 lbs. fat for the period ending 7th May. There are several individual yields here of over 1,000 lbs. milk, the highest being 1,386 lbs., testing 3.2.

The 109 cows in the Spring Creek association average 762 lbs. milk and 26.4 lbs. fat. Several individual cows here go over the 1,100 lb. mark; one good yield being 1,470 lbs. milk, testing 3.0, for the 30 days ending 1st May. At Hatley, Que., the average test is the same as at Spring Creek, Ont., namely, 3.4 for the same period, but the average yield is only 543 lbs. milk and 19.0 lbs. fat. The highest production of any one cow is 840 lbs. milk, testing 3.1.

St. Armand, Que., from 161 cows, averages 488 lbs. milk and 18.8 lbs. fat; Woodburn, Ont., with 79 cows has an average yield of 671 lbs. milk and 22.2 lbs. fat.

"The Farmer's Advocate" was pleased last week to meet Principal Davidson, of the Agricultural College, University of Nebraska, who passed through London en route from the Ontario Agricultural College to Michigan and the West. The University numbers an attendance of 3,100 students, of whom 480 are enrolled in the agricultural classes. The Nebraska Agricultural College offers two courses, one of three months in the winter, and another of three years, corresponding to the two-year or associate course at the O. A. C. Unlike the Guelph institution, it does not offer a four-year, or any other course, to qualify candidates for a B.S.A. degree. We are pleased to learn that the three-year course is growing in favor, in preference to the three-months' winter class.

THE BROCKVILLE HOLSTEIN SALE.

The consignment sale at Brockville, on May 24th, of Holstein-Friesian cattle, from the well-known herds of G. A. Gilroy, of Glen Buell, and G. H. Manhard, of Manhard, Ont., drew a large attendance of dairy farmers and breeders, principally from Quebec and Eastern Ontario, and while no sensational prices were realized, the sale was regarded as quite successful. Col. B. V. Kelly, of Syracuse, officiated as auctioneer, and made a good impression, keeping up the interest from start to finish, and disposing of the whole consignment of 85 head in short order, at an average price of \$150. Following is the sale list, excepting a few young calves, sold for an average of about \$40 each:

Table listing female cattle for sale with names, owners, and prices. Includes entries like Lilly Acme 2nd; W. H. Hawes, Athens; Iona J. 2nd; G. Roche, Abbotsford, Que.; Inka Sylvia; W. D. Brecken, Bronte; De Kol Imperial Duchess; W. D. Brecken; Johanna N. Lassle; G. Roche; Iora Sylvia Ira; John Cruise, Lachute, Que.; Jewel Lady Prince; Henry Crowder, Oxford Mills; Carmen Sylvia 4th; E. J. Scott; Inka Sylvia De Kol 13th; R. Sturgeon, Glen Buell; Inka Sylvia 5th (calf); Mr. Essely; Brightest Canary (calf); James White, Indian River; Countess Chase; W. D. Brecken; Pearl of Fairview; W. D. Brecken; Jewel Lady Pet; G. Roche; Highland Phocis; John Stewart, Humboldt; Aggie Grace; W. D. Brecken; Corona's Bessie; E. Horton, New Dublin; Holland Beauty's Queen; J. H. McLean, Inkerman; Betty Buttergirl; E. Horton; Guides; Joseph White, Indian River; Gem Tensen Girl; E. J. Scott; Gem Tensen Posch; J. D. Truesdale, Spring Valley; Jewel Posch; G. McIntyre, Renfrew; Pride of Evergreen; G. McIntyre; Pet of Evergreen; B. Mallory, Belleville; De Kol Madura; W. D. Brecken; Gem Lutske; J. Throop, South Augusta; Delta Gem; J. White, Indian River; Lady Vivian Sutske; John Edwards, Algonquin; Murrill Mutual; G. Roche; Mysie; John Edwards, Algonquin.

BULLS.

Table listing bull cattle for sale with names, owners, and prices. Includes entries like Beauty Cornucopia Lad; John Hopkins, Cumming's Bridge; Inka Sylvia De Kol, 4 months; B. Mallory; Count Gerben, 3 yrs.; B. Mallory; Eric Sylvia; James Brown, Bowmanville.



H. S. Peart, B. S. A. Director of the new Horticultural Station, at Jordan, Ont.

ANOTHER BIG FOUR.

Four outstanding products of the International Harvester Co. are artistically described in a series of four booklets, viz.: 1st, the self-binding harvester and other field machinery and their evolution; 2nd, three hundred years of power development, from the flail and the water wheel to the gasoline engine; 3rd, the manure spreader and its advantages; and, 4th, cream-separator development, with particular reference to those two styles rapidly becoming famous, the Dairymaid and Blue Bell. Our readers will be interested in these booklets, free copies of which may be obtained by dropping a card, mentioning "The Farmer's Advocate," to the International Harvester Co., Chicago, or enquiring at any of the local warehouses of the company by whom these publications are issued.

An agricultural census is to be taken this season by the Census Dept., Ottawa, of the five eastern provinces of Canada—Ontario, Quebec, New Brunswick, Nova Scotia and Prince Edward Island.

BLUESTONE SPRAYING FOR MUSTARD.

As indicated in a recent article on weeds, spraying wild mustard in grain crops is one of the modern methods of eradicating this pest. An outfit is used somewhat similar to that required for potato spraying.

It is usually advised that the spraying should be done after the plants have developed a considerable leaf surface, but before they come into bloom. The point has been disputed, however, by one man, who claims that it is better to defer till the blossoming stage, so as to kill more of the young plants coming on. The work should be done on a calm, bright day.

To prepare the solution, dissolve nine or ten pounds of bluestone by suspending it in a coarse bag in about three gallons of boiling water; the crystals should all be dissolved in about fifteen to twenty minutes. Strain the solution into the pump barrel, and fill with cold water to make forty or forty-five gallons. This quantity will usually treat an acre. Where a large area is to be covered, a "stock solution" of bluestone may be made by using a definite number of pounds of bluestone and a corresponding number of gallons of water. This may be hauled to the field in a barrel and the water drawn in a tank, and kept at the end of the field. If a pond is adjacent, the pump barrel may be filled there. The spray may be applied with an ordinary barrel pump. Place in a cart or light wagon, and drive slowly through the field, holding the nozzle so that all the mustard will be well wet. The bamboo-rod attachment will do the work, but not so rapidly as the horizontal extension-rod mustard-spraying attachment fitted behind the cart or wagon. The spraying-machine companies manufacture special apparatus for this purpose. For instance, a power-sprayer (driving the rod from the wheels) which has an extension rod with ten nozzles, covering a width of about 18 feet at each time across. With this, it is estimated that, when the water is handy, a man to prepare the chemicals, a boy to drive, and one horse, can spray about forty acres per day, which, allowing good wages, would amount to about ten cents per acre for applying. Good bluestone may be purchased in quantity at approximately six cents per pound, or fifty-six cents per acre. Allowing a little margin, however, we might estimate total cost of labor and material at 80 cents per acre. If an ordinary four-nozzle machine were used, the expense for labor would be a little higher, perhaps 20 cents, instead of 10. The cost of a complete ten-nozzle power outfit would run up to \$85 or \$90. An ordinary hand pump, with necessary brass parts and eight nozzles, for mustard spraying, could be procured for, say, \$22 in round figures; a similar outfit with four nozzles for about \$23. A group of farmers in mustard-infected districts might co-operate in the purchase of a power outfit, or, better still, a man might get one and hire it out to his neighbors for so much per acre. Lacking a power pump, however, there is no reason why ordinary hand pumps should not be put into service by attaching a four- or eight-nozzle brass row sprayer.

It is an advantage to have a horse-power machine for large plots. These are made with from four to twelve nozzles, covering 22 feet, each nozzle covering 22 inches, and are made with 40-gallon casks or 80-gallon tanks. Some makers arrange their machines to work entirely automatic, as to throwing in and out of gear, this being done by the pressure. The cask is an advantage for hilly or very soft ground. Combination rigs are also made to spray potatoes, vineyards and orchards.

INSTITUTE EXCURSIONS TO O. A. C.

The Farmers' Institute excursions to the Ontario Agricultural College during the month of June were arranged in the following order by the Department of Agriculture:

- Friday, June 7—W. Middlesex; Saturday, June 8—S. Grey and East Wellington (Mount Forest only); Lincoln; Monday, June 10—C. Wellington; Wednesday, June 12—E. Elgin; E. and W. Peterboro, and E. Durham; Thursday, June 13—C. Simcoe; N. York; Friday, June 14—E. and W. Lambton; N. and S. Waterloo; Saturday, June 15—Halton; Monday, June 17—S. Ontario; W. Durham and W. Northumberland; E. Simcoe; Tuesday, June 18—N. and S. Brant; Welland; N. Wentworth; Wednesday, June 19—Haldimand; S. Oxford; W. York; Thursday, June 20—W. Wellington; E. Middlesex; Dufferin, and E. Wellington; Friday, June 21—E. York; S. Huron; Monday, June 24—N. Oxford; N. Ontario; N. and W. Bruce, and N. Grey; Tuesday, June 25—S. and C. Bruce; N. Middlesex; N. Perth; Wednesday, June 26—Peel; C. Grey; Thursday, June 27—E. Parry Sound; S. Perth; Friday, June 28—S. Simcoe; W. Simcoe.

U. S. RAILWAY EARNINGS.

According to the report on the income amount of railways in the United States, for the year ending June 30th, 1906, which has been recently issued, the gross earnings of the roads amounted to \$2,318,760,080, or an average of \$10.543 per mile; the expenses were \$1,582,163,153, or \$6.963 per mile.

America's Oldest Agricultural College 50th Anniversary.

The State of Michigan boasts the pioneer Agricultural College of America. The constitution of the State, as revised in 1850, provided for it, and the provision was carried into effect by the Legislature in 1855. Last week, with high enthusiasm and grand eclat, the College celebrated its semi-centennial anniversary. The programme of ceremonies lasted six days, and included the annual convention of the American Association of Agricultural Colleges and Experiment Stations, which brought delegates from all States of the Union and Canada, as well as visitors from Germany and Scotland. Most of the meetings of this convention were held in the Masonic Temple, Lansing, but one or two were held at the Agricultural College, in the capacious assembly tent. In addition, the anniversary exercises included a wide diversion of entertainment, from congratulatory, historical and reminiscent addresses, to class reunions, athletic sports, fireworks, parades, conferring of degrees, and, last of all, an epoch-marking speech by President Theodore Roosevelt of the United States, who took as his topic, "The Man Who Works With His Hands." For clear thinking, effective deliverance, Christian spirit and simple common sense, this speech may be ranked among the most remarkable oratorical efforts of this remarkable man. After hearing it, and watching the eager mass of some ten to twenty thousand people assembled to hear him in the natural amphitheatre on the College campus, it is easy to understand the hold he has on the hearts of the American people. He trusts in the people, and they trust him; he is concerned in the welfare of the masses from the purest of disinterested motives. He is a man of action, and he stands for the square deal, but, rarer than all, he combines the prescience of prophecy with the crowning attributes of judgment and simple common sense.

His speech will be published next issue substantially in full. It was a plea for more general industrial and agricultural education as a means of improving the relative financial position of the average citizen, and opening to him the way to a richer, fuller and higher life.

HISTORY OF THE M. A. C.

The Michigan Agricultural College was founded in 1855, with a sum of \$56,320, resulting from the sales of salt-spring and swamp land grants. A tract of 676 acres of uncleared land, three miles east of Lansing, the State capital, was purchased, and four brick residences, a barn, a dormitory and a recitation building were erected, and the College opened for students on May 13th, 1857. In 1861 a State Board of Agriculture was created and placed in charge of the College. It originally consisted of six members appointed by the Governor and confirmed by the Senate. Two members retire each two years. The Legislature of 1905 added another member to the board.

In 1862 the United States Congress passed what is known as the "Morrill Act," appropriating land for the maintenance by the several States of "Colleges of Agriculture and Mechanic Arts." The Morrill Act stated that "The leading objects shall be, without excluding other scientific and classical studies . . . to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the pursuits and professions of life." This Act led to the establishment in several States at first, and later in many more, of Colleges of Agriculture and Mechanical Engineering, in some cases connected with a State University, but nearly always allied with an Experiment Station. From the manner of their founding they are called land-grant colleges. There are 65 of these land-grant colleges in the United States to-day, and all but two give regular courses in agriculture, which courses are attended by an aggregate of 10,000 students. The land-grant colleges introduced a radical change into New World ideas of education. Whereas it had once been the great ambition of seats of learning to eschew studies of commercial or practical value, it has now come to be recognized, as Secretary Wilson of the U. S. Department of Agriculture said last week at Lansing, that we must eat three times a day, and that the first thing to do for a farmer, a laborer, a scientific investigator or a minister, is to see that he has beefsteak for breakfast. The land-grant colleges,

while conservatively adhering to some of the old subjects, such as the study of English, added others which developed the student's intellect by instructing him in useful things, and in the sciences connected with his present and future environment. They have sought not merely to make their graduates good thinkers and good-living men, but have trained them to do things, thereby helping to adapt education to the needs of the masses, and contribute to the efficiency of the American people. Fortunately, the ideals of these technical schools are now being incorporated in some degree into the curricula of the Universities and Colleges of liberal arts. So far as Michigan was concerned, she had previously to the passage of the Morrill Act blazed the path in the way of agricultural courses. By complying with this Act, and adding a course of mechanic arts, the Michigan Agricultural College—for the old name has still been retained—became endowed with 240,000 acres of land.

The Morrill Act was followed in 1887 by a further manifestation of Federal beneficence, in the form of the Hatch Act, which appropriated \$15,000 annually to each State, for the purpose of establishing a State Experiment Station, specifying that it was to aid in acquiring and diffusing practical information about agriculture, and to promote investigation and experiment. In Michigan experimental work had already been undertaken on the College property, but the Federal grant rendered possible a great extension of this line of effort.

Again in 1890 a second Morrill Act granted to the College \$25,000 a year, to be applied to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic science, with special adaptation to the industries of life.

Finally, the Adams Act of 1906 grants additional aid to the Experiment Stations, of \$5,000 the first year, with an increase of \$2,000 each year until the annual grant amounts to \$30,000. The provisions of this Act lay special emphasis upon research. We have, therefore, two generous grants of Federal aid to the College and two to the Experiment Station. Thus early established and handsomely endowed, the Michigan Agricultural College now rounds out a half century of ever-increasing popularity and usefulness. By the 1906 report we find the College had at that writing graduated with the degree of Bachelor of Science 1,218 persons, while over 6,000 had received instruction for a longer or shorter period of time. The courses offered embrace agriculture (including horticulture and forestry), engineering and domestic science; the latter being for the female students, over 100 of whom are at present on the roll. During the winter practical short courses are put on for young farmers unable to enter upon one of the longer terms. There are at present, or were recently, between eight and nine hundred students in attendance, of whom, excepting the ladies, about half take agriculture, and the balance mechanical engineering. Just here it is pertinent to note that for many years there was at most of the American land-grant colleges a great preponderance of engineering over agricultural students, but latterly the agricultural courses have been rapidly gaining ground in attendance and popular esteem. The change has so far been more marked in the Western than in the Eastern States.

FACULTY AND EQUIPMENT.

A beautiful city is Lansing, and richly in keeping the premises of the M. A. C., reached from the city by a street-car line. Scarcely old enough to be venerable, and certainly far from hoary, the park-like precincts have nevertheless attained an air of elegance and finish, except for occasional evidences of new buildings to provide increased accommodation. Fifty-five buildings dot the College grounds, some dozen of these being residences for members of the faculty. Of the remainder, the more noteworthy are the building for women, containing living rooms and other accommodation for 120 young ladies; Abbot Hall, Williams Hall and Wells Hall, for male students; waiting room and post office; armory; chemical laboratory; college hall; library and museum; horticultural laboratory; bacteriological laboratory; botanical laboratory; greenhouse and forcing houses; heating and lighting plant; mechanical laboratory; engineering building; veterinary laboratory; agricultural laboratory; dairy; extensive barns and stables, and a

cold-storage fruit house. Except in a few cases, the various departments of the Experiment Station are housed with the corresponding branches of the Agricultural College, the two instructions articulating one with the other.

The popular President of the College is Prof. J. L. Snyder, M.A., Ph. D., and the Director of the Experiment Station is Prof. Clinton D. Smith, M.S., who also serves the College in the capacity of "Dean" of the Short Courses." Of late years Prof. Snyder has done much to make the College and Station known to the people, by arranging summer excursions, such as those which annually visit Guelph.

One of the most enjoyable and profitable half days of the week was that spent in visiting the departments of the College and farm, under the guidance of Director Smith. Space forbids detailed review, but a few general facts may not pass without mention. The farm consists of 680 acres, of rather light sandy soil, varying considerably in topography and character of soil and subsoil, rendering somewhat difficult the securing of uniform blocks suitable for variety tests or other comparisons. Inasmuch, however, as it typifies a considerable area of land in Michigan, it is in some respects well adapted as a State Experiment Station and Agricultural College farm. In addition to the main farm, the State of Michigan has in recent years supplemented the funds received from the general Government to the extent of about \$9,000 yearly. A sub-station in the northern peninsula, and another at South Haven, devoted chiefly, we believe, to horticultural work, are supported entirely by State funds. The results of experimental work are published from time to time in bulletin form, but a few of the more important lines of investigation now being undertaken may be noted here.

SOME EXPERIMENTAL WORK.

The Adams fund, the new annual bequest supplied by the Federal Government, as explained above, is being expended in carrying forward five projects, as follows:

- 1.—A study of hog epidemics in Michigan; by Chas. E. Marshall, Ph. D., Bacteriologist.
- 2.—Bacteriological factors influencing the keeping qualities of milk and butter; by Prof. Marshall.
- 3.—The action of bacteria in rendering available the insoluble elements of the soil; by Prof. Marshall and A. J. Patten, the Chemist.
- 4.—The utilization of untreated rock phosphate; by Prof. Patten.
- 5.—Causes of a disease of cattle prevalent in sandy regions of the State; by Geo. A. Waterman, Veterinarian.

Out in the agronomy department the visitors' attention was directed to a series of plots on which a rotation experiment is being tried. In the year 1890 a series of plots was laid off for rotation experiments. They were thoroughly drained, and were sown to oats in 1891 and 1892. They were all in wheat in 1893, and in oats in 1894 and 1895. In 1896 the rotations began as follows: 1, wheat and clover, alternately; 3, wheat, clover, corn; 5, wheat, clover, potatoes; 7, wheat annually; 21, corn annually; 23 and 25, orchard grass continuously; 27, corn annually; 29, 31 and 70, bare fallow continuously; 34, clover continuously; 36, wheat continuously; 38 and 58, wheat and oats, alternately; 60, wheat continuously; 62, wheat, clover, potatoes; 64, wheat, clover, corn; 66, wheat and clover, alternately; 68, wheat continuously; 72, clover continuously.

After ten years of such cropping, the plots last year were all planted to corn and this year with oats, the idea being to ascertain what plots have been most and what ones least impoverished. The following list of yields of corn in 1906 affords some surprises. Prof. Smith is at a loss to explain some of the results, notably, the very poor yield of corn after continued cropping of wheat, and the very indifferent yield of one of the fallow plots. He considers it possible that natural soil differences may account for it in part. Our own surmise is that it is accounted for by deficiency of humus and of nitrogen. The experiment is interesting, but will require prolonged study in order to reach safe conclusions. Unfortunately, the results this year with oats have been spoiled on some plots at least by the backward spring. We quote the figures, however, giving the comparative yields of corn last year:



BIRD'S EYE VIEW OF AGRICULTURAL DEPARTMENT, M. A. C.

General View Michigan Agricultural College, at Lansing.

YIELDS OF CORN ON ROTATION EXPERIMENT PLOTS IN 1906.

Table with 5 columns: Plot, Corn, Stover, Plot, Corn, Stover. Rows 1-34 showing yields in lbs.

In the fascinating realm of plant breeding considerable work is being done with corn, while in flax we were shown three distinct forms, one with three branches, another with one branch, and a third which grows a short stem, and is intended for the purpose of seed production.

The Michigan Station is building up its live-stock department. R. S. Shaw, B.S.A., is the experimenter in this branch, and several bulletins from his pen have come to hand within the last year or so. One line of work is in comparing different breeds of cattle for use in grading up the common stock of the State. Another is along the line of baby beef. In the yards were a nice bunch of skim-milk-fed beef-bred cattle 18 months old, that had been sold to butchers for 5 cents a pound. These were being compared with another lot that had sucked the cows for their first summer. Strange to say, while the latter made the best gains while sucking their dams, they dropped back at time of weaning; the skim-milk calves then getting the lead, which they kept to the end, making not only the cheapest, but actually the largest average gains from birth to block. The skim-milk calves put on an average of 1 8-10 pounds per 24 hours from the day they were born, the cost of which was reckoned at 4c. to 4 1/2c. per pound, leaving a margin of 1/2c. to 1c. profit out of the selling price of 5c.

Next year's results may be different, but, however that may be, baby beef, made by one means or another, is regarded as by far the most promising line of beef-raising for the average Michigan farmer of today, and this conclusion holds equally, at least, under practically all conditions of Eastern Canada.

CONVENTION OF THE AMERICAN ASSOCIATION OF AGRICULTURAL COLLEGES AND EXPERIMENT STATIONS.

The convention of the American Association of Agricultural Colleges and Experiment Stations was held in Lansing, Mich., during the week of the Semi-centennial celebration of the M. A. C. This concourse, as usual, was widely representative of the States of the Union and Provinces of the Dominion. The programme included many technically scientific, as well as some bright dashes in the way of popular addresses. From the more noteworthy of these latter, we call a few points, most of which apply quite as pertinently to Canadian as American conditions. Further extracts will be made use of in later issues. Officers elected for the ensuing year are: President, J. L. Snyder, President of the Michigan Agricultural College; 1st Vice-President, Director E. A. Burnett, of Nebraska; 2nd Vice-President, Pres. H. H. Harrington, of Texas; 3rd Vice-President, President E. A. Bryan, of Washington Territory; 4th Vice-President, Director C. D. Woods, of Maine; 5th Vice-President, Dean H. C. Price, Ohio; Bibliographer, Director A. C. True, Washington, D. C.; Secretary-Treasurer, Director J. L. Hills, Vermont.

THE STATE AND THE PEOPLE.

Prof. L. H. Bailey, of Cornell University, President of the Association, expressed some sound thoughts in forceful words in his address on Tuesday evening. We quote somewhat at length from newspaper reports of his speech:

EAST AS GOOD AS WEST.

"The person who works his own land is usually a strong individualist. This individualism conduces to isolation of ideas. The farmer's work is founded on personal experience, and when he is not able to analyze his experience or to understand it, he falls into the 'experience routine' of the season and his ideas become crystallized. As the community-sense has grown into nationalism, and as loyalty to the first of the local leaders has developed into patriotism, the organism of the nation has felt the necessity of interfering with the land workers as with other workers for the benefit of the nation at large.

"What is wise for the state to do in aid of the farmer? We live in a time of great shift. The center of population is moving westward. The popular mind has pictured a great decline in eastern agriculture. New York State has declined more than 80,000 persons below the maximum in the rural counties. This is due to migration to cities and to other regions, and to lower birth rate. Of the 227,000 farms in the State, 34 per cent. are encumbered. Between 1880 and 1900 there was an annual decline in value of farm property of seven and one-third million dollars.

"Markets, however, are as good as ever. The land is still productive, and good farmers are better off today than ever before. We must not take alarm at abandoned farms. They are only an expression of social and economic conditions. In the breaking up of old conditions under the development of manufacture and

transportation, persons cling to the farm as if it were a divinely ordained unit, but new farms will be built on the basis of the old ones. The possibilities of agriculture in the east lie in a new adaptation to conditions. Farming used to be easy; it has become complex, demanding much higher integrity and business ability. Agriculturally, under the new regime, New York is a newer State than Illinois or Iowa. Opportunities lie east as well as west.

COUNTRY SOCIALLY STERILIZED.

"American agriculture is yet raw and undeveloped. I look for its first real evolution in the old east rather than in the new west. The east has reached the point where it is willing to look facts squarely in the face. Rural life is in a state of arrested development as compared with city and town life. The nativeness of rural institutions has died out. The country is left socially sterilized. The organizations that control farmers by controlling their products are in the city. The tariff for protection system has fostered this movement and has tended to the concentration of wealth. If it has aided the farmer it is only because it has first aided someone else more. We have been living in an epoch of city development. It is a process of dump everything and everybody into the cities. We are now entering the era of the small city, which will drain the farm still more. I think that no agricultural work has any justification unless its one purpose is to allow native individual responsibility and initiative to develop in the man who stands directly on the land. When the people come to look beyond their own institutions they lose opportunity to help themselves in much the same way that they are hurt by the aggressiveness of the city, and the present tendency of the city as a rival to the farmer must be overcome. I believe the agricultural colleges are now on the right track. They teach in terms of daily life, but the city control over the farmer still continues. There are only three sources of raw material, the soil, the mines and the sea; but were one to judge by the temper of recent events we might almost think some of the raw material in the cities is derived from the wind.

NEED SCHOOL IMPROVEMENT.

"As to country schools, they are good, but they ought to be used more. And they do have this fault: They fail to teach the things of their own environment. Three movements look toward the betterment of country schools—aid by Congress, consolidation of existing schools, and the establishment of secondary agricultural schools.

GOOD OUTLOOK IN EAST.

"Some years ago the western migration was at its height. The middle western lands were cheaper than in the east. Farmers went west and found that on those cheap lands and with the advantages of the railroad rates they could supply the east more cheaply than the eastern farmer himself could.

"New England young men went west. So long as cheap lands continued so in the west the migration continued. New England farms are rocky; they are not as fertile as the western farms, and they cannot be cultivated at so low a figure.

"Consequently, many New England farms were abandoned, but the most of these were the most rocky. Now the tide has turned. Western farms that used to cost but \$10, \$20 or \$30 an acre are now worth \$100 per acre.

"Good New England lands can be bought for \$20 to \$30 an acre. To-day I would rather invest at \$20 or \$30 an acre in New England than at \$100 an acre in the west. More money can be made on the investment. A lot of New England farms are being taken up to some extent, it is true, by foreigners, but mainly by Americans.

"A lot of those who have gone west and made money are returning to take up their old homesteads and make of them summer homes. New England is dotted by such. A huge Old Home week is being planned for August in Boston, for which \$100,000 is now raised. Home comings on smaller scales are held yearly at many places by these returned New Englanders, who have come back out of the west. Things are looking up in the New England agricultural districts."

"Some of the other points on which he touched were fairs, roads, and a better mail service. On the subject of roads, he pointedly observed that we need good roads connecting one side of the country with another, as well as good roads connecting the country with the city. The latter drain the country to fill the city; the latter would improve matters in the rural districts.

EARLY BEGINNINGS OF AMERICAN AGRICULTURAL EDUCATION.

"Geo. Washington was one of the earliest and most influential Americans to take an active public interest in agriculture," said Dr. Elmer Ellsworth Brown, United States Commissioner of Education. "First in war and first in peace, he was also, it would seem, the first American farmer of his day. His outlook over the educational needs of the new nation included proposals for the establishment of boards of agriculture, a military academy and a national university.

"It would be difficult to say just where and how systematic instruction in the principles of agriculture took its rise in this country. Such instruction was given in some sort in Moor's Indian school, out of which Dartmouth College arose, back even in colonial days. Benjamin Franklin proposed such instruction for the academy at Philadelphia, the forerunner of the University of Pennsylvania, but it does not appear that this part of his plan was realized.

"When we grow more skillful," said Dr. Brown, "we shall make schools of a better-rounded type, in which the book-learning that has long been the distinctive province of the school shall join to itself the best things in the old system of apprenticeship, and from that combination shall arise something better than either one in its lonesome isolation. Already we are beginning to make institutions somewhat of this order, and it will be done much better yet as time goes on."

ENGINEERING EDUCATION: WHAT IT IS AND DOES.

Following Dr. Brown came President Winthrop Ellsworth Stone, of Purdue University, who spoke on the "Development of Engineering Education." In this, the land-grant colleges have borne a large part. The curricula of the engineering schools are characterized by the omission of the dead languages, although all retain as much as possible of non-technical and cultural studies, such as English, history, economics and modern languages. The fundamentals of these courses are mechanics, shop practice, drawing and the physical and chemical sciences, in pure as well as applied form. Upon this groundwork, administered for the most part in the first two of the four years' course, is built the specialized and professional training of the last two years, pertaining to a wide variety of engineering fields. Civil, mechanical and electrical engineering are most commonly taught; after these come mining, sanitary, municipal and architectural engineering. The equipment of these institutions is a distinctive feature, involving extensive laboratories, not only for the natural sciences, but also in steam engineering, hydraulics, materials, testing, electricity, shop practice, etc.

Standards of scholarship are high from the nature of the subjects taught, which admit of nothing but absolute mastery of facts. The immediate product of these colleges consists in thousands of men trained in scientific methods of thought and study, and skilled in the application of scientific principles to practical affairs.

Summing up broadly, the distinguishing features of these engineering colleges are a adaptability of instruction in theory and practice, a high efficiency in training men, and in conducting research for immediate and practical use in doing the world's work.

AMERICA NEEDS TRUE SCIENTISTS.

One of the most forceful and valuable contributions to the programme of the convention was the address of Prof. W. H. Jordan, Director of the New York Experiment Station, at Geneva, who discussed "The Authority of Science." He raised a protest against the great mass of superficial, incomplete and sometimes inaccurately-conducted experiments carried on in the name of science. He called for trained young men to engage in the real patient, persevering, intelligent work which alone can produce reliable results. While rejoicing that we had got away from the medieval point of view, which disparaged any tendency to make practical use of science, and commended utility as the aim of the investigator, nevertheless he warned against the tendency on the part of many professional men of today to set salary before service. The need is for men who will pursue science and learning animated by the zest of discovery itself, rather than the money to be made by the investigator out of his discoveries. To quote Prof. Jordan's words:

"The present fundamental need is for young men endowed with a love of learning, of scholarly habit, and with integrity of mind and heart, whose ambition is not for notoriety, but for the conquest of truth, and who, with more thought for service than for salary, are anxious to aid in laying broad and deep the foundations of human thought and activity. For this reason, in the progress of agricultural knowledge, I place the influence of the teaching institutions as the primary factor, because when there exists a body of men really possessed by the research impulse and with adequate training, inquiry will not wait on legislative authority and support, but will proceed even under adverse circumstances.

"It is a serious matter if the new education that is now attracting to it thousands of our young men is to serve chiefly in commercializing, rather than intellectualizing, the most virile manhood of a nation that is already grossly materialistic."

FAIR DATES FOR 1907.

- July 18-20—Winnipeg Industrial.
July 22-26—Brandon, Man.
Aug. 23-30—Iowa State, Des Moines.
Aug. 26 to Sept. 9—Canadian National, Toronto.
Aug. 29 to Sept. 6—Detroit, Mich.
Sept. 2-4—Dominion Exhibition, Sherbrooke, Que.
Sept. 6-14—Canada Central, Ottawa.
Sept. 6-14—Western Fair, London.
Sept. 9-13—Indianapolis, Ind.
Sept. 9-14—New York State Fair, Syracuse.
Sept. 17-19—Guelph.
Sept. 18-20—Woodstock.
Sept. 27 to Oct. 5—Springfield, Ill.

A convention to consider measures for combating the brown-tail moth will be held at Annapolis Royal, N. S., on Friday, June 7th, 1907, afternoon and evening. Dr. James Fletcher, Dominion Entomologist; Prof. F. C. Sears; Prof. H. W. Smith, and Mr. G. H. Vroom, and others, will speak. Single fares on standard - certificate plan have been granted.

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MARKETS.

TORONTO.

LIVE STOCK.

Receipts of live stock at the City and Junction markets, last week, were moderate—236 cars, 3,720 cattle, 4,022 hogs, 461 sheep, 7 calves, 4 horses. Market stronger for cattle and hogs, with trade steady, and prices a little higher generally.

Exporters.—Prices ranged from \$5.25 to \$5.60, the bulk selling at \$5.35 to \$5.45; bulls, \$4 to \$4.85.

Butchers.—Prime picked lots, \$5.20 to \$5.65; loads of good, \$5 to \$5.50; medium, \$4.60 to \$4.90; common, mixed, \$4.35 to \$4.90; butchers' bulls, \$3.50 to \$4.00.

Stockers and Feeders.—Light supplies of good-quality feeders met a good demand and a brisk market at about steady prices. Short-keep feeders, 1,200 to 1,300 lbs., sold from \$4.75 up to \$5.15 to \$5.20; feeders, 1,000 to 1,100 lbs., \$4.40 to \$4.70. Stockers, of which there are few good, sold at \$3.25 to \$3.75, and some selected lots, \$4 to \$4.15.

Milk Cows.—Steady to strong prices were paid for all milkers that were above medium in quality. There was not a very reliable outlet for the common grades. The best were quoted at \$50 to \$60, and most of the medium sold at \$35 to \$45.

Veal Calves.—Receipts of calves were large. The quality of the bulk of those offered was not good; of course, there are some that are choice, but not many, the great majority lack the necessary age and finish to make them satisfactory killers. And this has been the case more than ever this season, because the price of milk, butter and cheese is higher than for years. Prices ranged from \$3 to \$6 per cwt., the bulk selling at \$4.50 to \$5.50 per cwt.

Sheep and Lambs.—Receipts of sheep and yearling lambs have been light, while lambs are becoming more plentiful each week as the season advances. Prices were easier all round, but are still high. Export ewes, \$5 to \$5.75; rams, \$4 to \$4.50; yearling lambs, \$6.50 to \$7 per cwt.; spring lambs, \$4 to \$7 each. Hogs.—Prices were higher, as we predicted three weeks ago, selling at \$7.10 for selects, and \$6.85 for lights and fats. Drovers reported paying farmers \$6.75 per cwt. to farmers, and selling them to packers at \$6.90, f. o. b. cars at country points.

Horses.—Burns & Sheppard reported having had an excellent market all week, and that they had disposed of about 175 horses, all sold, at about steady prices. Messrs. Burns & Sheppard report horses of good quality as being scarce in all the different classes, and hard to buy from the farmer. Medium every-day work horses, 1,200 to 1,350 lbs., \$150 to \$180; heavy-drafters, 1,350 to 1,600 lbs., \$165 to \$225; express horses, \$150 to \$200; roadsters, \$125 to \$200; matched pairs of carriage horses, \$300 to \$450.

BREADSTUFFS.

Wheat prices are firmer and oats are very strong.

Wheat.—Ontario No. 2 red and white, 90c. asked; No. 2 spring, 85c.; Goose, 83c.

Buckwheat.—63c.
Rye.—71½c. to 72c.
Peas.—No. 2, 79c. to 80c.
Corn.—No. 3 American Yellow, 62c. to 63c., all rail, Toronto basis.

Oats.—No. 2 white, 44½c. to 45c.; No. 2 mixed, 42½c. to 43c., all outside quotations.

Barley.—No. 2, 53c.; No. 3X, 52c.; No. 3, 51½c. to 52c.
Bran.—\$23, at Toronto.
Shorts.—\$23.50 to \$24.
Flour.—Manitoba patent, \$4.05, track, Toronto; Ontario, 90 per cent. patents, \$3 bid for export; Manitoba patent, special brands, \$5 to \$5.20; 2nd patent, \$4.40 to \$4.60; strong bakers', \$4.20 to \$4.30.

COUNTRY PRODUCE.

Butter.—Receipts large. Prices easy. Creamery pound rolls, 23c. to 25c.; creamery boxes, 23c. to 24c.; dairy pound rolls, 21c. to 22c.; tubs, 21c. to 22c.; bakers' tub, 18c. to 19c.
Eggs.—Market firm, 18c. to 18½c.
Cheese.—New, 13c. for large, 13½c. twins.

Honey.—Strained, 12c.; combs, \$2.60 to \$2.75 per doz.

Evaporated Apples.—8c. to 9c. per lb.
Beans.—Car lots, in bags, at Toronto. Hand-picked, \$1.25 to \$1.30; primes, \$1.15 to \$1.20. Broken lots, \$1.45 to \$1.55 for hand-picked; \$1.30 to \$1.35 for primes, in bags.

Potatoes.—New Brunswick Delawares, firmer, at \$1.25 to \$1.30 per bag, by the car lot, on track, at Toronto; Ontarios, \$1.15.

Poultry.—Becoming more plentiful. Turkeys, 14c. to 18c. per lb.; yearling chickens, 16c. to 18c. per lb.; hens, 12c. to 13c. per lb.; spring chickens, 30c. per lb., alive; dressed, 35c. to 40c. per lb. for spring chickens.

Hay.—Baled, firm at \$13 to \$13.50 per ton for No. 1 timothy; \$11 to \$12 for No. 2.

Straw.—Baled, \$6.50 to \$7 per car, on track, at Toronto.

SEEDS.

Toronto seedsmen report the market as being nearly over, with little doing in seeds. Prices are nominal as follows: Red clover, \$15 to \$17 per 100 lbs.; al-sike, \$10.50 to \$13 per 100 lbs.; timothy seed, \$5 to \$7 per 100 lbs.

HIDES AND TALLOW.

Prices are quoted as follows by E. T. Carter & Co., 85 East Front St., Toronto: Inspected hides, No. 1 cows and steers, 9½c.; inspected hides, No. 2 cows and steers, 8½c.; country hides, 8c.; calf skins, No. 1, city, 13c.; calf skins, No. 1, country, 11c. to 12c.; sheep skins, each, \$1.70 to \$1.80; horse hides, No. 1, each, \$3.25 to \$3.75; horse hair, 30c.; tallow, 5½c. to 6c.; wool, unwashed, 13c. to 14c.

CHICAGO.

Cattle.—Beeves, \$4.50 to \$6.55; cows and heifers, \$1.75 to \$5.50; Texas steers, \$4.25 to \$4.75; stockers and feeders, \$3 to \$5.15; Western cattle, \$4.25 to \$5.15.

Hogs.—Light, \$6.10 to \$6.35; mixed, \$6.05 to \$6.32½; heavy, \$5.85 to \$6.22½; pigs, \$5.75 to \$6.30.

Sheep and Lambs.—Native, \$5.25 to \$6.35; Western, \$4.25 to \$6.40; yearlings, \$6.10 to \$7; lambs, \$6.25 to \$8; Westerns, \$6.25 to \$7.90.

CHEESE BOARD PRICES.

Listowel.—After the fair, practically all the offerings were sold at 12½c. Cable.—Old white, 66s.; colored, 68s.; new white, 60s.; colored, 62s. Next fair, Friday, June 14th.

Napanee.—1,490 white and 400 colored boarded; bids, 12½c. No sales on board; all sold on curb at above price.

Perth.—700 white and 200 colored cheese were boarded; all were sold. Brockville prices ruling.

Ottawa.—319 white and 252 colored were offered. All sold on the board at 12½c. per pound. Eight buyers attended.

MONTREAL.

Live Stock.—In the local market, the offerings were lighter than usual in cattle, and, as a result, prices were higher. There appears to be a shortage of stalled cattle in the country, to a large extent due, no doubt, to the high price of feed last winter. This shortage of choice stock will probably continue until well into the summer, or at least until the cattle have had time to get into good condition on grass. Trade was not very active, prices for the choice being as high as 6c., and a fraction more for choicest, fine being 5½c. to 5¾c.; good, 4½c. to 5½c.; medium, 4c. to 4½c.; and undergrades and common stock down to 3c. Sheep are in good demand at 5½c. to 6c., and lambs at 6½c. to 7c., a few spring lambs selling at \$4 to \$7 each. Calves are a little better in condition, but there is still a large number poor. Prices range from \$2 to \$6 each for fair to good. The market for hogs holds unusually firm, and prices have registered another advance. Sales of select stock are being made at 7½c., off cars, and at this price offerings are none too large.

Horses.—Demand very active, owing largely to the local freight situation, the facilities being insufficient to handle all the goods offering. We quote prices as follows: Heavy-draft horses, weighing 1,500 to 1,700 lbs. each, \$275 to \$350; light-draft, 1,400 to 1,500 lbs., \$250 to \$300; express horses, \$175 to \$250; common plugs, \$75 to \$150, and choice driving and saddle animals, \$300 to \$500 each.

Dressed Hogs.—Fresh-killed abattoir hogs are quoted at 10½c. per lb.

Provisions.—There is no change as yet in the provision market, prices, however, being firm. Demand for smoked meats is good at 13½c. to 14c. per lb. for hams of 25 lbs. each, and more; 14c. to 14½c. for those weighing 18 to 25 lbs.; 14½c. to 15½c. for 12 to 18-lb. weights, and 15½c. for lighter. Green bacon is quoted at 10½c. to 12c. per lb., and smoked at 14c. to 16c. Barrelled pork is \$20.50 to \$24.50 per bbl.; lard being 9½c. to 10½c. per lb. for compound, and 12½c. to 13c. for pure.

Potatoes.—The market for potatoes shows unusual firmness, and there is every reason to expect that much higher prices will be paid during the coming few months. It is very difficult to get supplies. Enquiries are coming in from all over the country, showing that the shortage is general, whereas it is difficult to get offerings from any section. Prices have advanced, and sales of Green Mountains have been made at \$1.20 per 90 lbs., on track, and the seller is of the opinion that he could get even more now. For good white stock, there is no trouble in getting \$1.10, on track, and \$1.20, bagged and delivered, in a jobbing way. Red potatoes range from about \$1.05 to \$1.10, track, and \$1.12 to \$1.15, store. One dealer refused an offer equal to about \$1.15 per 90 lbs., on track here, for red and white mixed.

Eggs.—There is almost a scarcity in the supply of eggs, when the active demand for all purposes is taken into consideration. The continued cool weather is conducive to a large consumption, and there is no trouble in disposing of everything that is offering. One firm is selling everything as it arrives at 18c. at the station, without touching the cases. Others quote the same figure, and 21c. for selects. There are very few No. 2 eggs offering, and prices hold steady at about 16c. to 17c., according to quality. The market is firm.

Butter.—In the country, ½c. more has been paid for creamery, and, although 21c. is still the general quotation for finest creamery, here, it is likely that a fraction more is made. Very ordinary stuff would bring 20½c. Some grass flavor may be looked for at the end of this week. Quality at present is excellent. The make continues light, owing to the cold weather, and prices are much too high to permit of export shipments.

Cheese.—The cheese market shows evidence of increased firmness. It is claimed that only a few firms are doing business here at present. There appears to be a shortage in England, and certainly there is no surplus here. It is claimed that the stock is being shipped too green, and this causes no wonder, as everything is wanted on the other side, and exporters do not delay the shipments. Last week, 31,139

boxes were shipped from here, against 24,174 for the corresponding week last year, making a total of 71,795 this season, as against 90,726 for the corresponding period of last year. Prices are a fraction higher than a week ago, Ontarios being quoted at 12½c. to 12¾c., and even 13c., and Townships at 12½c. to 12¾c., and Quebecs at 12½c. to 12¾c. Flour and Feed.—During the past few days, the markets for flour have not shown further advances, although the wheat market has been strong. Demand continues good, and prices are steady, at \$4.50 per bbl., in bags, for strong bakers', and \$5.10 for patents. As for millfeed, the demand is becoming less, week by week, as the grass grows, but stocks are so scarce that prices hold firm at \$21 per ton for bran, shorts being dearer than before, at \$22 to \$23, bagged, in each case.

Grain.—The market for oats is higher than ever, and dealers hardly know what to think of the situation. The export demand is responsible for the strength, shorts being possibly also responsible. Prices are 48½c. to 49½c. per bushel for No. 2 oats, either Manitoba or Ontarios, 47c. to 47½c. for No. 3 Ontarios, and 46c. to 46½c. for No. 4.

Hay and Seeds.—The market is dearer than ever, but dealers are now looking for a slight decline. Meantime, the embargo is lifted, and there appears to be more loading in the country. Prices for No. 1 timothy are higher, at \$16.50 to \$17 per ton, for No. 2 timothy at \$15.50 to \$16, and clover-mixed at \$14 to \$15, the latter having advanced considerably during the past few days, owing to better demand for low-grades now that prices are so high. Dealers in hay seeds report demand being sustained unusually late into the season. Supplies are a little light, and prices have advanced slightly on timothy and red clover. Timothy is quoted at \$5.75 to \$7.75 per 100 lbs., Montreal; red clover, \$17 to \$18.50; white clover, \$14 to \$20, and alsike, \$13 to \$16, alsike being cheaper. Hides.—Market unchanged.

BUFFALO.

Cattle.—Prime steers, \$5.80 to \$6. Veals.—\$5 to \$8.25.
Hogs.—Heavy, \$6.25 to \$6.50; mixed, \$6.50; Yorkers, \$6.50 to \$6.55; pigs, \$6.55 to \$6.60.
Sheep and Lambs.—Steady; lambs, \$5.50 to \$8.75.

BRITISH CATTLE MARKET.

Liverpool and London cables are firm at 11½c. to 13c. per lb., dressed weight; refrigerator beef is quoted at 9c. to 9½c. per lb.

GOSSIP.

BERKSHIRES AT AUCTION.

The announcement in our advertising columns that, on Wednesday, June 19th, Mr. John Lahmer, of Vine, Ont., a station on the Hamilton to Barrie branch of the G. T. R., 5 miles from Allandale Junction, will sell at auction his entire herd of Berkshire hogs, should attract the attention and attendance of farmers and breeders interested in the modern-type Berkshire, combining quality with size, length and easy keeping, the kind that pays a good return for the feed consumed and a satisfactory profit.

MORE GOOD SHORTHORN SALES.

Good prices have been realized at recent Shorthorn sales in the United States, indicating increasing confidence and a substantial rise in values. At the sale by Carpenter & Ross, at Mansfield, Ohio, on May 22nd, 44 head sold for an average of \$315. Fifteen bulls, five of which were imported, made an average of \$340, the highest price for a bull being \$800, for the red yearling, Keir Sceptre (imp.), taken by Col. F. O. Lowden, Ohio; and the highest price for a female, \$905, for Imp. Cadboll Gwinne, two years old, purchased by Thos. Johnston & Son, Ohio. At a consignment sale, at Chicago, on May 23rd, 34 head sold for an average of \$292. The highest price, \$725, was paid for the white four-year-old cow, Moss Rose 4th, consigned by D. R. Hanna, Ravenna, Ohio, and purchased by Carpenter & Ross, of Ohio. Victor Missie's Victoria, a roan yearling heifer, sold for \$565 to N. H. Gentry, of Sedalia, Mo., and Queen of Scots 19th, a roan five-year-old cow, to Thos. Johnston, Ohio, for \$585.



HOME MAGAZINE

Life, Literature and Education.

[Contributions on all subjects of popular interest are always welcome in this Department.]

A SUMMER MECCA FOR TEACHERS.

The opportunity to take a summer course and vacation combined at the Ontario Agricultural College this season is one that should appeal especially to the teachers in rural public schools, because it will bring them in touch with conditions and subjects of vital concern to the pupils in the rooms over which they preside. Not only will it advantage the pupils themselves, but the parents and the farm life. To teachers in city and town schools it will appeal as a rural outing, with educational advantages. The staff and facilities of the College and Macdonald Institute, and the beautiful and picturesque surroundings of these institutions and Guelph itself, present a combination of attractiveness that should insure the success of the summer school, which is to open shortly after the close of the public schools. President Creelman, of the O. A. C., will gladly furnish teachers who desire to avail themselves of the privilege with any information desired. Similar courses were formerly given at the three Provincial Normal Schools, but, as announced in "The Farmer's Advocate" last week, these will this season be occupied giving special instruction to Separate-school teachers.

PEOPLE, BOOKS AND DOINGS.

A colossal statue of Christ, called "The Christ of the Andes," has been erected on the boundary line of Chili and the Argentine Republic as a monument of perpetual peace between the two nations.

Winston Churchill's royalties on "Coniston," by which he receives thirty cents for each copy, are said to have already passed one hundred and fifty thousand dollars.

There are to-day over 200 airships projected or in course of construction in England alone.

A bust of the late Dr. W. H. Drummond is being made for the Carnegie Institute, New York.

Beethoven's sonata, "Opus 96," consisting of twenty-three folios, written in the musician's own hand, has been sold to a Florentine collector for \$10,500.

The Duke D'Abruzzi, the famous explorer and mountain climber, will come to Canada soon to look into some mining property in Northern Ontario.

It has long been known that blood is composed of corpuscles—some red, some white—but it has remained for twentieth-century science to discover the marvellous use of the latter, viz., the work of fighting against disease

germs. The discovery of this function promises to bring about a revolution in medical science, as it has enabled the foremost physicians of the world to bend their efforts, as they are now doing, towards the perfecting of a system by which the white corpuscles may be strengthened, and so made equal to the task of overpowering disease. If these efforts prove successful, it may not be long until immunity from many diseases and the cure of others will be secured by a method somewhat similar to vaccination.

RAMBLES ABOUT THE OUTSKIRTS OF ONTARIO.

REMINISCENCES OF CAMP-FIRE COOKERY.

I wonder who my next cook will be? To-night the little Chinese restaurateur placed before me a feast for the eye, as well as the taste. Beefsteak, with yellow-fat trimmings; potatoes fried to a golden brown, crimson strawberries drowned in cream, and, with an airy flourish, a neatly-folded napkin. And I leaned back watching him indolently, as if it were one of life's commonplace events. What a brazen deception! If he could only see the other side of my existence, would I not be treated to one of those superior stares with which "seedy" individuals are chilled when they dare rest their shiny elbows upon Hum's table! It's as well Hum doesn't know that I have eaten from a tin plate held between my knees, and without even the saving grace of a napkin; that, after carefully wiping up the last traces of congealed bacon grease with a lump of bread, the same plate received a dab of jam. That is only one of the vicissitudes of my career.

My first cook fitted me to appreciate even a rudimentary knowledge of culinary matters in his successors. He was a great, broad-backed fellow, who amused himself, while the bacon was frying, by lopping down young saplings with single cuts of his butcher-knife. At night he laid aside his paddle, with which he was a true artist, seized an axe, and roamed off in search of firewood. The metallic click of his chopping would be followed by a warning shout of "Tim-ber!" and the wailing crash of a falling tree. Presently he would emerge with a neatly-chopped log on one shoulder and another dragging along by the axe sunken into it. Wet or dry, Bill always lit his cook-fire with one match. Sometimes the gray lichen from a spruce tree, or a bundle of dry twigs, was the tinder; sometimes, when everything was soaked with rain, a roll of birch bark or a few resin-covered chips taken from a scarred evergreen.

But he made sad use of his splendid fires. His bannock-making was the source of as great tribulation to us as of absolute indifference to himself. Three of the ingredients—flour, salt and water—were usually in the desired proportions, since they admitted of no very great variation, but the baking powder was a mystery whose workings seemed obedient to no law. Of its vital importance to the production of good bread, he was confident, and it was probably on that account that it was one of the first ingredients to be used. He gave it

plenty of time to "mix up," never dreaming that the little bubbles rising through the water and escaping irrecoverably, were accountable for the delectable holes that breadmakers desire. His inquiring mind groped for a rational explanation of his too-substantial results, but arrived at a false one, like many philosophers, that the baking powder was not "full strength," and must be used in larger doses. Happily his experiments in that line were terminated by a shortage of material.

Always we got bannock quite devoid of porosity. Indeed, in the long strips into which Bill, with his great knife, sliced it, his bread gave the expression, "staff of life," a disagreeably literal significance. These rod-like strips were usually charred badly on one side, and it was our cook's habit to trim them into shape before bringing them to the table. Holding it by one end, the black coat was partly whittled off; then, with a dexterous toss in the air, reversed, and the other end treated in like manner. These stake-like pieces, when arranged on a tin plate, resembled a bundle of stout tent pegs.

There was such a convincing assurance about our chef that we never dared remonstrate with him. When the porridge had no salt in it, as was often the case, he would scan us with a look of tolerant scorn and explain that a little sprinkled over our platefuls would remedy so trivial a matter. Wondering that we had not thought of it ourselves, we would flatteringly thank him, and proceed to eat alternate spoonfuls of porridge and salt. But a worm will turn when trampled too severely. One Saturday we shot three partridges, turned them over to Bill, and went to bed to dream of ponds of fragrant soup. Once I had a great steaming bowl before me, starred over with pale-yellow globules; as I raised a spoonful it changed to ink. Next morning that black dream haunted me until Bill poked his head in the tent door and inquired whether we would have the soup first or last. We demanded lots of it immediately, and presently he entered with two tin plates, each heaped with a stodgy pile of boiled rice, through which protruded various fragments of partridge. Our jaws hung loose, and for a while there was a thick silence. Bill's real forte was acting, for he assumed an air of calm dignity, before which we seemed miserable culprits. "W— finally got his voice and insinuated, "Weren't you going to bring on the soup first, William?"

"Soup? You not like this kind soup?"

"Oh, I guess so; but it's middling thick." Then, seeing a hard expression settling, "White men are very queer in their tastes, you know."

When we were alone, W— dragged a partridge leg out of the tenacious heap and proceeded to scrape off the adherent rice. "Soup be hanged! Let's fire him!" And next day we told Bill that the work of paddling and cooking steadily was too much for one man, and that, for a while, Barney would have to relieve him.

Human experiences are all comparative. Bill became a pleasant memory after Emile took charge of the frying pan, or, rather, the pots. We had been rather in awe of Bill, and admired him without stint when,

at the head of a big rapid, he waved his paddle and yelled a challenge to the white breakers. Shooting rapids was a mania with him; Emile's idiosyncrasy was boiling. He boiled everything that came his way. The tea was boiled assiduously; so was the bacon. Unfortunate trout and pike were cast into that insatiable pot. The ordinary cook has the weakest conception of the utility of a kettle. When at last we got released from Emile, his resourcefulness showed no sign of exhaustion. His kettle contained as many surprises as a witch's cauldron, and, through irresistible and fearsome curiosity, we watched it daily. The last operation was a masterpiece. That day it frothed and bubbled longer than usual, and when the wizard, armed with a sharp stick, began to prod into it, every member of our wandering household was an onlooker. The third strike proved successful; he dragged up a slimy, white mass, which, on being deposited on a plate, slid across it, and was only maintained thereon by a skilful bit of balancing. This mercurial object was "chokedog." To his long repertoire another number had been added; chokedog, or, to use a less-effective term, boiled dough, was the last word in breadmaking.

Bob followed Emile as sunshine succeeds rain. He was a white man, and a Scotchman at that. You could tell that by watching him shave the rind off a slab of bacon. His bannock was a veritable spongecake, and the rolls and pies he concocted transformed an abstemious dyspeptic into a reckless gourmand. Young Nimrod loved him as a farmer's wife loves and cherishes a hen with a red comb. He split the wood, and enthusiastically suggested new lines of research in the art of confectionery.

The memory of Bob glows brightly among these dull camp-fire satellites. As with other truly fine characters, even his failings have become exalted to the position of virtues. Bob's shortness of stature was exceeded by a like deficiency in temper, which became evident when he boiled beans. The white bean, so dear to the heart of his predecessor, stirred the worst depths of my last cook's nature. Being a white man, he scorned the primitive "gib stick," and placed his kettles directly upon the logs, going about other affairs while they boiled. But white beans require an infinite amount of boiling. They were usually scarcely "phased" when the supporting logs were nearly burned away. The two Indian members of our camp took a deep interest in affairs about this time, and, when a log collapsed, upsetting the bean kettle, their merriment was convulsive. The great column of steam and sputtering coals would bring Bob from some other occupation on the run, arriving only to find the execrable grain in the ashes and two solemn, dark-countenanced spectators viewing indifferently the disaster. Having ascertained the damage to be irreparable, he would glare silently at the two meek redskins until the vials of his wrath overflowed in a stream of invective, whose volume left no doubt concerning the width of his earlier experiences as sailor, miner and railroad man. To his violent abuse the Indians would listen with broad grins and reply, "Well,

we're not the cooks, you're the cook."

As a white man, Bob was troubled by a temptation unknown to all Indian cooks. He was fond of bathing. At noon, while he perspired over his cook-fire, the rest of us sported about in the water, the water at whose very edge he was forced to watch a frying-pan. But on Sundays he had greater liberty. When the bread was all ready and baking before the fire, he could shake off his few clothes and rush for the lake. While he swam and splashed about, he kept a watchful eye on the bread-baking. At intervals it became necessary to go ashore and investigate matters closely. Fancy, then, this short, broad-shouldered fellow, arising like some domestic mermaid from his favorite element, to dance round the fire in a shocking state of nudity, and, having turned his loaves, scamper back again.

C.
Of the Geological Survey of Canada.

THE LONG ROAD OVER THE HILL

Copse, and meadow, and wimpling stream;
And voices, calling to flocks that stray,
And the loitering herd; and the plodding team;
And the hamlet, fair in the dying day;
Blossoming orchards, branching wide;
A rose-gray tower; a dusky mill,
Murmuring low, by the waterside—
And the long road over the hill!

O my soul, wilt thou farther fare?
Here is plenty, and here is peace.
Surely blessed, beyond compare,
Are these, secure in their tranquil lease,
Who take, with thanks, what the gods bestow—
Flower, and fruit, of the fields they till—
And tarry, content, while the travellers go
By the long road over the hill.

Never the call to strife they hear—
Never, the din of the moiling throng;
But blithful greeting, and sounds of cheer—
Praise at matin, and even-song;
These, and the mill-wheel's drowsy hum,
Pipe of bird and babble of rill,
And the tinkle of bells, when the slow kine come
To the hamlet under the hill.

And thus for aye, would I have them bide—
Wholly happy, and simply wise;
Never to dream of a boon denied,
Far adventure, or vain emprise.
Never a foot from the fold should stray!
But I would be the traveller, still,
Who looks, and envies—and goes his way—
The long road over the hill.
—William Young, in Scribner's.

DOES AN EDUCATION PAY?

Does it pay an acorn to become an oak?
Does it pay to escape being a rich ignoramus?
Does it pay to fit oneself for a superior position?
Does it pay to open a little wider the door of a narrow life?
Does it pay to learn to make life a glory instead of a grind?
Does it pay to add power to the lens of the microscope or telescope?
Does it pay to taste the exhilaration of feeling one's powers unfold?
Does it pay to know how to take the dry, dreary drudgery out of life?
Does it pay a rosebud to open its petals and fling out its beauty to the world?
Does it pay to push one's horizon farther out in order to get a wider outlook, a clearer vision?
Does it pay to learn how to center thought with power, how to marshal one's mental force effectively?—[Success.

"Is he a thoroughly honest man?"
"I don't know," answered the man from Missouri. "I have trusted him with hundreds of thousands of dollars, but I never tried him with a book or an umbrella."

The Quiet Hour.

THE SCORN OF CHRIST.

Instead of writing anything this week, I shall give you an extract from a wonderful book, written by Dean Slatery, called "The Master of the World." This book was published in 1906, and is well worth reading. I have not room for the whole of the chapter on "His Scorn," but will place part of it before you, trusting that you may some day have an opportunity of reading the whole book, which describes our Lord's graciousness, gladness, beauty, vitality, etc. HOPE.

Because Christ was the tender physician in the presence of all degraded people who admitted the sickness of their souls, because He was patient and forgiving with many of the worst types of humanity, there has come to be a feeling that He was always tenderness, and that the Lamb is the only symbol of His character. To this end many passages in the records of His Life are softened, or altogether explained away. Such violence to the documents is not only unscientific, it is irreverent. We must face the facts as history records them. He was not always gentle: He was often fierce as the lightning.

It is quite certain that He had no personal anger; that is, He did not resent insults or wrongs done to Him as an individual man. But in so far as opposition to Him kept men from the happy

check the process of death. Because His pity was not soft, but strong, He was pitiless to the man who barred the progress of Life to the whole human system. It is possible so to emasculate Christianity that its neglect to destroy sin is more than its power to build up righteousness. The writer who did most to reform English life in the nineteenth century was not Thomas Carlyle, who wrote violently of sins, but was Charles Dickens' who wrote vividly of living, concrete sinners. The schoolmaster Squeers, the nurse Mrs. Gamp, the employer Mr. Pecksniff, the ruffian Sikes, and a host of other evil persons were held up for hatred; people came to a sense of the blackness of the crimes which made human nature bestial, and public opinion rose to great reform. Into his open grave in the Abbey the poor threw flowers continuously for one whole day; because he had forced men to hate and depose the sinners who had been allowed to make miserable the weak and defenceless. Nor, in such a connection, can we forget that superb force for righteousness, Thomas Arnold. It was said that many an Englishman hurled back temptation in the thick of public life because he remembered how as a boy he had seen the face of Dr. Arnold flash disgust and scorn in the presence of any person who had done a mean or a low act. The tempted man's imagination brought to mind how Dr. Arnold would look upon him, his once loved pupil, now identified with such sin—he saw again the indignant gaze, the anger, and the contempt—and so, with that memory, he dropped

for scorn, for hatred. When the youth sees the horror on his mother's face, he will know at last how loathsome is his tempter,—and he will be saved. "It must needs be," said Christ, "that occasions of stumbling come; but woe to that man through whom the occasion cometh! . . . Better for him that a great millstone should be hanged about his neck, and that he should be sunk in the depth of the sea."

II. Against Hypocrites.

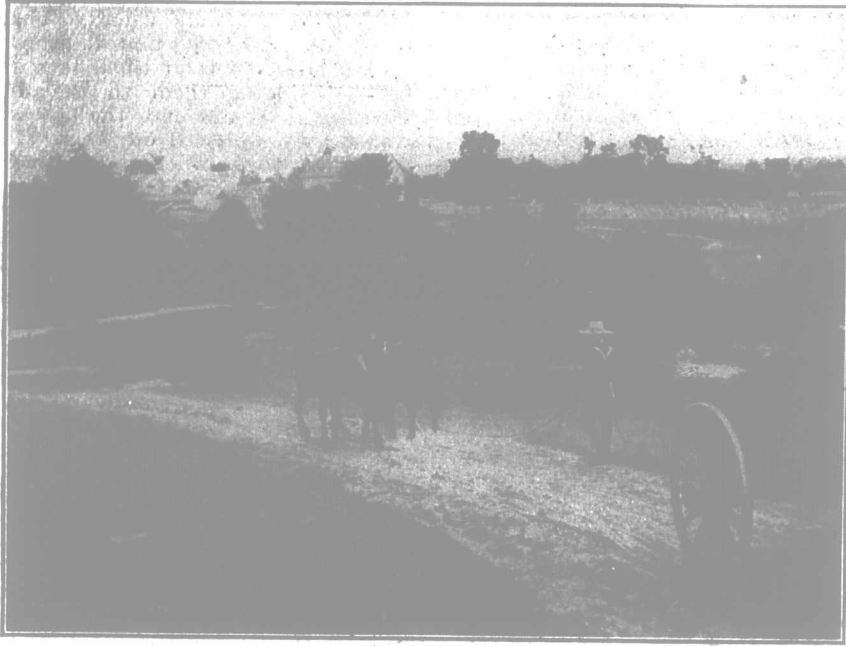
Christ was especially vigorous in His denunciation of hypocrites. . . . On these people our Saviour poured out the vials of His wrath. He called them "fools and blind," "blind guides," "unclean," "whited speculchres," "serpents," "generation of vipers." He exposed them to biting sarcasm as He pictured them standing up and offering to remove motes from other people's eyes,—when in their own eyes there were beams. And the "woe," "woe," "woe," of His invective falls with the force and regularity of a bludgeon. If ever people were cursed, Christ cursed the hypocrites. The cursing of the promising but fruitless fig-tree removes the last doubt, if any could exist, upon our Lord's estimate of the hypocrite. He said quite definitely to such men, "How shall ye escape the judgment of hell?"

A large share of the disgust roused by the recent investigations of the great Insurance Companies comes from the fact that these trustees of enormous funds, who have been using them for their own crooked and selfish ends, have been appealing piously to the thrifty wage-earners of the country so to deposit their savings that, should death overtake them, their widows and their orphans might be provided for. "Deny yourselves in the present," is the pathetic cry of the insurance tract, "to make safe the future of your families." Very proper language this, had these officers of insurance companies really cared for working men, widows and orphans; but hideous and contemptible jargon, if these pleaders turned from their tracts, with an amused twinkle at their own astuteness, to vote themselves outrageously high salaries, to pension the members of their own families, to buy up legislators, and otherwise to contribute to their own wealth and power. The mere villainy is had enough,—but it is all intensified with the rankling remembrance of the philanthropic pamphlets sent out by these would-be benefactors of mankind. A villain who is a hypocrite is an arch-villain. If a man is a plain, straightforward murderer, the world is content with a legal penalty; but when it is the kiss of a Judas that starts the crime, the world never forgets. And no one dare say that the world in such a mood is un-Christian.

III. Against the Hard-hearted.

Another class of men upon whom Christ vented His scorn were the hard-hearted. These, too, for the most part seem to have been Pharisees. They shut their lives into so hard a case of stubbornness and prejudice that no truth or persuasion could penetrate to their hearts. They came then to have what has been called "the ossified heart." . . . This scorn for hard-heartedness is perhaps most clear in the Fourth Gospel, particularly in the fiery dialogue between Christ and the prejudiced opponents which is recorded in the eighth chapter. "Ye are of your father the devil," He cried, "and the lusts of your father it is your will to do. . . . He is a liar, and the father thereof." His vituperation, as well as His assumption of authority, so incensed them that they took up stones to kill Him. . . .

It must be kept in mind always that the Master who had moments of such anger and scorn was, notwithstanding, first of all tender and loving. Only the love was not soft and flabby, but had all the elements of perfect strength. It was organic. There was justice in it. The servant who stubbornly laid his Lord's talent away was stripped of his little all; and the servant who tried hard and did his best was rewarded. Just as the merciful schoolmaster detects the hopelessly bad boy and sends him away from his privileges, lest, remaining in the school, he drag others down to his own infamy; so the merciful Christ rejected the tempter, the hypocrite, the hard-hearted, the worldly, from His kingdom. . . . Some men feeling



Going Home to Dinner.

life to which He tried to lead His people, He did resent men's opposition. The resentment was official. Moreover, as we shall see, the resentment was often against those whom He loved; and so, though it was, in a real sense, anger, anger is perhaps not the best word to describe His attitude. It was never that slow, sullen rage, which often is suggested by the word "anger"; but was always a quick, fiery intensity, by its very brilliance and heat calculated to burn the sin to ashes. For these reasons, the best word available is "scorn."

In the attempt to disclaim for Christ any wrath against persons, it has sometimes been argued that this scorn was for the sin rather than the sinner. The sophistry of such a distinction was as far as possible from our Lord's spirit. If sin was disowned by its victim, Christ counted it separated; but if the sin was cherished, tolerated, Christ counted it identical with the sinner. His resentment, His contempt, His anger, His scorn, was for the concrete, personal sinners of His day, not merely for any abstract qualities which hung about their lives.

People who think that they follow Christ, sometimes become insensible to sin through an exaggerated tenderness for bad people. They reach the depth described by the Psalmist, "Neither do they abhor anything that is evil." Because bad men are tolerated, excused, their villainous influence spreads. Christ was as a surgeon, cutting evil men out of the great organism of humanity, to

the temptation, he kept himself unspotted. Surely we need to remember that the most gracious Saviour, who had only pity for Zaccheus and the Magdalen, had the most burning scorn for certain types of sinful persons,—the persons who drag down humanity, and, so far as they can, blot out the kingdom of heaven. We need not try to explain away or even tone down the invectives and the curses: they are part of His redeeming love for humanity, and must be studied just as they stand in the narrative.

I. Against Tempters.

Christ had very evident scorn for those who consciously or unconsciously tempted men from the right. He expressed this scorn not only when people tried to turn Him from His Messianic duty, but also when He saw that His earnest followers were being beguiled from "the way."

The purity and splendor of such indignation we feel when we see the face of a mother who has discovered that to her boy, hitherto unspotted from the world, some villain is holding out the temptation to depart from righteousness. There are men who take a fensish pleasure in watching the unspoiled life make its first timid plunge into gross sin. They are the tempters of innocence. The mother who discovers that such a malign personality is approaching her beloved has the right of a tigress to spring upon this murderer of her child's soul. Tenderness has its limit: there comes a time

the heat of His scorn must have come to a sense of their condition. For the scorn of a perpetual blusterer does not hurt; what does hurt is the scorn of the gentle, the kind, the loving. . . . We can be candid with ourselves and measure exactly the attitude which Christ will have for any of those qualities in us which once He faced on earth with terrible scorn. He was fierce as only the Gentlest can be fierce. There is no paradox in His forgiveness and His anger; only completeness, in love.

—From "The Master of the World."

THE MOONS OF MARS.

("T. P.'s Weekly," London.)

Messrs. Black have sent me a copy of the Rev. James Baikie's (R. R. A. S.) "Through the Telescope," a most serviceable manual whose object is "to give a brief and simple description of the most important and interesting facts concerning the heavenly bodies, and to suggest to the general reader how much of the ground thus covered lies open to his personal survey on very easy conditions. I quote this note on the Moons of Mars: "The Moons of Mars are among the most curious finds of modern astronomy. When the ingenious Dr. Jonathan Swift, in editing the travels of Mr. Lemuel Gulliver, of Wapping, wrote that the astronomers of Laputa had discovered 'two lesser stars, or satellites which revolve about Mars,' the suggestion was, no doubt, put in merely because some detail of their skill had to be given, and as well one unlikely thing as another. Probably no one would have been more surprised than the Dean of St. Patrick's, had he lived long enough, or cared sixpence about the matter, to hear that his bow drawn at a venture had hit the mark, and that Professor Asaph Hall had detected two satellites of Mars. The discovery was one of the first-fruits of the 26-inch Washington refractor, and was made in 1877, the year from which the new interest in Mars may be said to date. The two moons have been called Deimos and Phobos, or Fear and Panic, and are, in all probability, among the very tiniest bodies of our system, as their diameter can scarcely be greater than ten miles. Deimos revolves in an orbit which takes him thirty hours and eighteen minutes to complete, at a distance of 14,600 miles from the center of Mars. Phobos is much nearer the planet, his distance from its center being 5,800, while from its surface he is distant only 3,760 miles. In consequence of his nearness, he can never be seen by an observer on Mars from any latitude higher than 69, the bulge of the globe permanently shutting him out from view. His period of revolution is only seven hours and thirty-nine minutes, so that to the Martian inhabitants, if there are any, the nearer of the planet's moons must appear to rise in the west and set in the east. By the combination of its own revolution and the opposite rotation of Mars it will take about eleven hours to cross the heavens, and during that period it will go through all its phases and half through a second display."

TO THE WOODLARK.

O, stay, sweet, warbling woodlark, stay,
Nor quit for me the trembling spray:
A hapless lover courts thy lay,
Thy soothing, fond complaining.

Again, again that tender part,
That I may catch thy melting art!
For surely that woe touch her heart
Wha kills me wi' disdaining.

Say, was thy little mate unkind,
And heard thee as the careless wind?
Oh, nocht but love and sorrow joined,
Sic notes o' wae could wauken.

Thou tells o' never-ending care,
O' speechless grief and dark despair;
For pity's sake, sweet bird, nae mair!
Or my poor heart is broken.

—Robert Burns.

We should begin life with books, they multiply the sources of employment, so does capital—but capital is of no use unless we live on the interest; books are waste paper, unless we spend in action the wisdom we get from thought.—B. Lytton.



"Boy Playing a Mandolin."

(From a painting, by E. Dyonnet, R. C. A., Montreal. Exhibited at Toronto Exhibition, 1906.)

The Young People's Department.

All letters intended for Young People's Department must be addressed to Cousin Dorothy, 52 Victor Ave., Toronto.

ON HOBBIES:

I.

We often speak rather contemptuously of hobbies. "Oh, that is just So-and-so's hobby," we say, with a superior smile. But let us think a little before we make too sure of being superior to him. Say So-and-so's hobby is botany. He thinks of it as he does his daily work, and plans what he will do with his pocket-money. There is a new book he must have when he has saved enough, and perhaps he will be able to take a botanical magazine next year. These delightful thoughts make the time pass quickly, and as soon as his work is done, he goes off to hunt specimens. You don't see So-and-so wandering aimlessly along the road, knocking the dandelion heads with a stick, and wishing it were not so hot or so dull, and that there was someone to talk to. No! So-and-so is off in all directions, skirmishing about among the weeds, his heart thrilling with the hope of finding a new specimen. How excited he is when he finds it! He is perfectly happy as long as he is picking it to pieces, pressing it, and adding it to his beloved collection. Do you think hobbyless people can afford to laugh at So-and-so?

Now, my dear cousins, my opinion is that every young person who has no hobby yet, ought to set about getting one at once. Perhaps you have just left school, and find it hard to settle contentedly down to the farm work. You're afraid your brain will get rusty from want of use, and yet you haven't time to keep up your history, and literature, and Mathematics, and composition, and all the things you were so interested in before. You see older people about you who take no interest in anything but their crops or their housework, and you are afraid you may some day be the same yourself. Try a hobby! The country is the place to cultivate one—we have no odd minutes in the city. When we think we have some, the door-bell or the telephone rings, and the precious minutes are gone. But I have lived in the country, and I know that generally you have a good deal of spare time, which may either be found very dull, or made tremendously interesting. And you know interested people are the interesting ones. A good hobby will keep a bashful young man from thinking about himself, and he will have at least one subject that he can talk easily about. The bashfulness which is such a trouble to so many young people comes from thinking about themselves, and you can't be thinking about yourself and your hobby too.

It will, of course, occur to every young person of sense that there are a few rules to be observed in the pursuit of a hobby. It is for want of keeping them that some people have brought the poor thing into disfavor. But they are no new rules. They might all be included in one: "Never be selfish."

Don't talk about your hobby all the time (as I have noticed very boring girls sometimes do about their high-school studies), and never talk about it to anyone who you know doesn't want to hear of it. You can always think about it, and that is much more useful. Don't let anything make you leave work undone to enjoy your hobby, or spoil the pleasure of someone else because your mind is full of it. No wonder people are down on hobbies when they are made excuses for bores, and idle people, who like everything better than their plain duty.

I hope some of you will have something to say about this subject. I think it would be a good plan to discuss a few hobbies among ourselves, don't you? Next week, I will give you my opinions on a favorite hobby of my own, and, perhaps, the most common and pleasant hobby of all, namely, "Books."

I expect to hear your opinions, too, and, if all is well, on several other subjects, such as photography, ornithology, music, fancy needlework, gardening, and other things which some of you know more about than I do.

COUSIN DOROTHY.

THE BOY CAME BACK.

James Whitcomb Riley, in his inimitable way, tells the story of a "much-aggravated and unappreciated lad," who made up his mind that he "could stand the tyranny of home no longer," and so early one morning he put a long-contemplated plan into execution, and ran away.

All day long he played down at the old "swimming hole" with the other boys, making a raid on an orchard at noon to stifle the pangs of hunger. At night, when his companions went home he was left alone, "with a lump in his throat that hurt worse when he didn't notice it than when he did." As it grew dark he "oozed toward home." He climbed the back fence into the big backyard, which had such a "homey" look that he had never noticed before. After roaming around, getting acquainted with his home that he had left so long ago, about twelve hours since, he wandered into the sitting-room, where his father was reading the evening paper, and his mother was sewing. They took no notice of him, and he sat down on the remote edge of a chair, and waited to be recognized. He could hear the boys playing out on the commons their nightly games of "town-fox," but he didn't want to join them. He just wanted to stay right there at home forever. The clock ticked, oh, so loudly; but otherwise the silence was so deep that it was painful. Finally, when it became more than he could bear, he cleared his throat and mustered up courage enough to say: "Well, I see you've got the same old cat."

God bless the boy who, finding he had made a mistake, in his valuation of home, is brave enough to go back and prove just how much the "same old cat" is worth, as compared with no cat and a homeless life.—Sel.

WHERE IT CAME FROM.

During the course of a geography lesson, the teacher asked the following question: "Who can tell me what useful article we get from the whale?" "Whalebone," promptly replied a boy. "Right. Now, who knows what we get from the seal?" "Sealing-wax!" shouted a little girl.

NOT MUCH HOPE.

When the first Australian contingent arrived at Cape Town, Mr. Kruger is said to have asked General Joubert if he knew anything about these Australians. "I only know that eleven of them once beat all England." "Good heavens!" cried the president, "we are lost! Thirteen thousand of them have just landed!"

Writing or printing is like shooting with a rifle; you may hit your reader's mind or miss it; but talking is like playing at a mark with the pipe of an engine, if it is within reach and you have time enough you can't help hitting it.—O. W. Holmes.

With the Flowers.

BULBS AFTER FLOWERING.

Many people are troubled to know what to do with bulbs when they have stopped flowering in spring, the more especially as the space taken up by them is often required for other plants.

Narcissi and daffodils, as a rule, resent disturbance, hence should be planted in borders, where they may grow up at their own sweet will. Once in three or four years, however, they may show signs of weakness, in which case they should be taken up (after every vestige of foliage has ripened off), rested for a summer, and reset in the fall again.

Tulips and hyacinths may be taken up as soon as the stems have turned yellow, packed side by side in a shallow box, and placed in a dry, airy spot exposed to the winds. When thoroughly dry, they should be sorted over, the stems removed, and all bulbets and shriveled bulbs discarded, the sound, plump bulbs being then kept in an airy, rather cool, but dry, spot until it is time to reset them in October.

Some people plant the small bulbets out, and by careful cultivation for two or three years bring them to the blooming point, but, as a rule, they are simply thrown away.

MIDSUMMER WORK IN THE FLOWER GARDEN.

For the remainder of the summer, there remains little to do in the flower garden, save transplanting occasionally, and cultivating.

In transplanting, it is necessary to bear in mind that gentleness is a prime factor of success. You cannot jerk tender little plants out of their seed-box, lacerate the rootlets, jam them into the earth, and pack it so as to bruise them still further, then expect them to stiffen up and grow on without a falter. You must remember that every rootlet is a member complete in itself, with a little hard tip made for pushing through the hard earth, which should be preserved intact; also that every crushed rootlet means just one feeder, less to the growing plant. Transplanting should, if possible, be done on a dark, moist day, but if such an opportunity does not offer, success may be invited by setting out the plants in the evening, watering them freely, then scraping a much of dry, loose earth over the damp spots around the plantlets. By doing this, the moisture is conserved, and the surface of the soil prevented from baking.

Cultivation.—The importance of cultivation is not, perhaps, fully realized. Many people suppose its chief reason is the eradication of weeds, but this is a great mistake. Cultivation not only keeps the surface of the soil porous and permits the ingress of air; it also—and this is its chief function—draws the moisture, by the principle of capillary attraction, from far down in the ground and disposes it just where it will do good—about the roots of the plants.

Perhaps a very simple experiment will serve to illustrate what this capillary attraction is. Take a lump of sugar or salt and hold the lowest tip of it in a saucer of water, then watch what happens. You see the moisture mount up, up, up, until the whole lump is saturated. Now, this is precisely what happens in the soil when you make the surface of it porous by cultivation; and this is the reason why the best gardeners, whether of vegetables or flowers, cultivate, cultivate, cultivate, so continuously throughout the growing season. They have found out the wisdom of the old adage, "A good stirring up is as good as a rain." Cultivation need not be deep; a depth of from two to three inches is usually enough for even deep-rooted plants, while those with finer roots coming close to the surface may need only a thorough scratching of the top of the soil, done with especial frequency during periods of drouth.

SPRAYING ROSEBUSHES.

Spraying rosebushes with a solution of Ivory soap is recommended by American Gardening as an effectual preventive of rose bugs.

The Ingle Nook.

SOMETHING ABOUT CHILDREN.

(Concluded.)

In conclusion of this subject, it may be well to bring up the query, Should children be made to yield implicit obedience, without question or reason? This was the old-time method, and, too often it is to be feared, its chief results were to be seen in "bullying" parents and timid, sometimes deceitful children. To-day, perhaps, the tendency has swung too far the other way, so that it is not unusual to see headstrong, overbearing children and timorous parents ready to yield to anything to save an uproar.

Certainly it is very pleasant to see children obey quickly and readily, and yet there may be cases in which they should be treated as reasoning beings. "What for?" the question so often asked by little ones, is one that may not be always wisely disregarded.

Another factor in child-training is the influence the atmosphere of the home and the conversations heard in it have upon them. It is almost impossible for cheerful, optimistic children to go forth from a place of gloom and fault-finding.

Last of all is it not true that a very efficient way of inducing children to be cheerfully obedient is to give them some object or some enjoyment in doing things? Yet this object must never take the form of a reward. I once heard a father say, "Tommy, if you split that kindling I'll give you five cents; if you don't I'll give you a thrashing." I have never heard how Tommy turned out, but surely were such a method continuous, only a miracle could have prevented him from growing up sullen and selfish, unwilling to do a single favor without pay, disliking the father who was so tactless as to put such alternatives before him. How differently Tommy must have felt if his father had asked him politely to split the kindling, representing the little act as a favor to himself. As a rule, children love to do favors, provided right representations are brought to bear upon them.

Now, there may be some phases of this question which I have not touched upon, or touched upon inadequately. If any of our readers feel that they have anything really worth while to say about it I shall be glad to hear from them, for the subject is surely an important one.

DAME DURDEN.

Reply from Aunt Nan.

Dear Dame Durden.—I must endeavor to write you once more, but I fear I will find it no easy task to write equal to the recommendation you so kindly gave me last time.

I fear the subject of farming and the experiences of farm life are too broad to do it anything like justice in a letter of this kind. However, one of the essentials in beginning and continuing farm life successfully is live within your income, let it be ever so small. If you do so, you will find the day of better things will soon come, if you have managed wisely. Then, too, keep a strict account of income and outlay, and you will be less likely to purchase the unnecessary things. Take a reasonable amount of comfort as you go, for when the end is attained for which you have striven you may find the faculty for enjoying it past. We have found that the days of small things have given us such seasons of thankfulness as we never experienced before, and one finds so many similarly situated that one wonders how one could have lived and realized so little in the days gone by, that the struggle for bread in our prosperous farming country was so strenuous.

Especially apparent does it seem now that so many of the women are striving to "keep the farm going" and "educate the children" at one and the same time. Let me say for those around us, whose homes I see as I drive along, that the "farms are not going to the dogs," to use a very common expression of our men friends. By the way, that same expression was given me by way of advice by a farmer when we undertook to farm. You see, his confidence in us as farmers was not very strong, but, let me tell you, he has changed his tune.

Born and raised on a farm, I have frequently been amazed, during the last few

years, at the number of things I failed to estimate the value of. Accustomed to having men take charge of the outside work, always having hired help, and only occasionally helping when necessary, at the various kinds of work girls are often asked to do, such as chores, raking hay, building loads, etc., I felt that the work in general should be familiar.

But when it came to putting a proper value on stock, and the allowance one should make for time and work, also the proportion of grain to sow, or the length of time it should take a man and team to do a piece of work, I felt bewildered.

But, friends, we can learn, although experience is a dear teacher. I would that all our farmer girls and mothers should have a broader knowledge of those things, and then the day of adversity, when it comes, as it must to some of us at least, will find them better fitted for the anxieties and cares that are sure to follow.

Let the mothers see to it that the sons also have a knowledge of things about the house, and we will have fewer complaints from our bachelor friends about their difficulties in housekeeping. Jack's Wife is right; each should have a practical knowledge of the other's work, and then the case of emergency would cause no one anxiety.

I enjoyed your talks on house plans, Dame Durden, and think they must surely prove helpful to those building houses. Your mention of suitable colors for walls and ceilings of the different rooms are timely. Let me add a word of experience in favor of painted walls and ceiling on the plaster. It is a most satisfactory plan, and one tires less of plain walls than of any pattern of paper. Besides, the sanitary condition is much improved, and, once done, it will look well for years.

"The Farmer's Advocate" is one of the essentials aforementioned to successful farming, and is practical in every department. So, now, Dame Durden, I must close, or you will think I am like the brook that "goes on forever."

AUNT NAN.

Fleas.

Dear Dame Durden.—Can you offer any suggestions as to ridding a house of those vile little pests, fleas? The soil here is somewhat sandy, and they seem to get into the house in spite of being very unwelcome guests.

Kent Co. LASS O' GOWRIE.

In regard to fleas, Smith, in his Economic Entomology, says: "Where a house becomes infested, the dogs or cats should be washed with carbolic soap every other day to kill the adults on them, and if the animals be allowed to run throughout the house, they will, in a few days, attract all the fleas to themselves, where they can be dealt with. The sleeping rugs of the animals should be thoroughly beaten on shaken out of doors every day, and the most rigid cleanliness should be everywhere observed. Where dogs or cats are not available as traps, a liberal application of gasoline, following a thorough cleaning up, is the best remedy. It should be poured into every crevice in the floor and along the baseboards, and it will kill every larva and adult with which it comes into contact. The liquid is exceedingly inflammable, and must be used with that fact borne in mind." I may add that no light or fire of any kind, not even the striking of a match, should be allowed in a room where gasoline is used. The fumes are as inflammable as the gasoline itself, and the consequences might be disastrous. As the liquid evaporates very quickly, however, leaving all doors and windows open will soon restore a room to its normal condition, when fires may be built or lights brought in with safety. Pet animals may be cleaned by a free and frequent use of carbolated soaps or vaseline.

According to a bulletin by the U. S. Department of Agriculture, a good treatment is with creolin.

Among the various household insect pests, fleas are one of the most troublesome to eradicate. In New Hampshire, creolin was found to be the most satisfactory remedy for this pest. For dogs, a three-per-cent. solution was recommended, and for cats a two-per-cent. solution. The animal should be thoroughly washed, and the application will destroy the adult fleas as well as the larvae. The application should be made as soon as

any infestation of dogs and cats is observed. This method, when compared with others, was found to give by far the most satisfactory results. Commercial creolin may be purchased at any drug store, and forms a milky solution when mixed with water. It may be applied to dogs and cats by washing with the hand or brush, or by submerging the animals in the prepared solution."

WHEN THE COWS COME HOME.

With kingle, klangle, klingle,
Way down the dusty dingle,
The cows are coming home;
Now sweet and clear, and faint and low,
The airy tinklings come and go,
Like chimings from some far-off tower,
Or patterings of an April shower
That makes the daisies grow;
Ko-klarg, ko-klarg, ko-klingleingle,
Way down the darkening dingle,
The cows come slowly home;
And old-time friends, and twilight plays,
And starry nights, and sunny days,
Come trooping up the misty ways
When the cows come home.

With jingle, jangle, jingle,
Soft sounds that sweetly mingle,
The cows are coming home;
Malvine, and Pearl, and Florimel,
De Kamp, Redrose, and Gretchen Schell,
Queen Bess, and Sylph, and Spangled Sue,
Across the fields I hear her oo-oo,
And clang her silver bell;
Go-ling, go-lang, go-lingingleingle,
With faint, far sounds that mingle,
The cows come slowly home.
And mother songs of long-gone years,
And baby joys, and childish tears,
And youthful hopes and youthful fears,
When the cows come home.

With ringle, rangle, ringle,
By twos and threes and single,
The cows are coming home;
Through the violet air we see the town,
And the summer sun a-slipping down;
The maple in the hazel glade
Throws down the path a longer shade,
And the hills are growing brown;
To-ring, to-ring, to-ringleringle,
By threes, and fours, and single,
The cows come slowly home.
The same sweet sound of wordless psalm,
The same sweet June-day rest and calm,
The same sweet scent of bud and balm,
When the cows come home.

With a tinkle, tankle, tinkle,
Through fern and periwinkle,
The cows are coming home.
A-loitering in the checkered stream,
Where the sun-rays glance and gleam,
Starine, Peachbloom, and Phoebe Phyllis
Stand knee-deep in the creamy lilies
In a drowsy dream;
To-link, to-lank, to-linkleinkle,
O'er the banks with buttercups a-
twinkle
The cows come slowly home.
And up through memory's deep ravine
Come the brook's old song and its old-
time sheen,
And the crescent of the silver queen,
When the cows come home.

With a kingle, klangle, klingle,
With a loo-oo, and moo-oo, and jingle,
The cows are coming home;
And over there on Morlin hill
Hear the plaintive cry of the whippoor-
will;
The dew-drops lie on the tangled vines,
And over the poplars Venus shines,
And over the silent mill;
Ko-ling, ko-lang, ko-lingingleingle;
With ting-a-ling and jingle,
The cows come slowly home.
Let down the bars; let in the train
Of long-gone songs, and flower and rain,
For dear old times come back again
When the cows come home.

RECIPES.

Doughnuts.—One cup sugar, 1 cup milk, 3 tablespoons melted butter, 2 eggs, 3 cups Five Roses flour, 3 teaspoons baking powder, $\frac{1}{2}$ teaspoon salt. Make into rings, and fry in hot lard.

Yorkshire Pudding.—One cup milk, 2-3 cups Five Roses flour, a pinch salt, 3 eggs. Roll out, cut in squares, and lay beside roast of beef to bake, basting frequently. Cook $\frac{1}{2}$ hour.

GOING BACK TO THE FARM.

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

I'm goin' back, for I've had my fill—I've
saw what there is to see;
The city may still be the place for you,
but it's lost it's charm for me;
And won't I be lonesome there, you say,
with the people so far apart?
Well, mebbe they're few and far between,
but each of em's got a heart;
There ain't no hundreds of thousands
there to push you around, I know,
Not carin' a cent where you're comin'
from or where you're tryin' to go—
For the one that's jostled day after day
with never a friend to greet,
There ain't a lonesomer place on earth
than the city's crowded street.

I'm goin' back where the dog's asleep
on the step by the kitchen door,
With his nose pushed down between his
paws—I'm sick of the smoke and
roar;
There's money to make where the crowds
are thick and they're tryin' to trip
things loose—
There's money to get if you've the grit,
but, dang it all! what's the use?
They hustle for dollars all through the
day, and dream of dollars in bed,
And forgive the gougins a fellow may
do as long as he gets ahead—
They bustle and hustle and coop them-
selves in dark little holes and fret,
And honor a person according to the
money he's managed to get.

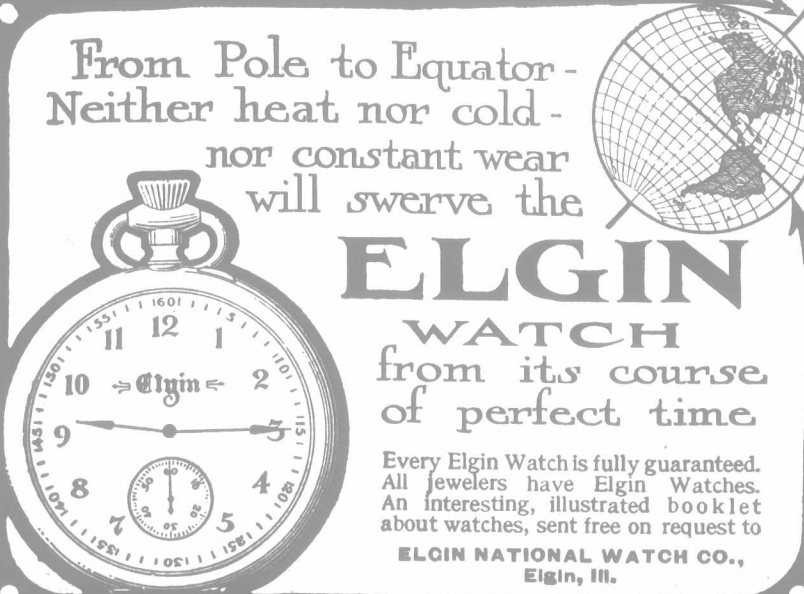
I'm going back where the poplars stand
in tall rows down the lane,
Where the bobsleg's settin' beside the
barn, deyin' the sun and rain;
Where the birds are singin' away as
though they were hired to fill the air
With a sweetness that nobody ever can
know who was never a boy out there;
I'm goin' back where they'll not expect
me to sit in the kitchen when
I'm courtin' the girl I love because I'm
workin' for other men—
Where the richest among 'em'll shake my
hand, instead of lettin' me see
That they think the money they've got
must make them a blame sight better
than me.

I'm goin' back, and you'll stay here and
rush, in the same old way,
Goin' to work and then goin' home—the
same thing day by day—
And you'll think you're havin' a high old
time, and I'll pity you, lookin' back
(From where I whistle across the fields)
at you in the same old track,—
I'm goin' back, but the crowds won't
know, and they'll still keep rushin'
on;
They'll never notice that someone's face
is missin' when I am gone—
No, they'll never notice that someone's
gone—if they did they wouldn't care—
But every tree'll be noddin' to me when
I turn up the lane back there.

—Ottawa Valley Journal.

A Philadelphia physician warns the public against sitting with one leg crossed over the other. "This apparently harmless habit," he says, "is likely to cause sciatica, lameness, chronic numbness, ascending paralysis, cramps, varicose veins and their evils, including appendicitis. The reason is simple. The back of the knee, as well as the front of the elbow and wrist, the groin and the armpit, contains nerves and blood vessels which are less protected than those in other parts of the body. The space behind the knee contains two large nerves, a large artery and numerous veins and glands. It is the pressure on these nerves and vessels which is apt to give rise to the various troubles against which I give warning."

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nor constant wear
will swerve the



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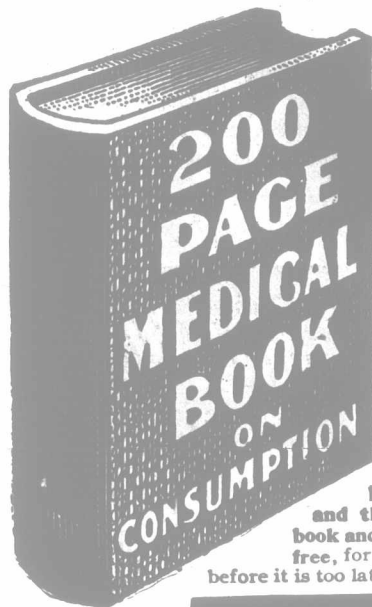
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About the House.

SALADS.

Although salads are good at all times of the year, they are especially appetizing during warm weather. Moreover, they are the very easiest things to make, and the wise housewife will fly to them for an extra dish whenever she is hurried or too tired to fuss with anything more troublesome. Make a good pot of dressing once in two or three weeks, and the chief part of the work of preparation is over.

There are many recipes for salad dressings—probably a dozen have been given in this department from time to time, and all are good. As a rule, in places in which cookery has become a fine art, French dressing is used for all salads served without fish or fowl, and mayonnaise for fish and chicken salads, and for those made of tomatoes. The real mayonnaise requires oil. Pure, fresh olive oil is the kind usually used. It may be bought in sealed bottles at any drug store or fruiterers, and is so exceedingly nourishing that the purchase is well worth while. The following is a recipe which has not been given heretofore in these columns:

Mayonnaise Dressing.—Boil an egg ten minutes, and, when cold, take out the yolk and mash it finely. Add to it the raw yolk of another egg, and stir until smooth, then add $\frac{1}{2}$ teaspoon sugar, $\frac{1}{2}$ teaspoon salt, a dash of pepper, $\frac{1}{2}$ teaspoon of made mustard, and a few drops of Worcester sauce, if you have it. Then add $\frac{1}{2}$ cup olive oil, stirring continually until well mixed, and, last of all, this to the desired consistency with vinegar. Have it very cold when put on the salad.

French Dressing.—Mix together $\frac{1}{2}$ teaspoon salt, $\frac{1}{2}$ teaspoon pepper and 3 tablespoons oil; then add 1 tablespoon vinegar, stirring slowly.

Oil dressings, by the way, should be made a short time before serving. The following, however, will keep well in a cold, dark place, and are, consequently, the best for the busy housewife:

1. **Imitation Mayonnaise.**—Mix together 3 tablespoons hot, mashed potatoes, 2 saltspoons salt, $1\frac{1}{2}$ teaspoons dry mustard, and a dash of cayenne. Stir into this 2 well-beaten eggs, and beat until light. Now, add alternately, a little at a time, 4 tablespoons thick cream and 2 of vinegar, beating in the greater part of the vinegar last.

2. **Good Dressing.**—Two eggs, butter size of an egg, 1 tablespoon mustard mixed in a little milk, 2 tablespoons sugar, 1 cup good vinegar, $\frac{1}{2}$ cup cream, pepper and salt to taste. Mix beaten eggs, sugar, mustard and salt; then add vinegar and heat in a double boiler until smooth and creamy. When cold, whip in the cream.

Sometimes trouble is found in keeping salad dressing from curdling, although this seldom happens if the yolks of eggs alone are used. Cooking the dressing in a double boiler or in a pan set in hot water will usually prevent the trouble, but if it should occur, heating the mixture briskly with a Dover egg-beater will make a great improvement.

And now listen,—you can make salad with almost anything. At this time of the year there is not, of course, so great a variety as a little later, yet as long as we have potatoes, beans, fish, chicken, eggs, cheese, ham, watercress and canned tomatoes, we need not go saladless. Then it will not be long until lettuce, small beets, etc., are in.

Bean Salad.—Use left-over baked beans. Mix in a little finely-minced onion; mix with dressing, and serve.

Beef Salad.—Run any fragments of lean, cooked beef through a meat chopper; mix with it some finely-minced cucumber pickle, and one or two hard-boiled eggs cut into bits. Add dressing, and serve.

Cheese Salad.—One cup grated cheese (old, hard cheese will do), yolks of 2 hard-boiled eggs (mashed). Mix with a little mayonnaise, form into balls, and serve on lettuce leaves.

Egg Salad.—Simply boil hard, cut into thick slices, and serve on lettuce leaves, with a spoonful of mayonnaise on top.

Chicken Salad.—Mince scraps of cold chicken, and mix with a little of any vegetable you may have on hand, baked beans, minced cold potato, or celery, or

beets; a few bits of walnut meat will also be a great improvement, and a very little bit of onion may be added, if liked. Mix with dressing, and serve.

Watercress Salad.—Break the cress into small pieces, sprinkle some finely-cut bits of green onion over, and serve with dressing in a pitcher.

Orange Salad.—Slice, lay on lettuce leaves, and pour a little mayonnaise over.

Potato Salad.—Mince the potatoes finely, and add to them some minced onion and hard-boiled egg. Mix well with dressing, and serve.

Canned Tomato Salad.—One pint canned tomatoes, 1 sprig parsley, 1 slice onion, 6 cloves, salt and pepper to taste. Put all on stove, let stew a little, then strain and place again on stove. Add two tablespoons gelatine, which has been soaking half an hour in cold water, and rubbed smooth. Stir up well, take from the fire, and stir in 2 tablespoons lemon juice. Pour into a wet mould, and let stand in a cold place eight hours. Cut in dice, and serve with mayonnaise on watercress or lettuce leaves.

Current Events.

Mexico is massing troops on the Guatemalan frontier.

Prince Fushimi, of Japan, will make a flying trip through Canada during the early part of June.

A movement to secure better working hours is said to be afoot among the operating staff of the G. T. R.

Walter Wellman, the aeronaut sent out by the Chicago Tribune-Record, has gone to Spitzbergen, whence he will start on his trip toward the Pole. Three men will accompany him in his airship.

The Hague Peace Conference, which is to meet this month, will assemble in a thirteenth-century castle called the Hall of Knights. It is now believed that the question of limitation of armaments will not be a feature of the Conference.

The Grand Trunk Pacific Railway will begin immediately the construction of the first of its lines in British Columbia, from Klamath to Kit-salas. A rapid development of the Western Provinces is expected to follow the pushing of the railway branches into new territory.

The Railway Commission of Canada is making a thorough inquiry into the matter of broken rails on railways. It will also consider the question as to whether it is necessary to have a Government inspector to inspect the rails during process of manufacture. So far, Canadian-made rails are said to be satisfactory.

THE FOOTHILLS.

Under the cloudless blue they lie,
Golden hills in the golden sun;
Rising up to the mountains high,
Reaching down where the rivers run.
Smooth and bright as a beaten strand,
Fresh and strange as an unsailed sea,
Billowing out on either hand,
Sweet with a magical witchery.

Up to the springs of youth they lead,
Under the edge of the purple pines;
Ways untainted by toil or greed,
Paths where peace in its fullness shines;
Winds of healing above them pass,
Free and fresh in their stainless might;
Golden ripples the mountain grass,
Golden stretches the boundless light.

O to be where the foothills rise,
Far away from the homes of men!
O for an hour to lift mine eyes
Up to their glorious slopes again!
All day long my feet must fare
Over the paths by tollers trod,
But O to kneel on that altar stair
Lifted up by the hills of God!

—Mabel Earle.

Doctors Tried for 8 Years to Cure Me

But I Am Well Now and Believe I
Owe My Life to Dr. Chase's Kid-
ney-Liver Pills.

There is a remarkable cure described in
this letter which should prove of vital
interest to anyone suffering from derange-
ments of the kidneys.

Mrs. Dave W. McCall, Lombardy, Leeds
Co., Ont., writes: I desire to acknowl-
edge the benefits I have received from
Dr. Chase's Kidney-Liver Pills. I was
troubled with kidney disease for eight
years, and doctored with several doctors
to no avail until my husband got me
Dr. Chase's Kidney-Liver Pills, and I
began using them. Altogether I used ten
boxes, and can truthfully say I would
have been dead long ago only for Dr.
Chase's Kidney-Liver Pills. Words cannot
express my praise for them, for I believe
there is no medicine so good for kidney
and liver disorders."

Dr. Chase's Kidney-Liver Pills are
unique in that they have a direct and
combined action on both the liver and
kidneys, and for this very reason prove
effective when other treatments fail. One
pill a dose, 25 cents a box, at all deal-
ers, or Edmanson, Bates & Co., Toronto.

ECZEMA

Of the Skin and Scalp
Can Be Cured.



It yields quickly to
our reliable home
remedies for the cure
of all skin troubles.
Not one remedy is a
cure-all. **CONSUL-
TATION FREE** by
mail. We've had over
fifteen years' experi-
ence in treating **Ec-
zema, Salt Rheum,
Ringworm, Rashes,
Pimples, Black-
heads, Blisters,
Freckles, Moth-
patches and Dis-
colorations.**

Any spot or blemish that tends to mar the
personal appearance of any young man or
woman is always successfully treated. When
writing be sure and describe trouble fully.

Superfluous Hair.

Moles, Warts, Birthmarks removed
permanently by our method of Electrolysis.
Satisfaction guaranteed. Come during sum-
mer for treatment. Send 10 cents for books
and sample of cream.

GRAHAM DERMATOLOGICAL INSTITUTE,
Dept. F. 604 Church Street, Toronto.

Notice to Horse Importers

GERALD POWELL,
INTERPRETER,
LILLE, FRANCE,

Is well posted on the Percheron, French
Draft, Belgian and French Coach horse
trade, can meet importers at any port in
France or Belgium. 17 years' experience,
and best of references. Correspondence
solicited. All information about shipping,
pedigrees and banking.

Bargains in Cheap Power

We have the following new Gasoline Engines
for sale at a very low price:

Four 1 1/2 H. P. Gasoline Engines (Bates & Edmunds,
Lansing, Mich.). Twelve 8 H. P. Gasoline Engines
(Labatt Mfg. Co., London, Ont.). Five 12 H. P.
Gasoline Engines (Labatt Mfg. Co., London, Ont.).
Also a number of second-hand engines in good
order. **THE CANADIAN FAIRBANKS CO., Limited,**
26-28 Front Street West, Toronto.

\$10 WOMEN'S LUSTRE SUITS, \$6.
Wash suits, \$2.99 up. Cloth suits,
\$6 to \$16. Skirts, waists and silk coats at man-
ufacturers' prices. All garments tailored to your
measure within one week. Send for free cloth
samples and fashions. **Southcott Suit Co.,
London, Ont.**

Since every man has power over his
character, and power over his body, let
him use it with care. Happiness is a
rare improver of the hard-favored visage.
—Irving.

Health in the Home

HOUSEHOLD SANITATION.

(Continued.)

By Mary E. Allen-Davidson, M. D.

Artificially-heated air is always too
dry, hence irritating to the delicate
air passages, especially those of chil-
dren. This may predispose to
coughs, colds, catarrh, etc. An irri-
tating cough at night is often caused
by dry air, and will cease at once if
moisture be applied. If parlor-
heaters are used, a kettle of water
should always be kept on the same,
the steam from which will supply the
necessary moisture. Where furnaces
are used, the reservoir does not sup-
ply sufficient moisture to the heated
air, even if kept filled. Set tin pails
in the registers and keep filled with
water. The evaporation of this
water into the warm air passing
over it causes quite a perceptible dif-
ference in the moisture of the air.
Where steam or hot water is used for
heating, the air is not so likely to be
too dry. So much for general venti-
lation and heating. Something may
be added when the sleeping-rooms are
discussed.

As to lighting, be prodigal of sun-
light through the day. Disease is a
thing of darkness, and lurks in damp,
sunless corners. Have plenty of
windows, and don't keep the blinds
down. Never mind the curtains and
carpets. Better that these should
fade and lose their freshness than
that the children should be pale and
peaked and without the red roses of
health blooming on their cheeks. Let
in the sunlight, flood the house with
it. It will search out the cobwebs,
show up the dust, sweeten and purify
everything, and revive you with its
warmth and cheer. The sun and the
elements are always our friends.
The former gives warmth and
light; while earth, air, fire and water
—Nature's tireless cleansers—are at
constant war with our enemies, filth
and disease. So welcome the sun-
light and make the elements your co-
workers. Burn every useless thing
if it can be burned. It will not then
become a source of contamination.
Call earth and air and water to your
aid in keeping your home healthful
and so restful to mind and body.

For artificial lighting, coal oil and
gas use up a great deal of oxygen,
and throw off carbon dioxide gas. Be
sure to allow a lot of extra fresh air
if these are used. See that the coal
oil is pure, and never burn with wick
turned low. Shade lamp if neces-
sary, or set in an adjoining room.
There is great danger of explosion if
the wick is turned low, because the
escaping gas, so perceptible by its
odor, is very inflammable and easily
ignited. The consequences need not
be dwelt upon; they are only too
fatally common.

LIVING-ROOMS.

Kitchen.—This should be the larg-
est, cheeriest room, in farmhouses
at any rate, because, no matter how
cosy the parlor may be, even if there
be a good-sized dining-room, which
does not obtain in the majority of
farmhouses, still the kitchen ever will
be the living-room, because the
mother must spend the major portion
of her waking hours there, and she
is the magnet that draws all the in-
mates of the home into the charm
of her presence. So, mothers, I ad-
dress myself particularly to you. This
is your especial domain; does it
seem a lowly place, and your daily
round menial and commonplace? Not
so. It is a throne-room, and though
the toil is unceasing and severe, you
are inculcating principles and giving
a matchless example of fortitude and
endurance, and of self-sacrifice for
your loved ones, that will go a long
way toward shaping the destiny of an
empire; for the mothers of Canada
are giving us men and women who
will make our native land a nation
of ideal homes and the home of an
ideal nation. So, mothers, have
your workroom spotless. Let it
preach sermons to all who enter it,
of law and order. Keep it clean and
healthful. Never allow the kitchen

to become close-smelling. No cloth-
ing should hang on the walls as a
thing of routine. Have a closet for
these outside wraps, overshoes, etc.,
that litter up your kitchen, bringing
with them horsey odors and barnyard
smells. Don't allow swill or slop
barrels to stand in the kitchen. Fer-
mentation goes on, using up the oxy-
gen; gases are given off that foul
the air and infect the food.
(To be continued.)

MARRIAGE.

I met an ould caillach, I knowed right
well, on the brow o' Carnashee:
"The top o' the mornin'!" I says to
her. "God save ye!" she says to
me:

"An' och! if it's you,
Tell me true,

When are ye goin' to marry?"

"I'm here," says I, "to be married to-
morrow,

Wi' the man to find an' the money to
borrow."

"As sure as ye're young an' fair," says
she, "one day ye'll be ugly an'
ould.

If ye haven't a husband who'll care," says
she, "to call ye out o' the could?"

Left to yourself—

Laid on the shelf—

Now is yer time to marry.

Musha! don't tell me ye'll be married
to-morrow

Wi' the man to find an' the money to
borrow."

"I may be dead ere I'm culd," says I,
"for nobody knows their day,
I never was fear'd o' the could," says I,
"but I'm fear'd to give up me way.

Good or bad,

Sorry or glad,

'Tis mine no more when I marry.

So here stand I, to be married to-mor-
row,

Wi' the man to find an' the money to
borrow."

The poor ould caillach went down the
hill shakin' her finger at me.

"'Tis on top o' the world ye think yer-
self still, an' that's what it is,"
says she.

But thon was the day,

Dan MacLibray

Had me promise to marry,—

So here stand I, to be married to-mor-
row,—

The man he is found, but the money's to
borrow."

—Songs of the Glens of Antrim.

DO YOU WANT A FINE GREEN LAWN?

Of Course You Do. The Best Way
of Obtaining Same Is by Using
My "Star Brand" Wood-
Ash-Fertilizer; It Is Fine
for the Lawn.

For the Following Reasons:

1st.—They are nature's complete fer-
tilizer.

2nd.—They are healthy for man and
beast.

3rd.—They last from 15 to 20 years in
the soil.

4th.—They make new soil out of worn-
out land.

5th.—They do not make the lawn an
unsightly object.

6th.—They produce no unhealthy or
disagreeable odors.

7th.—They are easier to handle than
most other fertilizers.

8th.—They stand a drouth much longer
than anything else.

9th.—They contain all the elements re-
quired for plant food, as they contract
their own nitrogen from the atmosphere.

10th.—They are a valuable fertilizer for
grass, fruit and worn soil, and their ag-
ricultural value is more than their chem-
ical value.

Put up in 100-pound bags, each con-
venient to handle, and sold at one price
to all. No agents. No discounts.

Prices: 200 pounds, \$1.60; 300 pounds,
\$2.30; 400 pounds, \$3; 500 pounds,
\$3.75; half a ton, \$7.25; or more tons,
\$14 per ton. Terms cash with order.

Prompt shipment to all points. Write
me for printed matter, Chas. Stevens,
Drawer 15, Napanee, Ont.

GET IT GOOD

IT PAYS, because an organ
lasts, and the kind that lasts
costs very little more than the
kind that don't.

**QUALITY THE GREAT
FACTOR IN AN ORGAN.**

Be sure of it. Don't let a
case hide the truth. Ex-
amine a

SHERLOCK- MANNING.

Descriptive catalogue upon
receipt of a postal.

**The
Sherlock-Manning
Organ Co.,**

LONDON. ONTARIO.

This Surplus of Over a Million and a-Half

—\$1,552,364.26—the 1906
surplus of The Mutual Life of
Canada, on Government
Standard of Valuation — or
\$1,203,378.58 on Company's
Valuation Standard (an in-
crease on the latter, for the
year, of \$251,377.46)—
proves that The Mutual Life
enjoys, to an extraordinary
degree, the full confidence of
the people.

The gains in every department
are far beyond our expectations
—and the steady gains of pre-
ceding years had made those
expectations reasonably high.

Write the Head Office,
Waterloo, Ont., for particulars.



R & O 1,000 ISLANDS
Rapids,
St. Lawrence,
Montreal, Quebec

3.00 P. M. Commencing June 1st,
daily (except Sunday) for Charlotte (Rochester),
1,000 Islands, Rapids, St. Lawrence, Montreal
and Quebec.

Saturday to Monday Outings
TO 1,000 ISLANDS COMMENCE JUNE 1ST

Tri-weekly service through Bay of Quinte to
Montreal and intermediate points, Tuesday,
Thursday and Saturday, leaving Toronto at
5.30 p. m.

For full particulars call on any R & O. agent,
or address:

H. FOSTER CHAFFEE, A.G.P.A., Toronto

When Writing Mention Advocate

Clydesdale Stallions and Mares

Just arrived, a first-class importation from some of the best studs in Scotland. They are sired by such famous horses as Baron's Pride, Montrave Ronald, Royal Favorite, Marmion, and by sons of Baron's Pride. Come and see them whether you buy or not. You will not be disappointed.

R. A. & J. A. WATT, ELORA, ONTARIO.
For Shorthorns Address Salem.

BEWARE OF IMITATIONS.

PURITY

DIAMOND DYES

MADE BY
EXPERT COLOR CHEMISTS
FOR
**PERFECT HOME
DYEING.**
THE MOST FASHIONABLE
COLORS FOR WOOL, SILK,
COTTON AND MIXED
GOODS.

STRENGTH

REFUSE SUBSTITUTES.

"Safe Lock" Shingles can't leak.

They are the original interlocking metal shingles and the only ones which leave absolutely no nail holes exposed to the weather. They are proof against lightning, fire and water.

When we first brought out the "Safe Lock" Shingle, other makers were selling *deal* shingles. Several imitations have appeared, but they have not solved the vital problem of concealing all the nail holes.

Remember that "Safe Lock" Shingles are nailed *above* the lock. Others are nailed *through* the lock, thus leaving nail holes exposed to the drifting snow and moisture.

Being heavily galvanized, "Safe Lock" Shingles will never rust. No dust or dirt can lodge on their smooth surface, and the result is clean rainwater in the cistern. Besides, our galvanized "Safe Lock" Shingles may be counted upon to outlast a generation, without one cent for repairs.

Don't take our word for this, alone. Ask our customers in your neighborhood, how they like our goods and our liberal treatment. We'll send you a list of users in your county, if you write us. 48

The Metal Shingle & Siding Co., Ltd., Preston, Ont.

\$8.00 per Acre Will Buy 640 Acres

of good mixed-farming land, unimproved, 10 miles from railway station, 2 miles from post office. Watered by spring creek. Soil is black loam, with clay subsoil. You should enquire into this. It will make you money.

**Canadian - American Real Estate Co., Limited,
Lacombe, Alberta.**

R. A. & J. A. Watt, Elora, Ont., near Guelph, advertise for sale in this issue a new importation of choice Clydesdale Stallions, mares and fillies, selected from leading studs, and sired by some of the best stallions in Scotland. See the advertisement, and write for particulars, mentioning "The Farmer's Advocate."

W. J. Kennedy, head of Animal Husbandry Department, Iowa Agricultural College, leaves for Europe June

4th, and will spend several weeks, visiting the leading stock farms of England, Scotland, France and Belgium. He will attend the International Horse Show, at London, England; the French Agricultural Show, Paris, France; the Belgian Horse Show, Brussels, Belgium; the English Royal Show, at Lincoln, England, and the Scottish Highland Show, at Edinburgh, Scotland. While in Europe, he will purchase a number of horses and sheep for the Iowa Agricultural College.

GOSSIP.

Unshorn Colorado lambs of last year sold in Chicago Stock-yards last week at \$9.25 per cwt., a record price.

Mr. James F. Elliot, Oxford Centre, claims June 26th as the date for an auction sale, at Guelph, of 25 imported mares and fillies of superior merit, personally selected, further particulars of which may be looked for in future issues of "The Farmer's Advocate."

Horse importers, interested in Percheron, French Draft, Belgian, or French Coach horses, should look up the advertisement in this paper of Mr. Gerald Powell, Interpreter, Lille, France, who solicits correspondence, and furnishes information about shipping, pedigrees, banking, etc.

At an auction sale, on May 28th, of Aberdeen-Angus cattle of the herd of C. J. Martin, of Adazu, Iowa, an average of \$275 a head was realized. The cow, Blackbird 26th, sold for \$2,000, and her five-months-old bull calf topped the bull sale at \$1,500, going to W. A. McHenry.

H. M. Vanderlip, of Cainsville, Ont., whose advertisement of Berkshire hogs runs regularly in "The Farmer's Advocate," has just returned from England with a new importation of 15 head, personally selected from leading herds in the home of the breed, which are now in quarantine at Quebec, and will be released on June 16th. This consignment will be an important acquisition to the breed in Canada, where it is admirably holding its own in the keen competition.

TRADE TOPICS.

WHERE WILL YOU GO THIS SUMMER?—If you desire rest and recreation why not try "The River St. Lawrence Trip?" Folders descriptive of the Thousand Islands, Rapids, Montreal, Quebec, Murray Bay, Tadoussac, the far-famed Saguenay River, etc., on application to any railway or steamboat ticket agent. For illustrated guide, "Niagara to the Sea," send 6c. in postage stamps to H. Foster Chaffee, A. G. P. A., Toronto, R. & O. Navigation Co.

TEMAGAMI.—The word "Temagami" is derived from the Indian word "Tema-gamingue," meaning deep water, and is applied to a magnificent territory in New Ontario, that embraces all the attractions that are sought after by the canoeist, tourist, angler, and hunter. It is, comparatively speaking, a region known only to a few who have been fortunate enough to traverse the district, under adverse circumstances, owing to the difficulty experienced in reaching its confines. This, however, has been overcome by the building of a new railroad through the heart of this grand territory, opening up the way for the summer visitors who are looking for a good healthy spot to spend their summer vacation. Call at the nearest Grand Trunk ticket office for further particulars and illustrated literature.

It is while you are patiently toiling at the little tasks of life that the meaning and shape of the great whole of life dawns upon you. It is while you are resisting little temptations that you are growing stronger.—Phillips Brooks.

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 20 cents.

At Valley Mills Poultry Ranch, hatching eggs from S. C. White Leghorns—heavy winter layers—\$4.50 per 108; \$1 per setting. Send for circular. E. C. Apps, Box 294, Brantford, Ont.

CHANDLER—S. C. White Leghorns—layers; 2 eggs \$1.50 upwards. Quick supply. E. Hindall, Smithfield, Ont.

CANADA'S best Single-Comb and Rose-Comb Black Minorcas; great layers winter and summer; single-Comb eggs, \$1.00 per 15; Rose-Comb eggs, \$1.50 per 15. T. A. Faulds, 11 Victor St., London, Ont.

FIFTEEN Barred Rock eggs \$1. Extra good stock. Entire satisfaction guaranteed. A. S. Werden, Anesida Farm, Bethel, Ont.

FOR SALE—Breeding pens: One Barred Rocks, two White Wyandottes, two Black Orpingtons, one Buff Orpington, one Brown and one White Leghorn, one White Rock. Twelve hens and one cock in each pen. \$15 per pen. F. W. Krouse, Guelph.

INGLENOK Poultry-Farm offers eggs from selected pens of choicest laying strains of White and Brown Leghorns, Black Minorcas and Buff Orpingtons, also a select pen of White Wyandottes for show birds, but not tested for laying quality. Eggs either separate or assorted, \$1 per 15; \$5 per 100. W. H. Smith, 41 Spruce St., Toronto.

RHODE Island Reds—Rose-Comb (exclusively), bred eight years from carefully-selected heavy winter layers; large, brown eggs; \$1.50 per 15. Good hatch guaranteed. Jno. Luscombe, Merton, Ont.

TWO dollars will get you a setting of choice Buff or White Orpingtons Barred and Buff Rocks, and White Wyandottes Stock for sale. L. O. Christmann, Beachburg, Ont.

WHITE Rocks—Great layers. Non-sitters. "Andrews strain." Eggs one dollar thirteen. Highworth Poultry Yards, London.

BANDS, MARKERS & BOOKS
All kinds for Poultry, Pigeons, Rabbits, Cattle, Sheep & Hogs.
PRINTING AND CUTS
For poultrymen, Farmers and Stockmen. Price list and out catalogue free. Use Morgan's Soup Cure, 25c., postpaid.

Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, Pet Stock, and miscellaneous advertising.

TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 20 cents.

FOR SALE—Extra good stock or grain 200-acre farm in Brant Co. Soil clay loam. Twenty-seven acres heavily timbered. Well fenced and watered. Large stone house. New commodious, up-to-date basement barn, 64 x 108, with plenty of light and good ventilation. Situated one-half mile from Glen Morris and electric road; seven from Galt and six from Paris. W. & H. Buchanan, Glen Morris.

TOWN and control several large and small tracts of timber near Vancouver, also several large and small tracts of fruit and ranch land in the dry belt on Thompson River, with water rights. Best climate in Canada. Will take partner on either lumbering or horse-raising proposition, or sell. Geo. D. Scott, 436 Granville St., Vancouver, B. C.

WANTED—A few good subscription agents for The Farmer's Advocate and Home Magazine. Liberal terms. The William Weld Co., Ltd., London, Ont.

WANTED—Ladies in rural districts desirous of engaging in profitable business will do well to write the Robinson Corset & Costume Co., London, Ont.

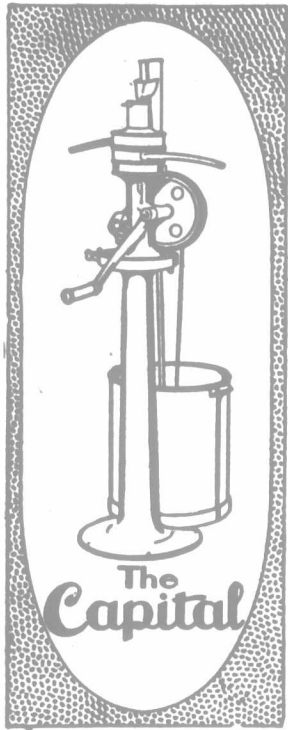
WANTED—Women to take orders for our Tailored Skirts in their community. Send for free samples, cloths and terms. The Central Skirt Co., London, Ont.

Four Cows Will Earn You MORE Money Than EIGHT Cows Earn You Now

Tell me to show you how to get over thirty dollars a year more out of each cow you keep. Make me prove that four cows AND a Capital Separator will actually earn you —YOU, PERSONALLY—more money in cold cash profits than an EIGHT-cow herd and no Capital Separator. Don't take my say-so for it. Don't wrap yourself up in your own belief that it can't be done. It CAN be done, and I can PROVE it to you, in a practical, hard-sense fashion, with figures and facts that you won't want to dodge. Write to me and see.

Let's get the thing clear to start with. Here is what I say I can show you: That with four good cows and my method of separating, making butter—and selling butter—you can make more money in one year than eight cows will make you without my method.

If I do that,—if I do show you a difference of over thirty dollars profit a year on every cow you keep,—then I want to talk business with you. I don't want a cent of your money until you are satisfied that I have made good every word I say and everything I promise. I don't want to sell you a Capital Separator until you ask me to,—I shan't importune you, nor bother you. All I want to know is your name and address, and how many cows you keep. When I get these facts, I'll tell you some things you haven't heard before. I'll show you not only why you need a Capital Separator, but why you can make more money by my method of selling butter than you'll make any other way. It won't be all separator talk I'll talk to you,—you've read reams of separator argument, but you haven't heard yet about the right way to



make butter and the right way to SELL butter. Tell me to tell you about it,—there's nothing to pay.

Why don't I tell you right here in print? Simply because I am not giving "blanket" advice. What might be a good plan for a man in Ontario wouldn't work in Manitoba,—and I propose to advise each dairyman according to his location and other vital details. Naturally, I want to sell Capital Separators. I am no philanthropist. But I will sell them faster because I can tell people how to make them pay,—and that's something new in this business.

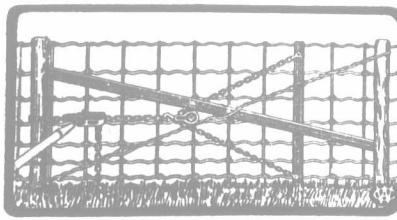
I don't care what your experience with dairying has been, nor what with separators. You may have what you think is the best separator there is. Or you may believe, as many do, that there isn't any real profit in dairy-farming. I can show you where you're wrong in either case. Do I get the chance to do that? Will you listen to the mere, sheer, downright facts? Just write to me and say so.

I don't care whether you feel able to buy a Capital Separator or not. It won't be a hard matter, once you get to the buying point, to make terms with me. Some of my friends—I don't consider them merely my customers—take three years' time to pay in. Some of them pay in three months. Doesn't make any difference to me, because I know, and I can prove to you, that my Separator will buy itself the first year you have it. It will save you enough money and trouble, to pay for itself twice over in that time. And I can prove that, too,—just write and ask me to.

I've got a machine here, and a method, that will open your eyes to what there really is in keeping cows for profit. Maybe you are one of the few that know that already. Even if you are, you won't be any the poorer for reading what I'll write you. Let me tell you about the easiest separator to run you ever saw,—the easiest to buy,—the separator that skims cleanest and does it easiest,—the one with the really-low-down can,—and about the method that makes more butter, makes better butter, and gets better prices for it the whole year round. Just write to me—address as follows:

Robert Ferguson

National Manufacturing Co., Limited
1 Mail and Empire Building, TORONTO, ONT.



HOW TO BUILD A GOOD FENCE

Everyone intending fence building should send for our folder on Erecting Fences. It's full of valuable information on fence building, tells how to erect fence wire and has an article quoted from bulletin of U. S. Dept. of Agriculture on concrete post making, showing how these durable posts can be economically made at home. Don't fail to write for a copy. It's free.

THE BANWELL HOXIE WIRE FENCE CO., Ltd.
Dept. B Hamilton, Ontario. Winnipeg, Manitoba.



GOSSIP.

The team of six gray draft horses sent by J. Ogden Armour, of Chicago, to the International Horse Show, to be held in London, in June, are attracting much attention in England. The wheelers are very weighty geldings, one 18 hands, the other 17.3; yet moving with the freedom of a Hackney. The swing pair are scarcely less in weight or height, and the leaders

are 16.2. The weight of the heaviest is given as 2,380 lbs., while not one is less than 2,000. Their ages range from five to nine years. They have all been purchased from time to time on the Chicago Market, and are selected from the huge stud which Messrs. Armour maintain to keep up to the mark by the purchase of some 300 annually. They are to be shown at a number of leading shows in Great Britain this summer, and it may be at the Toronto Exhibition.

A good dairyman with a helpful wife to take charge of a thoroughly-equipped milk business near Montreal is wanted by J. J. Riley, Jr., as intimated in his advertisement in this issue; also a young man to take charge of cows. Two pure-bred Holstein bull calves are offered for sale in same advertisement, which see, if interested.

Let Fate do the worst she can—
One can still fight on—a man.

QUESTIONS AND ANSWERS. Miscellaneous.

PLANTING ARTICHOKEs.

Kindly inform me when to plant artichokes, and how to handle them. I would like to plant a number of bushels for hog feeding. If you can give any information along this line, I would be obliged.

Ans.—Artichokes may be planted and grown much the same as potatoes. The tubers may be cut to single eyes, or if "seed" is plentiful it is better to plant the whole tuber. They are quite hardy, and may be planted early in the spring or even in the fall. If they are sufficiently covered with earth, they will not be injured by severe freezing. If they are intended for hog feeding, the best plan is to allow the hogs to harvest them for themselves. The tubers do not keep quite as well as potatoes when stored, hence are best left in the ground until wanted, and may be dug any time in the fall after the tops have matured, or in the spring before they make new growth.

H. L. HUTT.

RHEUMATIC HENS.

I have about nine hens out of a flock of 45 that are sick. They lose the use of their feet, and, when trying to run, propel themselves along with their wings. They get so bad they will lie out on their side, and also seem to be troubled with their breathing; before they get so bad, they seem all pinched up, get small, and their heads become dark. They have the run of an orchard and field of spring seeding. Have been fed on wheat, oats and barley mixed, also apple peelings. If you will tell me a cure, I will think more of your valuable paper than ever, and I think it is about all right now.

A SUBSCRIBER'S WIFE.

Ans.—The hens are troubled with rheumatism. Rheumatism in hens may have a number of causes: damp quarters, continued exposure to cold and wet, too much meat or too little green food. Give them 15 grains of iodide of potassium in each quart of drinking water, common baking soda is also very good. One teaspoonful to a quart of drinking water. See that their houses are dry and sunny; give them plenty of green food, and those not affected should get through all right.

J. C. ELFORD.

The Macdonald College.

CRIPPLED CHICKENS.

As a result of our last hatch from the incubator of about 80 chicks, we had a number that seemed to have no use of the upper part of their legs or thighs. We called them sprawly-legged chickens. Can you tell us the cause of this, and is there any treatment for the disease?

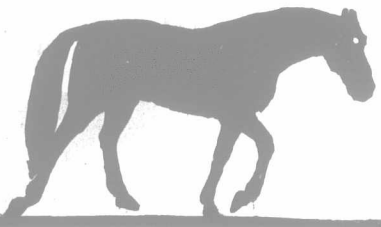
Ans.—I take it to mean that at the time the chickens were hatched they had no use of their legs; that is to say, these chickens were deformed at the time of hatching. One might take from the description that the chickens, when they were some days of age, developed this trouble.

As to the cause of the first inference, I do not know that there is anybody who is absolutely certain of the causes of cripples. We have plenty of illustrations of where cripples are caused apparently by the parent stock not being in normal condition. There are also numerous instances in which the trouble appears to be caused by variations in temperatures, probably I should say excessively high or low temperatures.

My observation leads me to believe that where an incubator heats unevenly, one is almost sure to get a much higher number of cripples than where the incubator heats evenly. Also where you start a machine with the temperature on the eggs either excessively high or low, the chances are that you will get more cripples.

If one were to take the second inference from the inquiry, the trouble, in this case, would be caused by excessive feeding and a lack of exercise. This should not happen at this season of the year. If the chickens are allowed to run out of doors on a fairly large range, one can feed them about any feed he chooses, and they will keep on their feet; but in the winter time a great deal of care is required or the chickens will lose the use of their legs. The remedy for this is to supply an abundant amount of fresh air, exercise and none too liberal feeding.

O. A. C. W. R. GRAHAM.



Where all else fails
USE
Kendall's Spavin Cure

Bone Spavin, Ringbone, Splint, Blood and Bog Spavin, Thoroughpin, Curb, Capped Hock, especially if of long standing and obstinate—will not yield to ordinary liniments or blisters.
KENDALL'S SPAVIN CURE is an extraordinary remedy that gives extraordinary results. It cures old, stubborn cases that many times veterinarians have given up—takes away every sign of lameness—does not scar or kill the hair—and leaves the horse sound and smooth.

BENITO, Man, Sept. '06
"I have used Kendall's Spavin Cure for 20 years—
and it never failed me once." JOHN MCKENNA.

Write for noted book "Treatise On The Horse"—something worth knowing on every page. Sent free. Kendall's Spavin Cure is sold by dealers everywhere at \$1. a bottle—6 for \$5.
DR. B. J. KENDALL CO., ENOSBURG FALLS, VERMONT, U.S.A.



Clydesdales, Percherons
and Hackneys

I have still on hand 19 Clydesdale stallions, 4 Clydesdale fillies, all imported; Scotland and Canadian prizewinners; 8 years old, that will make 2100 lb. horses of choicest quality and richest breeding; 4 black Percheron stallions, 3 years old, big, flashy, quality horses, and 6 Hackney stallions, 1st-prize and championship horses among them. Will sell reasonable and on terms to suit.

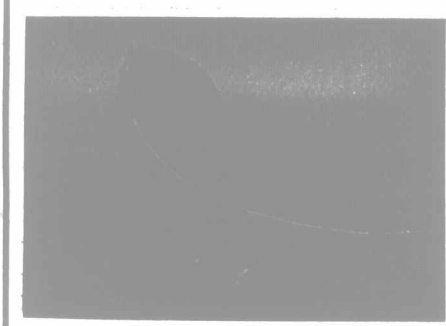
DR. T. H. NASSARD, Millbrook P.O. and Stn.

40 WAVERLY HACKNEYS 40
Imported Stallions and Fillies.



Every one a high-class actor and a show animal. Splendidly-matched pairs and singles. Positively the highest class lot of Hackneys to be found on any one farm in America. All ages. Also 4 imported Clydesdale fillies. A big, flashy lot, full of style and quality.

ROBERT BEITH,
Bowmanville P. O. and Station.
Long-distance 'Phone.



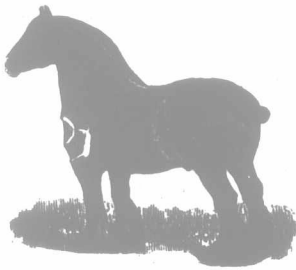
THOS. IRVING
Winchester, Ont.

Established for over 30 years.
Importer and exporter of

HACKNEY,
CLYDESDALE and
SHIRE STALLIONS and MARES.

New importation of winners
just arrived. 90 miles west
of Montreal on C. P. R.

HODGKINSON & TISDALE,
BEAVERTON, ONT.



Importers and Breeders of Clydesdale and Hackney Horses. We have on hand at present the choicest specimens of Clydesdale fillies in Canada, also a few extra fashionably-bred young Clyde stallions. People wanting good ones should see these before buying. Our farm, "Simcoe Lodge," is situated near Beaverton, on James Bay and G. T. Railways. Long-distance 'phone No. 18. Visitors will be met at Beaverton on notification.

W. C. KIDD, LISTOWEL, ONT.

Importer of Clydesdales, Shires, Percherons, Belgians, Hackneys, Standard-breds and Thoroughbreds

of highest possible quality and richest breeding. Have sold as many stallions the last year as any man in the business, with complete satisfaction in every case. I have always a large number of high-class horses on hand. My motto: "None but the best, and a straight deal." Will be pleased to hear from any one wanting a rare good one. Terms to suit. Long-distance 'phone. LISTOWEL P.O. AND STATION.

CLYDESDALES AND FRENCH COACHERS, IMP.



Scottish and Canadian winners, stallions, mares and fillies. The Clydes represent the blood of such noted sires as Baron's Pride, Up-to-Time, Royal Favorite, Ethiopia and Aome. They combine size, quality and action. The French Coachers are a big, flashy, high-stepping lot, and are winners in both France and Canada. Our prices are right, and our horses as good as the best. Long-distance telephone.

ROBT. NESS & SON, Howlok, Quebec.

ADVERTISE IN THE ADVOCATE.

GOSSIP.

Colts should be trained to walk fast before there is an attempt made to improve them in any other gait.

A cow will not, of her own accord, move so quickly as to impair her milk flow. It is when she is "rousted" by a dog that the trouble occurs.

Some of the so-called sacred cattle of India have been imported into Texas. Their hides are said to be impervious to ticks, hence the reason for their importation.

A richly-bred young Jersey bull of the St. Lambert family is advertised for sale by Mrs. F. A. Rolph, Markham, Ont. Parties interested should write for particulars.

Copies of volumes one and eight of the Clydesdale Studbook of Canada are wanted by the secretary, as intimated in an advertisement in this issue.

Every perfect machine is merely an improvement of an imperfect one. The higher step on the stairway is reached by way of the lower steps.—Selected.

Americans are rapidly acquiring a taste for mutton. Porterhouse steak is giving way to mutton chops in the menu of many swell cafes, to the prosperity of sheep husbandry.

Owners of imported Clydesdales should look up the advertisement of the secretary of the Canadian Association in this issue, calling attention to the recent registration rule regarding imported horses and mares, and the importance of promptness in attending to the same before the first of July, when the new rule will come into force.

A number of farmers were travelling in a railway carriage, discussing matters of the soil. To them enter a leading man of science, positively brimming over with useful information. Presently the talk turned upon potatoes, and he saw his chance. "I don't know whether you are aware," he said, "that every potato contains a percentage of deadly poison." The silence of surprise reigned for a moment. Then the oldest of the farmers withdrew his pipe from his mouth. "I'm eighty-five, come Thursday," he said. "It must be a varra slow poison."

In the race for wealth men often sacrifice time, energy, health, home, happiness and honor—everything that money cannot buy, the very thing that money can never bring back. Business men, in their desire to provide for the future happiness of their families, often sacrifice the present happiness of wife and children on the altar of hurry. They forget that their place in the home should be something greater than being merely "the man that pays the bills"; they expect consideration and thoughtfulness that they are not giving.—Wm. George Jordan.

What man or woman, growing old, would not give a fortune for the renewal of youth? With a little care they might have kept it for ten or a dozen years longer, but its value was not realized until too late.

Up to the age of 23 or 25 in the case of men, and 18 or 20 in women, the framework of the body is being formed, and the diet should be generous. After the thirtieth year has been passed, it is no longer necessary to eat to make more tissues, but only to preserve equilibrium of weight and strength. Yet at that time eating is a pleasure highly appreciated. Therefore, most men and women eat too much, and this is the time of life when indiscretions in diet produce disease with especial frequency.

Do not eat heavy suppers.
Drink little or no alcohol.
Avoid rich meats and pastry.
Do not grow fat by eating too much.
Fat people seldom reach a good old age.
The youthful old man is lean.
Lessen your food continually as you grow older.
Overeating produces all the diseases that make one old.
Underfeeding shortens life.
Just enough and a trifle over is the ideal.—Dr. Cohan, noted London specialist.

Warranted to give satisfaction.



GOMBAULT'S
CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address
THE LAWRENCE-WILLIAMS COMPANY, Toronto, Ont.

Standing Offer



Good always, everywhere,
\$100 Reward, for any lameness, curb, splint, founder, distemper, etc., (where cure is possible) that is not cured by

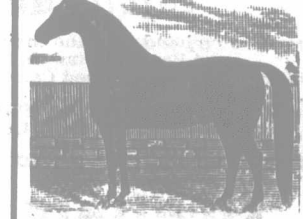
TUTTLE'S
ELIXIR

Greatest horse remedy in the world. Tuttle's Family Elixir invaluable for human bruises, pains, rheumatism, etc. Send for free 100 page book, "Veterinary Experience." The perfect horseman's guide. Every disease symptom and its treatment.

TUTTLE'S ELIXIR CO.,
68 Beverly Street, Boston, Mass.
Canadian Branch, 32 St. Gabriel St., Montreal, Quebec.

Dr. Page's English
Spavin Cure.

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements.



This preparation (unlike others) acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by Dr. Frederick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents: om

J. A. JOHNSTON & CO., Druggists,
171 King St. E., Toronto, Ont.

Imp. Clydesdale Fillies!



Have now on hand about a dozen, nearly all imported. A high-class lot and very richly bred. Combine size and quality, and all in foal. Also one-year-old stallion. Write me, or come and see them.
Nelson Waag, Clarendon P.O. Ont.

SHETLAND PONIES!

P. McCullough & Son, Breeders and importers of Shetland ponies, Markdale, Ont. We showed 8 ponies at Toronto Exhibition in 1906, and got 8 prizes: 3 firsts, 4 seconds and 1 third. All our ponies are imported. Our stallion, Foxglove, took first prize at Toronto. Our mare, Bessie, took first prize, and their foal, Bruce, took first prize also. Good accommodation for mares sent from a distance to breed. Ponies for sale. Our address: Markdale P. O., Ont.

CANADIAN GLYDE STALLION

FOR SALE

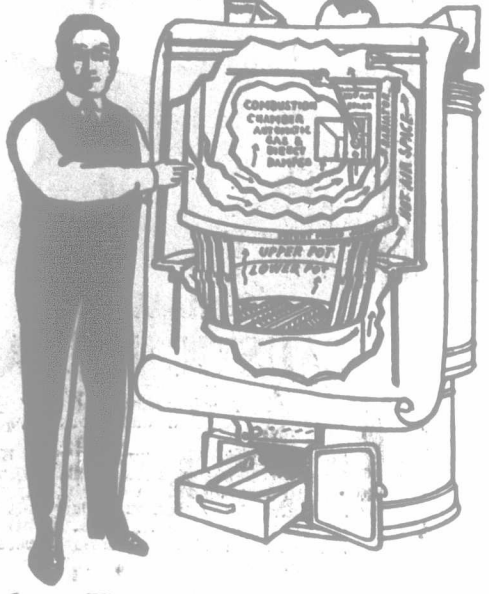
LOTHIAN PRINCE (4000) G.C.S.B.

Jet black; four white feet; star in face; four years old; a good, big, upstanding colt, and will be sold worth the money. Apply:

H. G. Boag, Barrie, Ont.



YOUNG MEN WANTED—To learn the Veterinary Profession. Catalogue sent free. Address VETERINARY COLLEGE, Grand Rapids, Mich. L. L. Convey, Prin.



Built for Service
Every part shows it.

Fused Joints. The radiating chamber has walls and flues of steel (the best radiating material) joined in one piece to the cast-iron with Hecla fused joints—which can never loosen or leak unhealthy gas, smoke or dust into the house.

The Fire Pot is cast in two sections, bound with heavy flanges, which add 50% to the radiation surface. The combustion chamber is made of heavy cast iron, and is corrugated to provide additional strength and heating power.


"Hecla" Furnaces

have other points of advantage over other furnaces that you should know about. There is not a weak spot in them from top to bottom.

See your nearest dealer or write "Clare's Furnace Builder" for new illustrated catalogue and estimates.

Clare Bros. & Co. Limited, Preston, Ont.


THE BISSELL



has made a great record throughout all Canada. There are good reasons why this is so. **Balanced Right—Does not hump up. Improved Brake—Omits and turns well over. Matches Well Back—Easy draught.** This Disk has several imitations but no equal. None genuine without the name "BISSELL." For Sale by Agents. Manufactured by

T. E. BISSELL, ELORA, ONT.
Ask for Booklet 'W'


SMITH & RICHARDSON, COLUMBUS, ONT.,



have now on hand only the choice imported colts Dashing King, a 3-year-old, and Baron Columbus, a 2-year-old; also a couple of ratling good Canadians, 7 and 3 years old.

Long-distance 'Phone. Myrtle Station, C. P. R. Brooklin or Oshawa, G. T. R.


Graham & Renfrew's GLYDESDALES and HACKNEYS



Our Clydes now on hand are all prizewinners, their breeding is gilded. Our Hackneys, both stallions and mares, are an exceedingly high-class lot. We also have a few high-steppers and carriage horses. Yonge Street cars pass the door every hour. 'Phone North 4488.

GRAHAM & RENFREW, BEDFORD PARK, ONT.

OAK PARK STOCK FARM CO., LTD. BRANTFORD, ONTARIO.



Breeders and Importers of Hackneys, Clydesdales, Shropshire Sheep, Berkshire Pigs and Scotch Collie Dogs.

A number of choice Hackneys of both sexes for sale. A number of choice Shropshires of both sexes, from our imported flock, for sale. Will have a number of show pens, will be ready for sale by the end of July. Some choice Berkshire boars and sows for sale from our imported stock. We are booking orders for Scotch collie puppies from our imported kennel.

CRAIGALEE STOCK FARM FOR SALE

Positively one of the best farms in York county. Lots 9 and 10, in 5th con., Scarborough, contains 140 acres, 4 miles from Markham, G.T.R.; 3 miles from Locust Hill, C.P.R.; 1 1/2 miles from P.O., church and school; two-story brick house; barn 40 by 90 feet; stone stables, cement floors; 18 horse gasoline engine and 60 feet of shafting; water in stables; hay forks, alings, etc., complete; 4 acres orchard, small fruits. Farm thoroughly drained and fences first class, and in high state of cultivation; 3 1/2 miles from Locust Hill creamery. Bell telephone connection. Everything first-class. Address:

H. J. SPENCHELY, Box Grove P. O.

THE CHAMPION IMPORTED GLYDESDALE STALLION, BARON KITCHENER (10499)

this year's winner of the Cawdor Challenge Cup at Glasgow, will stand for service to approved mares for the season of 1907 at "The Firs," Woodstock, Ont. Mares from a distance will be kept on pasture at \$1 per week. Terms to insure, 8%. For further particulars address the owner

J. W. BOYLE, P. O. Box 563, WOODSTOCK, ONT.

QUESTIONS AND ANSWERS. Miscellaneous.

UNDERGROUND SILO.
State your ideas in regard to an underground silo, built out of cement, to be in the form of a cistern. G. C.

Ans.—On no account allow anyone to persuade you to build such a silo. You would realize the mistake before it was half empty.

"CONCESSIONS."
Can you explain the meaning and application of the word concession as used in connection with the districts, as 8th and 9th concession—concession, something conceded, a grant? What is it that is conceded? Is it the road or the land between the roads? Who conceded them or granted them, the Government to the county, or the farmers to the Government? A full explanation would enlighten many of us. NEWCOMERS. Ontario.

Ans.—It is the land between the road allowances, and such land is the subject of grant from the Crown—that is to say the Government—to individuals and corporations. The word is used many times in "The Surveys Act" (Revised Statutes of Ontario, 1897, chap. 181), and we would refer you to such Act for illustrations of the way in which it is applied in the connection stated.

TONIC FOR MARE.
1. Seven-year-old mare has had a case of acute indigestion, causing looseness of the bowels and loss of flesh. She has a smooth coat, but is very thin. By the aid of medicine from a vet., she is slowly gaining. What is the best system of feeding to bring her up in flesh? Her appetite is limited, except for grass. I think she needs something to tone up her system and aid digestion.

2. If she is cured of this trouble now, is it apt to bother her again? G. M.

Ans.—1. Turn her out on pasture, and leave her there a while. As her digestive organs regain their tone, a moderate allowance of crushed oats may be fed. Do not bother with drugs; grass is the best tonic and best food.

2. If the mare has a congenitally weak digestive apparatus, this is liable to manifest itself in further attacks; otherwise the fact of her having acute indigestion once will not render her especially subject to repetition of the attack, although no man or animal can suffer inflammation of an organ without, to some extent, lessening the resisting power of the part affected.

GOSSIP.
In the horse-department classification, Iowa State Fair for 1907, the premiums aggregate about \$3,000. The stall fees have been reduced to a merely nominal charge. A new classification has been added for American carriage horses. This was the first classification of the kind offered at any State fair or public show. Similar classifications have since been adopted by Kentucky and several other fairs. The contract has just been let for a new \$10,000 horse barn on the grounds. This will constitute the first section of a barn that when completed will have a capacity of over six hundred horses, erected at a cost of \$75,000 or \$80,000.

W. J. McCallum & Bro., Brampton, Ont., who have recently made a new importation of Hackney, Clydesdale and Shire stallions and fillies, re-enter their advertisement in this issue of "The Farmer's Advocate." In their new importation is included the richly-bred and typical prizewinning stallion, Derwent Performer, by the triple London champion, Rosador, dam by the champion, Garton Duke of Connaught. Among the Clydesdale contingent is the capital son of the champion, Marcellus, that stood second to Clan Forbes at the late Glasgow Show in the three-year-old class, and which was described by the Scottish Farmer as "a colt of rare quality, perfection of feet and pasterns, and flat bones, and, in respect of levelness throughout and quality of limbs, one of the best three-year-olds seen this season." The fillies in this importation are described as an exceptionally good lot, as are also the Canadian-bred members of the stud.


Fistula and Poll Evil



Any person, however inexperienced, can readily cure either disease with **Fleming's Fistula and Poll Evil Cure**—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in Fleming's Vest-Pocket Veterinary Adviser. Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durably bound, indexed and illustrated.

FLEMING BROS., Chemists, 75 Church Street, Toronto, Ontario

You Can't Cut Out A ROG SPAVIN or THOROUGHPIN, but ABSORBINE



will clean them off, and you work the horse same time. Does not blister or remove the hair. Will tell you more if you write. \$2.00 per bottle, delivered. Book 40 free.

ABSORBINE, JR., for manking, \$1.00 bottle. Cures Varicose Veins, Varicocoele, Hydrocoele, Ruptured Muscles or Ligaments, Enlarged Glands, Allays Pain. Genuine mfd. only by

W. F. Young, P. D. F., 73 Monmouth St., Springfield, Mass., Canadian Agents, Lyman, Sons & Co., Montreal.

Hackney, Shire & Clydesdale STALLIONS and FILLIES

Imported and Canadian-bred. A new importation personally selected. A number of high-class fillies, the whole consignment one of the best imported in recent years. Stables within 10 minutes' walk of the G.T.R. and C.P.R. stations. Visitors met at station if no timed.

W. J. McCALLUM & BRO., Brampton, Ont.

NOTICE To Clydesdale Owners!

Owners of imported Clydesdale stallions or fillies not yet recorded in the Clydesdale Studbook of Canada, are urged to do so at once, as under the new regulations regarding the registration of imported Clydesdales only those bearing registration numbers in the Clydesdale Studbooks of Great Britain and Ireland, and whose parents and grandparents are similarly recorded, will be held eligible for registration in the Clydesdale Studbook of Canada after July 1st, 1907. Address:

Accountant, National Live-Stock Records, Department of Agriculture, Ottawa, Ont. J. W. Sangster, Sec., Clydesdale Horse Ass'n.

WANTED

Copies of Vols. 1 and 8 of the **Clydesdale Studbook of Canada**. Parties having these in their possession, and wishing to dispose of them, please write

J. W. SANGSTER, Secretary-Treasurer, Clydesdale Horse Association Temple Building, TORONTO, ONT.

Clydesdales, Shorthorns and Cotswolds—For individuals of above breeds, write me. My new Cotswold and Clydesdale importation will arrive early in the season.

J. C. ROSS, Jarvis P. O. & Sta.

The Ontario Veterinary College, Ltd.

Temperance St., TORONTO, Canada. Affiliated with the University of Toronto. Patrons: Governor-General of Canada, and Lieut.-Governor of Ontario. Fee, \$65.00 per session. Apply to **ANDREW SMITH, F.R.C.V.S., Principal.**

FOR SALE: SCOTCH COLLIE PUPS

Sable and white, at \$5 to \$10, f. o. b.

J. K. HUX, Box 454, RODNEY, ONT.

Aberdeen - Angus Cattle.

If you want anything in this line, write or come and see them at Elm Park, Guelph.

James Bowman, Guelph, Ont.

For Sale—COUNT ECHO DEKOL,

one of the greatest Holstein stock bulls ever imported into Canada. A sire of A. R. O. daughters of extra quality.

J. A. GASKEY, MADOC, ONTARIO.

THE SUN FURNISHES THE WATER

On the Canadian Pacific irrigated tract in Southern Alberta water is obtained from the Bow River, which draws its supply from the main range of the Rocky Mountains.

Owing to the inexhaustible supply of water coming from the mountains, it is unnecessary to build storage dams or reservoirs. The flow of water in the Bow River has been measured year after year by the Government, and it has been found just what the minimum flow is.

Canadian Pacific Irrigation Colonization Company, Limited,

109 Ninth Ave., West, CALGARY, ALTA., CANADA Sales Department, Canadian Pacific Railway, Irrigated Lands.

Dispersion Sale

OF HILLOREST HERD OF

BERKSHIRES

TO BE HELD ON

Wednesday, June 19, '07

AT VINE, ONTARIO,

Comprising the whole herd, without any reservation. The stock boars are Concord Triumph 13303 and Stall Pitts Winner (imp.) 12185.

The farm is close to Vine Station, G.T.R., a few miles south of Barrie. Catalogues issued. At the same time the whole outfit will be disposed off.

JOHN LAHMER, Vine P. O., Ontario.

Wanted Men \$75 to \$150 per month. Dominion Railway Correspondence School WINNIPEG

GLEN ROUGE JERSEYS! For sale: a pure St. Lambert bull, 14 months old, solid color; dam St. Lambert's Florence; sire Exile Rioter King

FOREST VIEW FARM HEREFORDS Four bulls from 9 to 18 months old; prize-winning and from prize-winning stock. Several heifers bred on the same lines; choice individuals for sale.

THE SPICE OF LIFE.

Hast thou exercised a gentle, obliging disposition toward those with whom thou hast been associated? Hast thou been careful to keep in subjection all vain thoughts and evil passions?

Among the host of delightful anecdotes in "My People of the Plains"—that book of reminiscences by Bishop Talbot, who is lovingly known throughout the West as the "Cowboy Bishop"—is the following: "One evening, on reaching a mining camp, I was in the washroom preparing for dinner after a dusty ride in the stage coach.

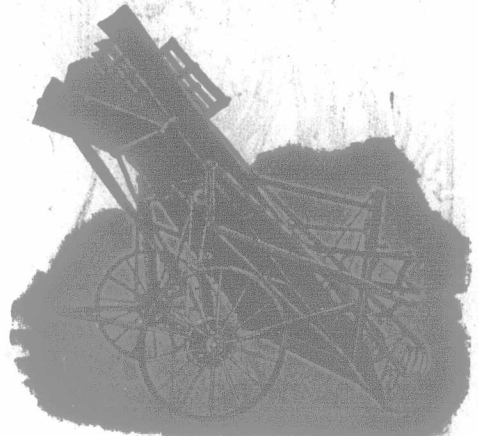
Scottish folk are proverbially canny and prudent in money matters, and the following shows that the younger generation is no exception to the rule. A teacher in a Lowland school was taking mental arithmetic with a class of boys. She asked one boy: "How much would your mother give you to buy four pounds of tea at one and six a pound?"

WHEN TWO ARE JOINED. Good Minister (a married man).—Do you wish to marry this woman? Man.—I do. Minister.—Do you wish to marry this man? Woman.—I do.

TRADE TOPIC.

THE OSHAWA HAY CARRIER WORKS, South Oshawa, Canada, have lately secured the Canadian patents of the celebrated American "Meadow King" hay carriers.

The Great Dain Loader Still Leads.



Hay is going to be good. Don't put off ordering your Loader to the last day. Order NOW. And let it be a DAIN. We will put a machine in to you on its merits.



If you want a Side-delivery Rake, see the Dain. The original three-sweep machine.

The Dain Mfg. Co., PRESTON, ONT. The Fairchild Co., Winnipeg, Man., Western Agents. Phelps & Smith, Montreal, Can., Gen. Agents Prov. Quebec.

WANTED!

A good DAIRYMAN, with a helpful wife and family, to take entire charge of a hundred-acre dairy farm outside of Montreal (could be increased to 300 acres). Milk shipped by train daily to the city.

Broxwood Herefords

Cows, heifers and calves

For Sale.

R. J. PENHALL, Naber, Ont.

The Sunnyside Herefords.

To make room for my new importation, I will sell four cows with heifer calves by side, two yearling heifers, one yearling bull and two bull calves at a 20% reduction if taken in the next 30 days.

When Writing Please Mention this Paper



Whether it is a fresh bruise, or strain of back, shoulder, whiffle, fetlock, pastern, or coffin joint—or an old swelling,

Fellows' Leeming's Essence

For Lameness in Horses

takes out all the soreness and stiffness —strengthens the muscles and tendons —and cures every trace of lameness.

10 50c. a bottle. At dealers, or from National Drug & Chemical Co., Limited - Montreal.

SHORTHORNS AND BERKSHIRES

Three young bulls fit for service; the right sort at reasonable prices and easy terms. Also heifers and cows with calves at foot by Bando-leer =40106=. In Berkshires: Sows five months old, and pigs soon ready to wean.

F. Martindale & Son, Caledonia Sta. York P.O. Haldimand Co.

GREEN GROVE SHORTHORNS

Fairy Queens, Urys, Floras, Claretts, Isabellas, Rose of Autumns, Village Girl. Females of all ages 3 choice young bulls. Prices right. Breeding unsurpassed.

W. G. MILSON, Goring P.O. Markdale Station

Shorthorns and Leicesters

Present offering: 1 extra good bull calf, 6 months old, from a grand milking young cow, and sired by Rosierucian of Dalmeny (imp.); also young cows with calf at foot. Leicesters of all ages.

Address: W. A. Douglas, Caledonia Station, Tuscarora P. O.

Shorthorns, Cotswolds and Berkshires.

For sale: 3 yearling bulls, also 5 bulls ranging from six to nine months; also yearling heifers and young calves. Will book orders for Cotswolds and Berkshires.

CHAS. E. BONNYCASTLE, P. O. and Stn. Campbellford, Ont.

1 BULL

16 months old, sired by Royal Bruce, imported; 2 10 months old, sired by Lord Lieutenant, imported; cows and heifers imported and home-bred. All at reasonable prices.

SCOTT BROS., Highgate, Ont.

LOGIC IS LOGIC.

The Irish intellect is more often associated with wit than with logic, but an Irish workman recently silenced for a moment the upbraiding tongue of his foreman by a display of something which bore just enough resemblance to logic to confuse his hearer.

The workman enjoyed leaning on his hod and making shrewd observations much more than he did stirring about, and the cry of "Mort! Mort!" fell on dull ears.

"Why don't you attend to your hod and keep that man going?" demanded the foreman, severely, when Patrick was enjoying one of his frequent periods of rest.

Patrick raised his hod with a leisurely movement and turned a pair of twinkling eyes on his accuser.

"Sure, now," he said, easily, "if I was to keep him goin' all the time sorra a thing he'd say at all, at all; an' if he didn't say anything I'd be thinking he wasn't there. An' if he wasn't there, sorr, what would he be wantin' of morthar anyway?"—[Youth's Companion.

J. Watt & Son

Are offering about one dozen females (all ages), most of them in calf or calves at foot, including some choice show yearlings and calves. Herd headed by Imp. Pride of Scotland and Heatherman. Prices moderate. Correspondence invited.

SALEM P.O. Elora Station, G.T.R. and C.P.R.

Shorthorns, Clydesdales and Shropshires.

In Shorthorns we have 100 head to select from of both sexes and all ages. No fancy prices asked. Several choice young Clyde mares and fillies. 75 Shrop. lambs of both sexes. Small profits and quick returns is our motto.

EDWARD E. PUGH, Clarendon P. O. and Station. Telephone connection.

MAPLE + GROVE + STOCK + FARM Scotch and SHORTHORNS Scotch-Topped SHORTHORNS

Present offering: Cows and heifers in calf to Lord Mysie =59627=. Some good young bulls and prize-winning heifers at very reasonable prices. For particulars write to

L. B. POWELL, Wallenstein P. O. Wallenstein Station on the Guelph and Goderich Bys., C.P.R. Farm one-half mile from station.

White Hall Shorthorns

Missies, Cecillas, and Lady Victorias, 4 young bulls, 1 heifer, and a few older females. Bred right and will be sold right.

N. A. Steen, Meadowvale P.O. and Station, Peel Co.

WILLOWBANK SHORTHORN HERD

ESTABLISHED 51 YEARS. FOR SALE: Young bulls and heifers from imp. sires and dams, of most fashionable breeding and type; exceedingly choice. Prices to suit the times.

JAMES DOUGLAS, Caledonia P.O. and Sta.

Glen Gow Shorthorns

Our present offering is 9 bulls, from 6 to 14 months of age, sired by Imp. Ben Loman and Imp. Joy of Morning, and out of imp. and Canadian-bred cows. Also a number of very choice heifers. No fancy prices asked. Long-distance phone.

WM. SMITH, Brooklin & Myrtle Stns. Columbus P.O.

Young Shorthorn Bulls!

Am now offering 3 grand ones from Scottish Peer (imp.). Will make show animals. A few Berkshire boar pigs 3 months old. Also Leicester sheep.

JAS. SNELL, Clinton, Ont.

ARLINGTON SHORTHORNS AND LEICESTERS

Present offering: 2 bulls 8 and 11 months old, by Christopher's Heir 46469; also a few females of different ages, some from imp. sires. No sheep for sale at present. Stock guaranteed and represented. John Lishman, Hagersville P.O. & Sta.

SCOTCH SHORTHORNS

For sale: 7 young bulls, also my stock bull, Royal Prince =31241= (roan), sire of the two noted females, Fair Queen and Queen Ideal, World's Fair champion. H. K. FAIRBAIRN, Thedford, Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

LINE FENCING.

I am sending a plan of A's farm and two lots opposite, formerly owned by B. He put up the line fence on the C lot and A the one on the D lot. Some ten or twelve years ago, B sold the two lots—the one where he built the fence to C, the one where A built the fence to D. Last summer, C built a new fence on half his lot; claimed all the old fence, and said A must put up the other half, which he did. D is living in the United States, but was home last summer and promised A that he would hire a man to put up his half. This he failed to do, going away, leaving the land rented as before. Can A remove half the old fence, and notify D, or his agent, to put up a new fence? Please examine the case, and give A directions how to act.

AN OLD SUBSCRIBER.

P. E. Island.

Ans.—We do not see that A is in a position to legally proceed with the suggested removal of fence. He ought, by correspondence with D, or through the agent, to make some definite arrangement of the matter. If, however, after a reasonable effort in that direction, he should find himself unable to so arrange, he ought then to consult a local solicitor personally, and be advised by him as to the necessary steps to be taken.

BURNING FALLOW—ENDING LEASE—EXECUTOR'S POWER—LANDLORD TAKING TIMBER.

1. What time in the summer have we the privilege of putting out a fire, that is, to burn a fallow?

2. Is a ten years' lease a lease that may be broken on certain conditions? If so, what are the conditions?

3. How much authority may an executor use in regard to his managing, say a farm property? By way of improvements, can he drain land? Can he tear down buildings and remodel them into one good, more up-to-date building?

4. If I rent a farm to a man for a term of years, and on that property is a lot of timber, and a good deal of that best timber is dying, can I go on and trespass and sell that dying timber, which is far more than the tenant could use for firewood, I being willing to let him cut green timber for firewood, if necessary?

Ontario. Ans.—1. It depends largely upon whether you are within a "fire district," or not, and upon the provisions of local municipal by-laws, if any. See Revised Statutes of Ontario, chapters 267 and 268; also The Consolidated Municipal Act, 1903, sec. 542, sub-sec. 16.

2. No, unless so provided by the indenture of lease itself, and in such case the document would, of course, contain clauses setting forth the conditions of termination or forfeiture.

3. It depends mainly upon the terms of the will under which he is acting. It is probable that unless so authorized or directed he cannot properly do what is suggested without the consent of the beneficiaries under the will; but it may be that either by virtue of the powers conferred on him by the will itself or having regard to the special circumstances of the estate, he could legally make substantial and permanent improvements of the character in question.

4. We would require to see the document of lease in order to answer this question definitely. It is likely, however, that you have the right to sell so much of the timber in question as is not reasonably required by the tenant for purposes of firewood, fencing, repairs, etc., and to enter upon the demised premises for the purpose of such sale and the removal of the timber sold, doing no unnecessary damage. But you ought not to proceed to do so without first consulting a solicitor personally, producing the lease and acquainting him fully with the circumstances, unless, of course, you have the consent of the tenant.

Messrs. Smith & Richardson, of Columbus, Ont., make a change in their advertisement of Clydesdales, in which they offer the choice imported stallions, Dashing King, a three-year-old, and Baron Columbus, a two-year-old, also two good Canadian-bred horses, one seven, the other three years old.

LIVER COMPLAINT.

The liver is the largest gland in the body; its office is to take from the blood the properties which form bile. When the liver is torpid and inflamed it cannot furnish bile to the bowels, causing them to become bound and costive. The symptoms are a feeling of fullness or weight in the right side, and shooting pains in the same region, pains between the shoulders, yellowness of the skin and eyes, bowels irregular, coated tongue, bad taste in the morning, etc.

MILBURN'S LAXA-LIVER PILLS

are pleasant and easy to take, do not grip, weaken or sicken, never fail in their effects, and are by far the safest and quickest remedy for all diseases or disorders of the liver.

Price 25 cents, or 5 bottles for \$1.00, all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Glenoro Shorthorns and Lincolns

Imp. Marr Boan Ladys, Missies, Miss Ramsdons and Urys. Strictly high-class in quality and breeding. Winners at Canada's leading fairs. Five grand young bulls, from 9 to 12 months old. Two from great milking dams (over 50 lbs. per day). Prices right. Come and see them and you will buy. One hundred head of Dudding bred Lincolns. Grand crop of lambs from imp. sires and dams.

A. D. MCGUGAN, Rodney, Ont.

DOMINION SHORTHORN HERDBOOK WANTED.

The Dominion Shorthorn Breeders' Association will pay \$1 each for the following volumes of their herdbooks: Volumes 8, 9, 12, 13, 14, 15, 16, 17 and 19. Parties having these volumes to part with, write for wrappers and mailing instructions to

W. G. Pettit, Sec.-Treas., Froeman, Ont.

Pleasant Valley Shorthorns

Herd headed by Imp. Ben Lomond =45180=, assisted by Bud's Emblem, 2nd-prize senior bull at Toronto, 1906, son of Old Lancaster 50068. Correspondence solicited. Inspection invited.

GEO. AMOS & SON, Moffat Sta. & P.O., C.P.R. Farm 11 miles east of City of Guelph.

FOR SALE 8 SCOTCH SHORTHORN BULLS

Aged 6 to 14 months. Marr Beautys, Campbell Claretts, Bessies, Claras and Rosebuds, got by the Broadhooks bull, Broadhooks Prince (imp.) 55002. Also cows and heifers in calf or with calves at foot or being bred to same bull. Prices lowest at terms easy.

DAVID MILNE, Ethel, Ont.

John Gardhouse & Sons

Importers and breeders of Scotch Shorthorn cattle, Shire and Clydesdale horses, and Lincoln sheep. Call and see us.

Highfield P. O., Weston Station 3 1/2 Miles. Telephone.

Elm Park Shorthorns, Clydesdales & Berkshires

Herd headed by the choicely-bred bull, British Flag (imp.) 50016. Stock of all ages for sale.

JOHN M. BECKTON, Glencoe, Ontario. G.T.R., C.P.R. & Wabash. Farm adjoins town limits.

MAPLE HILL STOCK FARM—High-class Scotch shorthorns.

Herd headed by Rose Victor =54835= and Victor of Maple Hill =65480=, both sons of the Duthie-bred bull, Sittytown Victor (imp.) =50038=, and from richly-bred imported cows. W. R. Elliott & Sons, Box 426, Guelph.

Spring Valley Shorthorns

Bulls in service are: Bapton Chancellor (imp.) =40359= (78286), Clipper Chief (imp.) =64220=.

Stock for sale at all times.

KYLE BROS., Afr. Ontario.

Shorthorns for Sale—Five choice bulls, all from imp. sires, and three of them Scotland's Fame (imp.) at head of herd.

ALEX. BURNS, Lockwood P.O. and G.T.R. Sta.

Brown Lee Shorthorns!

Nonpareil Victor =63307= at head of herd. Young stock for sale at all times. Prices very reasonable. Afr. C. P. R.; Drumbo, G. T. R.

DOUGLAS BROWN, Afr. Ont.

Shorthorns!
BELMAR PARC.
 John Doug'as, Manager.
 Peter White, Pembroke, Ont.

Calves for sale by our grand quartette of breeding and show bulls:
 Nonpareil Archer, Imp. Proud Gift, Imp.
 Marigold Sailor. Nonpareil Eclipse
 Females. Imported and from imported stock in calf to these bulls.
 An unsurpassed lot of yearling heifers.

WESTSIDE SHORTHORN HERD AND BORDER LEICESTER FLOCK.

All Registered in the Herd and Flock Books of Great Britain.

We invite all interested to inspect the cattle and sheep on this farm. The Shorthorns are long-traced families, tracing to the pioneer herds of Scotland through channels of repute. The Border Leicester flock is one of the oldest in Scotland, and embraces blood of the highest breeding. Selections for sale. Visitors from the States and Canada will be cordially welcomed.

A. Cameron & Sons, Westside Farm, Brechin, Scotland.

AT "MAPLE SHADE"

Our young bulls are the best that our herd has ever produced. We can furnish Cruickshank bulls of high quality to head the best herds, and some that should produce the best prime steers. We have a bull catalogue. Send for one.

JOHN DRYDEN & SON, Brooklin, Ont.
 Stations: Brooklin, G.T.R. Myrtle, C.P.R. Long-distance telephone.

Valley Home Shorthorns and Berkshires

Special offering at very low prices for immediate sale: Eight young bulls 10 to 15 months old, five cows from 3 to 5 years old, with calves at foot; four 2-year-old heifers in calf to Royal Diamond 2nd = 53459 =; also eight heifers one year old. The above are straight Scotch and a choice lot; and 10 young Berkshire sows, just bred to Myrtle's Prince (imp.) - 14133 -; and 30 young pigs of both sexes, from one to two months old. Visitors welcomed for personal inspection.

S. J. PEARSON, SON & COMPANY, Meadowvale, Ontario
 Stations: Meadowvale and Streetsville Jct., C.P.R.



Special Offering of Scotch SHORTHORN BULLS

3 just past two years old; 15 just over one year old; 7 just under one year old.

The best lot we ever had to offer in individuality and breeding, and prices are right. Catalogue.

John Clancy, H. CARGILL & SON, Manager, Cargill, Ont.

Pure Scotch Shorthorns

19 Bulls. PRESENT OFFERING. 75 Cows and Heifers.

1 imported bull, 3 two-year-olds, and 15 yearlings and calves from 10 to 18 months old—all from imp. sires and choice dams. Cows and heifers all ages, including some show animals. 1 imp. Clydesdale mare four years old, due to foal May 1st. We will book orders for young Yorkshires for May delivery. **W. G. Pettit & Sons, Freeman, Ont.**

Burlington Jct. Station. Long-distance Telephone.

Shorthorns and Clydesdales

I am now offering 6 young bulls from 8 to 30 months old, all Scotch bred, two of them from extra good milking families, and a few registered fillies of good quality.

JOHN MILLER, Brougham, Ont.
 Claremont Sta., C.P.R.; Pickering, G.T.R.

JOHN LEE & SONS, Highgate, Ont.

SHORTHORNS & LINCOLNS
 The champion herd of Elgin Kent and Essex counties.
 For Sale: 8 choice young bulls 8 reds and 8 roans, of grand type and quality; also good selection of young cows and heifers. Visitors welcome.

Glover Lea Stock Farm SCOTCH SHORTHORNS

Superior breeding and individual excellence. For sale: Bulls and heifers—reds and roans some from imp. sire and dam. Visitors met at Ripley station, G. T. R.

R. H. REID, PINE RIVER, ONTARIO.

The Salem Herd of Shorthorns

IS HEADED BY JILT VICTOR (IMP.).

It contains a number of the most noted matrons of the breed. Write for what you want.

R. A. & J. A. Watt, Salem, Ont.
 Elora station, G. T. R. and C. P. R.

Scotch Shorthorns Clarets, English Ladies, Mildreds, Nonpareils. Present offerings by Springhurst 44864 and Mildred's Royal. Prices moderate. **F. W. EWING, Salem P. O., Elora Station.**

Scotch Shorthorns A grand pair of yearling bulls, also a few heifers, bred from imp. sire and dams. Pure Scotch and fashionably pedigreed. Will be sold right. **P. C. RANKIN & SONS, Wyebridge P. O., Wyevale Station.**

SHORTHORNS.

Just closed out the season's crop of bulls of breeding age, but have a few very nice youngsters coming up. Anyone wishing a stock bull from the noted Derby (imp.), send orders ahead, as they are all picked up as soon as ready. **W. J. SHEAN & SON, Box 256, Owen Sound, Ontario.**

MAPLE GROVE SHORTHORNS

My present offering consists of imported and home-bred cows and heifers, also four young bulls bred by Lord Banff's Conqueror. He is one of the best stock bulls of his breed. Terms and prices to suit the times. **C. D. WAGAR, Enterprise Sta. & P. O., Addington Co.**

Queenston Heights Shorthorns

Show animals in yearling and two-year-old bulls, also bull and heifer calves. Young cows and heifers at very reasonable prices. Canadian and American registration.

Hudson Usher, Queenston, Ontario.

SHORTHORNS

Six superior yearling bulls, some of them out of great rich cows; heifers of all ages. A lot of very big yearlings and a few heifer calves cheap.

CLYDESDALES

Two mares 5 years old, one an extra good one and a pair of geldings 4 years old.

JAS. McARTHUR, Gobles, Ont.

A. EDWARD MEYER, Box 378, Guelph, Ont.,

Breeds **SCOTCH SHORTHORNS** of the following families: Cruickshank Be lons, Mysies, Brawith Buds, Villages, Broadhooke, Campbell Clarets, Minas, Urys, Hessies, Bruce Mayflowers, Augustas, Marr Missies and Lovelaces, and others. Herd bulls: Scottish Hero (imp.) = 55042 = (90065), Sittytun Lad = 67214 =. Correspondence solicited. Visitors welcome. Long-distance phone in house.

GOSSIP.

At the dispersion sale of the Shorthorn herd of Messrs. Denny, of Kent, England, recently, some good prices were realized, the cow Pluto's Pink, of the Garne Pye tribe, bringing 205 guineas, Amelia 15th, a four-year-old cow, bred in Scotland, but of Towneley blood, 230 guineas, and the whole herd of 45 head an average of £67. 15s., or \$338.

The 1907 Glasgow champion Clydesdale stallion, Baron Kitchener (10499), is advertised to stand for service of approved mares this season at the farm of Mr. J. W. Boyle, Woodstock, Ont., at the fee of \$25 to insure a foal. Baron Kitchener is a son of the champion and sire of champions, Baron's Pride (9122), and is a model Clydesdale in type and quality, with plenty of size.

A number of military men in a Washington hotel were giving an account of an incident in the Civil War. A quiet man who stood by at last said: "Gentlemen, I happened to be there, and might be able to refresh your memory as to what took place in reference to the event just narrated." The hotelkeeper said to him: "Sir, what might have been your rank?" "I was a private." Next day the quiet man, as he was about to depart, asked for his bill. "Not a cent, sir; not a cent," answered the proprietor. "You are the very first private I ever met."

IF THE HENS WOULD DATE THEIR EGGS.

A freak bill, attributed to J. O. Thomas, of Racine, and introduced by request, came into the Assembly of the Wisconsin Legislature recently. It provides:

"Every egg-producing fowl shall, upon proper application being made to the secretary of the Board of Agriculture, be provided with an automatic dating machine, and it shall be the duty of every such fowl to date consecutively each egg laid, in order that the public may be properly informed as to the age and edible qualities of such hen's product."

Assemblyman Thomas disclaimed any knowledge of the bill, and it was referred to the revision committee.—[Interstate Grocer.

QUESTIONS AND ANSWERS. Miscellaneous.

LEASE WITH RESERVATION.

A rents B a farm. The lease reads: "The lessor reserves the orchard out of the one hundred acres." Has A or B the right to use the house, which is in the orchard?

Ontario. Ans.—A.

BASSWOOD LUMBER—BARN FRAMES.

1. Will basswood make good timbers for a barn, or will it rot too quick, and, if it will, should it be dried before it is put up?

2. Will basswood make good sheeting for the outside of a barn, and should it be dried before it is put on?

3. Which is the strongest and cheapest barn, a plank barn or a frame barn, and how wide should the planks be cut?

4. Which will take the most lumber, a plank barn or a frame barn? J. J.

Ans.—Basswood makes satisfactory timber to use where it will be protected from the weather. It is desirable for plates on account of not being too heavy. It need not be seasoned before being used, though seasoning would be desirable, if time permits.

2. Basswood is not suitable for sheeting.

3. We cannot speak from experience on this point. We believe, however, the plank-frame barn is cheaper, and if properly braced is fully as strong as many barn frames that are erected nowadays.

4. If by "lumber" our correspondent includes timber, we should say the frame barn would require the larger quantity. Just how much more will depend upon the plan one has in mind, and the weight of timber he deems necessary to use. The opinions of readers who have built plank-frame barns is requested.

Boog Spavin

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.

Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid blemishes—Boog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be limited. Easy to use, only a little required, and your money back if it ever fails.

Fleming's Vest-Pocket Veterinary Adviser describes and illustrates all kinds of blemishes, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

FLEMING BROS., Chemists, 75 Church Street, Toronto, Ontario

Maple Lodge Stock Farm 1854—1907.

Am now offering a grand lot of young Shorthorn Bulls, several from choice milking strains. Also a few extra good heifers.

A. W. SMITH, MAPLE LODGE, ONT.

Six Red Shorthorn Bulls

13 to 15 months old, got by Proud Gift = 50077 = (imp.); also cows and heifers, imported and home-bred. Inspection solicited. We think we have as good Shorthorn cattle as we have Lincoln sheep. 14 firsts out of a possible 19, our record at Chicago, 1906.

J. T. GIBSON, Denfield, Ont.

GREENGILL HERD of high-class

SHORTHORNS

We offer for sale 8 young bulls, a number of them from imp. sire and dam; also females with calf at foot or bred to our noted herd bull, imp. Lord Rossberry.

R. MITCHELL & SONS, Nelson P. O., Ont.; Burlington Junc. Sta.

T. DOUGLAS & SONS

STRATHROY, ONT.

Breeders of Shorthorns and Clydesdales. 15 bulls, 60 cows and heifers, 1 imp. stallion and home-bred fillies. Write us what you want or come and see our stock. Farm 1 mile north of town.

KENWOOD STOCK FARM. SHORTHORNS.

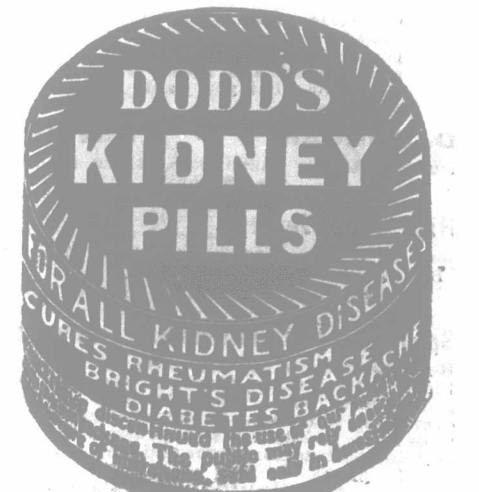
Headed by (imp.) Jilt Victor = 4517 =. Offerings are two bull calves, an 11-months Miss Ramsden from imp. sire and dam; a 19-months Missie, by Blythesome Ruier, and other bulls; also heifers of choice breeding. A few choice Berkshire pigs just off the sow.

HUNING BROS., Highgate, Ont. Kent Co.

SHORTHORNS, YORKSHIRES and S.-O. WHITE LEGHORNS.—I have sold all my young bulls advertised, but can offer straight Scotch-bred heifers of the noted \$9,000 bull, Joy of Morning (imp.) = 39070 =, and young cows bred to him. Also choice Yorkshires, 5 months old, imp. sire and dam. Leghorn eggs supplied at 75c. per 13. **Geo. D. Fletcher, Binkham, Ont., Erin Station, C. P. R.**

Shorthorn Bull—Prince of Stars = 48804 =. Rich roan. Sire Chief of Stars (imp.), dam by Blue Ribbon (imp.), s. dam Estelle (imp.). Kind, sure, a good handler. Will sell to avoid inbreeding. Look up this pedigree, and write **H. M. VANDERLIP, Canaville, Ont.**

Help me to look for my work beside me, to cease from yearnings for large activities, from discontent, restlessness, and scorning of this too ordinary life.—Jay Arbee.



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A
**Remarkable
Invention
FOR THE
CULTURE
OF HAIR.**



THE EVANS VACUUM CAP is a practical invention constructed on scientific and hygienic principles, by the simple means of which a free and normal circulation is restored throughout the scalp. The minute blood vessels are gently stimulated to activity, thus allowing the food supply which can only be derived from the blood, to be carried to the hair roots, the effects of which are quickly seen in a healthy, vigorous growth of hair. There is no rubbing, and as no drugs or chemicals of whatsoever kind are employed, there is nothing to cause irritation. It is only necessary to wear the Cap three or four minutes daily.

60 DAYS' FREE TRIAL!
The Company's Guarantee.

An EVANS VACUUM CAP will be sent you for sixty days' free trial. If you do not see a gradual development of a new growth of hair, and are not convinced that the Cap will completely restore your hair, you are at liberty to return the Cap, with no expense whatever to yourself. It is requested, as an evidence of good faith, that the price of the Cap be deposited with the Chancery Lane Safe Deposit Company of London, the largest financial and business institution of the kind in the world, who will issue a receipt guaranteeing that the money will be returned in full, on demand, without questions or comment, at any time during the trial period.

The eminent Dr. I. N. LOVE, in his address to the Medical Board on the subject of Alopecia (loss of hair) stated that if a means could be devised to bring nutrition to the hair follicles (hair roots), without resorting to any irritating process, the problem of hair growth would be solved. Later on, when the EVANS VACUUM CAP was submitted to him, for inspection, he remarked that the Cap would fulfill and confirm in practice the observations he had previously made before the Medical Board.


Dr. W. MOORE, referring to the invention, says that the principle upon which the Evans Vacuum Cap is founded is absolutely correct and indisputable.

An illustrated and descriptive book of the Evans Vacuum Cap will be sent, post free, on application.

**THE SECRETARY, EVANS VACUUM CAP CO., LTD.,
REGENT HOUSE, Regent St., London, Eng.**

I Will Import for Showing and Breeding
SHROPSHIRE, OTSWOLDS, HAMPSHIRE, OXFORDS, SOUTHDOWNS,
or any other of the English breeds of Sheep, Cattle, or Horses, for those wishing to make an importation, large or small, this season. The best of care in selecting and delivering will be exercised, and the commission will be reasonable. Write me at once for what you want.
ROBERT MILLER, STUFFVILLE, ONTARIO.

AYRSHIRES AND YORKSHIRES



We offer several young calves of either sex, of choice dairy breeding, a few young cows and heifers in calf. We are importing several head of both sexes from Scotland. Our John Beeson has already selected 1st and 2nd winners of "The Derby," 1906, and 1st and 2nd in the Official Milk Record by Highland and Ayr Society, 1906. He is bringing out young stock of the same stamp and breeding, which will be for sale. Write us if you want something right at a reasonable price. Young bears fit for service. Young sows just bred. Feb. and April pigs for sale.
ALEX. HUME & CO., MENIE, ONT.
Long-distance 'phone (Campbellford).

Hillview Herd of Prizewinning
AYRSHIRE CATTLE.
All animals bred and carefully selected for size, constitution, long tests and deep-milking qualities. Select animals of both sexes for sale at reasonable prices. For further information and prices write
**A. KENNEDY & SON,
Hillview Stock Farm, Vernon, Ont.
Winchester Station, C. P. R.**

SPRINGBURN STOCK FARM, North
Williamsburg, Ont., Ayrshires, both sexes and all ages; Oxford Down sheep, a few choice ones left; Buff Orpington fowls, eggs \$1.00 per setting, \$4 per hundred. **H. J. Whitteker & Sons, Props.**

SHANNON BANK STOCK FARM
FOR AYRSHIRES AND YORKSHIRES
Young stock of both sexes for sale from imported stock.
W. H. TRAN, Cedar Grove, Ont.

AYRSHIRES FROM A PRIZEWINNING HERD
Have some nice bull and heifer calves for sale at reasonable prices. For particulars, etc., write to
**WM. STEWART & SON,
Campbellford Bn. o Menie P.O., Ont.**
When Writing Please Mention this Paper

E. T. CARTER & CO.
TORONTO, ONT.
WOOL

Sheep Breeders' Associations.
American Shropshire Registry Association, the largest live-stock organisation in the world; G. Howard Davidson, Pres., Millbrook, N. Y. Address correspondence to **MORTIMER LEV BRING, Secretary, Lafayette, Indiana.** OR

SHROPSHIRE
Can sell about 90 Ram Lambs, Mostly by an Imp. Buttar-bred ram.
GEO. HINDMARSH, Missa Craig, Ont.
Oxford Down Sheep, Shorthorn Cattle Yorkshire Hogs.
Present offering: Lambs of either sex. For prices, etc., write to **John Cousins & Sons Buena Vista Farm, o Harrieten, Ont.**

QUESTIONS AND ANSWERS.
Miscellaneous.

REGISTERING GRADED SHORT-HORNS.

1. Could Shorthorns we graded up be registered like Clydesdales are now?
2. Was that the cause of a number dropping out a few years ago?
Ans.—The English Shorthorn Herdbook (Coates') admits cattle having four crosses by registered Shorthorn sires, but very few now claim the privilege. The Canadian Herdbook formerly had the same rule, but it was repealed some years ago, and those entered under that rule and their progeny were dropped out. Animals to be eligible to registration now must trace in all lines to imported stock registered in the English Herdbook.
J. G.

OYSTER-SHELL BARK-LOUSE.

I have this spring sprayed on my apple trees 700 gallons of lime-sulphur wash to destroy the oyster-shell bark-louse. If there have been some limbs missed in the spraying, will it be safe to apply 10 lbs. of washing soda to 50 gallons water? Will it injure the foliage if I give them a good drenching?
F. A. F.

Ans.—The lime-sulphur wash is one of the best applications that can be made in the spring to eradicate the oyster-shell bark-louse. If the wash has been well applied, it should destroy most of the scales this season. Rather than risk applying the caustic soda, I think it would be better to spray only with the Bordeaux mixture and Paris green, as is used for the prevention of apple scab and various chewing insects upon the trees, and apply the lime-sulphur wash again next spring to clear the trees of whatever bark-lice may be left upon them.
H. L. HUTT.

POULTRY FATTENING.

Could you give me the name of any firm or firms that handle poultry for fattening?
A. P. H.


Ans.—The Flavells, London, Ont., and Lindsay, Ont., and, we believe, the Canadian Produce Co., Toronto, Ont., have done some fattening in that way in the fall. The manager of Flavells, London, does not regard the system as altogether satisfactory nor as economical as properly finishing the birds in the farm poultry-yard where they are raised. The extra cost of handling, delay in getting the birds started feeding well after the change in quarters, and the expensive plant unused for 8 or 10 months of the year, eat into the returns too seriously to make it a paying proposition. Before the last Ontario Winter Fair, Adam Armstrong, of Fergus, Ont., who has been in the chicken-fattening business for six years, told of losing \$100 in one season in that way, besides \$175 locked up in coops, which he afterwards turned over to farmers to do the fattening, which has proved to be the proper plan, as the Flavells point out.

SICKLY EVERGREENS.

Enclosed please find samples of branches from some spruce trees, planted out three years ago, now 4 to 5 feet high. They are blighted more particularly on the south side, some much worse than others. Will this rust on them affect them? Or is the burnt appearance owing to the spring sun and snow together acting on them? What can be done for them?
J. F.

Ans.—It is impossible to say definitely what may be the cause of injury to your spruce trees without seeing them, although, from the specimens sent, it is evident that some of them, at least, are affected with the spruce gall louse. The branch showing enlarged joints, shows the swellings produced by this louse, which is a very difficult insect to eradicate. Young trees badly affected might better be dug out and replaced with thrifty, healthy trees than attempt to nurse along the injured ones. The browning of the needles on the south side of the trees may be due to the effect of the sun shining upon the trees after a severe frost. I notice many of the evergreens this year in exposed locations are sunburned in this way. This is not a serious injury, and the trees will outgrow it.
H. L. HUTT.
Ontario Agricultural College.

250,000,000
Sheep Every Year
Dipped in



COOPER DIP
Has no equal. One dipping kills ticks, lice and mites. Increases quantity and quality of wool. Improves appearance and condition of flock. If dealer can't supply you, send \$1.75 for \$2.00 (100 gallons) packet to
National Drug and Chemical Co., Limited, Toronto and Montreal.

HAMPSHIRE SHEEP
DOWN — SHEEP

"Reserve" for Champion in the Short-wool Classes, Smithfield, London, 1905, 1906 and 1907.

SPLENDID MUTTON
GOOD WOOL GREAT WEIGHT

This highly valuable English Breed of Sheep is unrivalled in its

Wonderfully Early Maturity.
Hardiness of constitution, adapted to all climates whilst in the quality of mutton and large proportion of lean meat it is unequalled, and for crossing purposes with any other breed unequalled. Full information of

JAMES E. RAWLENCE,
Secretary Hampshire Down Sheep Breeders' Association.
Salisbury, England.

SOUTHDOWN SHEEP

Unequaled for fine quality of both mutton and wool, hardiness of constitution and earliness of maturity.

STRIDE & SON
will sell by auction at

Chichester, on Wednesday
August 7th, 1907

6,000 Pure-bred Southdown Ewes.
450 Pure-bred Southdown Rams
and Ram Lambs.

Including consignments from nearly all the leading registered flocks in England. Commissions carefully executed. Telegrams—Stride, Chichester. Postal address:

Stride & Son, Chichester, Sussex, England.

The Waters Place, Herts, England

REGISTERED
HAMPSHIRE DOWN FLOCK
(ESTABLISHED IN 1874).

the property of Mr. T. F. Burton, who is giving up ram breeding; undoubtedly one of the best of the breed in existence, and possessing a brilliant show-yard record. Will be sold by auction on

FRIDAY, JULY 19th, 1907.


This grand breeding flock consists of about 800 ewes, ewe lambs, rams, and ram lambs, including fitted sheep. Catalogues and full information from the

Auctioneers: Waters & Rawlence,
SALISBURY, ENGLAND.

Fairview Shropshires

Orders can now be booked for shearing rams and shearing ewes, for ram lambs and ewe lambs, fitted for showing or field condition. Don't forget that this flock has produced more winners than any other flock in all America, and stock sold are producers of winners.

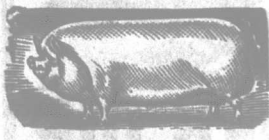
J. & D. J. CAMPBELL,
Fairview Farm, Woodville, Ont.



SOUTHDOWNS
AND
Scotch Collies.
Robt. McEwan, Byron, Ont.
Long-distance 'Phone.

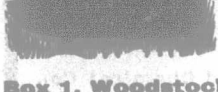
Canadian Agents for the Original
McDougal's Sheep Dip & Cattle Dressing
Imported direct. Price: Imperial pint, 50c; Imperial half gallon, \$1.25; Imperial gallon, \$2.50. Sold by druggists, or charge prepaid to the gallon tin. **THE WORTHINGTON DRUG CO., Toronto, Ontario.**

ORKSHIRES of Choicest Type and Breeding.



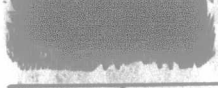
I have on hand 75 brood sows of Princess Fame, Cinderella, Clara, Minnie, Lady Frost and Queen Bess strains. My stock boars are true to type and richest breeding. For sale are a large number of sows bred and ready to breed, boars fit for service, and younger ones of both sexes. Pairs and trios not akin. J. W. BOYLE, P. O. Box 563, Woodstock, Ont.

Woodstock Herd of Large English Berkshires



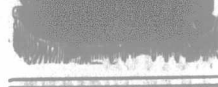
For sale: Boars fit for service. Sows ready to breed. March and April pigs supplied in pairs and trios not akin; bred from my imported and home-bred sows. My pigs are all bred on prize-winning lines, and true to type. Come and see, or write for prices. DOUGLAS THOMSON, Box 1, Woodstock, Ontario. C. F. R. and G. T. R. stations.

Rosebank Berkshires.



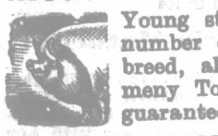
Present offering: Boars fit for service. Sows ready to breed. Choice young stock ready to wean, sired by Maple Lodge Doctor and Belle's Banno (imp.), a Toronto winner. Lefroy, S.T.R. JOHN BOYES, JR., Churchill, Ont. Long-distance 'Phone

OAKDALE BERKSHIRES



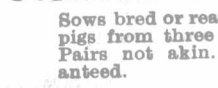
Largest Berkshire herd in Ontario. Stock boars and several brood sows imported. For sale: Sows bred and ready to breed, boars ready for service, and younger ones, all ages, richly bred on prize-winning lines and true to type. Everything guaranteed as represented. Long distance phone. L. E. BORDAN, Milligan P.O., Co. of York.

Meadowbrook Yorkshires



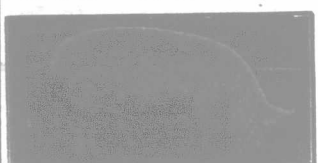
Young stock of both sexes. A number of sows old enough to breed, all sired by Imp. Dal many Topman. Everything guaranteed as represented. J. H. SNELL, HAGERSVILLE P. O. & STATION

Glenhodson Yorkshires



Sows bred or ready to breed. Young pigs from three to six months old. Pairs not akin. Satisfaction guaranteed. GLENHODSON COMPANY, Myrtle Station, Ont. Long-distance phone at farm. Lorne Foster, Mgr.

LARGE ENGLISH YORKSHIRES



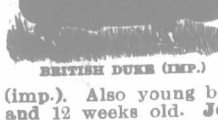
Pigs of the most improved type of both sexes all ages, for sale at 1 1/2 times. We have more imported animals in our herd than all other breeders in Canada combined. We won more first prizes at the large shows this year than all other breeders combined. We won every first but one and all silver medals and Best boar prizes at Toronto and London, and at St. Louis we furnished all the first-prize hogs in the breeding classes except two; also supplied both champion and grand champions. Prices reasonable. B. G. FLATT & SON, Millgrove, Ont.

Dunrobin Stock Farm

Clydesdales, YORKSHIRES, Shorthorns

We are looking orders for breeding stock from our grandly-bred Yorkshire sows. Twenty-five sows to farrow in the next few weeks. Unrelated pairs a speciality. Write for prices and particulars. DONALD GUNN & SON, Beaverton, Ontario. G. T. R., C. N. O. R. stations 1 1/2 miles from farm. Customers met on notification.

MAPLE LEAF BERKSHIRES!



Large English breed. Now offering King of the Castle sows, and Polgate Doctor sows, bred to British Duke (imp.). Also young boars and sows for sale, 10 and 12 weeks old. Joshua Lawrence, Oxford Centre P. O. Woodstock Station.

For Sale—Ohio Improved Chester Whites, the largest strain, oldest established registered herd in Canada; young sows in farrow; choice young pigs, six weeks to six months old; pairs not akin; express charges prepaid; post-groes and safe delivery guaranteed. Address B. D. GEORGE, Putnam, Ont.

Yorkshires and Tamworths—Either breed any age, both sexes; sows bred and ready to breed. Yorkshires bred from imp. sire and dam. Tamworths from Toronto winners. Pairs not akin. As good as the breeds produce. CHAS. CURRIE, Morrisston P.O. Schaw Sta., C.P.R.

ORCHARD HOME TAMWORTHS Herd headed by Newcastle Warrior. This hog won first prize and silver medal at Toronto 1906, and defeated his sire, Colwill's Choice (333) who has won these honors three years in succession. Our brood sows are large and of the same high quality. If you want choice stock, we can satisfy you at a reasonable price. Some choice young pigs. Also offering a pair of yearling boars at a very special price—good ones. Also a choice yearling Yorkshire boar. Express prepaid and satisfaction guaranteed. CRANDALL BROS., Cherry Valley, Ont.

Newcastle Herd of Tamworths and Shorthorns. We have for quick sale a choice lot of boars and sows from 2 to 6 months old, the produce of sows sired by Colwill's Choice and Newcastle Warrior, both our own breeding, and winners of sweepstakes and silver medal at Toronto, 1901-02-03-05. Several very choice sows due to farrow in March and April. Pedigree furnished with every pig. Several choice heifer calves and every pig. Several choice stock bull. All of high show quality. Prices right. Daily mail at our door. COLWILL BROS., Newcastle, Ont.

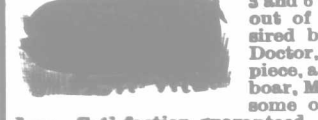
Mount Pleasant Tamworths and Holsteins. Herd of For Sale: Pigs of either sexes, from 6 weeks to 7 months; pairs not akin; also bull and heifer calves under 5 months. Phone in resi'ence. BERTRAM HOSKIN, The Gully P. O.

The test of tact is not how often you please, but how seldom you offend. Next only to say the right thing in the right place, but far more difficult still, is to leave unsaid the wrong thing at the tempting moment.—Rolins—Sala.

Chester White Pigs

Ready to wean in two weeks. Price for single pig, either sex \$4; pairs, \$7. Also thoroughbred Shorthorn bull 10 months old, and one 3 years old. Two Ayrshire bulls, one 16 months and one 2 year; past. All registered and highly bred. I have also a number of high-class Holstein cows: Ayrshires and Shorthorns all ages. Everything in the herd for sale. D. ALLAN BLACK, Kingston, Ont.

Willowdale Berkshires



Young boars and sows 3 and 6 months of age, out of imp. sows, and sired by Imp. Polgate Doctor, Royal Masterpiece, a son of the \$2,500 boar, Masterpiece, and some of them imp. in imp. Satisfaction guaranteed. J. J. WILSON, Milton P.O. and Sta.

LARGE ENGLISH BERKSHIRES



Choice young pigs from March and April litters. A few fall pigs and two young Shorthorn Bulls. JOHN RACEY, Lennoxville, Quebec.

CHESTER WHITE SWINE

and SHROPSHIRE SHEEP. Right in quality; right in price. Come and see, or apply by letter to W. E. WRIGHT, Glanworth, Ont.

ELMFIELD YORKSHIRES



Have 40 young pigs from 2 to 5 mos. Some young boars ready for service; also young sows bred and ready to breed. Pairs supplied not akin. Prices right. G. B. MUMA, Ayr, Ont.

Berkshires—Chief herd boars: Compton Duke (imp.), and Elmhurst Swell (imp.). For sale: 5 boars, 5 gilts, 1 nine-months' sow, due in May. Pigs ready to wean. Motto: "Goods as represented." Careful selections for mail orders. H. M. VANDERLIP, Cainsville, Ont.

DUROC-JERSEYS

Booking orders for spring pigs. All others sold. Mac Campbell & Sons, Harwich, Ont.

IMPROVED LARGE YORKSHIRES—Herd headed by the famous Summer Hill Gladstair 9th and Dalmeny Topman 2nd (imp.), and some imported sows of good breeding and quality. Stock for sale at all times. GEO. M. SMITH, Haysville, Ont. New Hamburg, G. T. R., or Bright on Buffalo & Lake Huron R.R.

GOSSIP.

The U. S. National Dairy Show of 1907 will be held in the International Live-stock Exposition Building, at the Union Stock-yards, Chicago, October 10th to 19th. The show will be affiliated with the National Corn Show, which will be held at the Coliseum at the same time. A prominent feature of the Dairy Show will be the educational exhibit by the U. S. Department of Agriculture and National Association of Dairy Instructors and Investigators. Herds of pure-bred dairy cows will be on view, and they will be fed, milked and cared for the same as on the farm; while experts from the leading agricultural colleges will deliver addresses along dairying lines, and there will be several conventions of dairymen, creamery and buttermakers and dairy-stock raisers. Ten thousand dollars in cash prizes, medals, cups and diplomas will be awarded to exhibitors of dairy cattle and makers of creamery and dairy butter and cheese.

ADVERTISING AS A BUSINESS FORCE.

The greatest single business force in existence to-day is advertising. Most breeders and many farmers can utilize that force to varying degrees. The breeder should aim first and foremost to produce first-class stock, and next to make that fact known as widely as possible, to the end that he may create a demand for his output that will enable him to secure profitable prices. Take two animals of equal quality and merit, one from a widely-known herd or flock and the other the product of an unknown breeder, and everyone knows that the former will bring much the higher price. Advertising creates demand and establishes prestige, and it is the steady hammering away that counts. An advertisement run regularly accumulates force from repetition. Of course, occasional advertisements of special offerings have their use, but the reputation and prestige gained from the regular all-the-year-round card form the most valuable asset of many a successful breeder. Nearly everyone has occasion to advertise sometimes. Perhaps you may wish to find a buyer or renter for your farm, or, vice versa, may yourself wish to purchase or lease, buy or sell cattle, hay, or whatever it may be. The columns of your paper afford you the opportunity to make your wants known to many thousands of readers at a ridiculously low cost when it is considered that in no other way could you possibly accomplish the same object except at a vastly greater expenditure of cash, time and trouble. Notwithstanding, some people have queer ideas concerning value of advertising space. For instance, some time ago a reader wrote that he intended to hold an auction sale and enclosed a long advertisement, which he requested inserted in a quarter-page space "as many times as \$1 would pay for," stating that his county paper had given him all the space he needed for that price (perhaps his local editor was unusually hard up that day). As soon as we recovered from the shock, we wrote him that the desired space for one issue would cost him \$23.52, which closed the correspondence. Probably it never entered his head that a country weekly of perhaps 250 circulation and a paper of 35,000 circulation were entirely different propositions as regards price at which space could be sold. Another would-be advertiser recently sent us a card, which in smallest possible space would cost \$2.10 for one insertion, and instructed us to run it "45 cents worth." Advertising that costs little or nothing is worth little or nothing. If you are going to advertise, do it in a paper that has a good circulation and, therefore, charges a fair price for its space, and you will get results for your money.

Advertising rates in all papers are based upon the "agate line," which simply means 1-14 of an inch, regardless how many lines of printing the advertisement may actually contain, or the size of type used. The "agate line" is taken as basis simply for convenience, fourteen lines of the "agate" size of type making one inch. Therefore, if a paper's advertising rate is 15 cents per line, a one-inch or "fourteen-line" advertisement will cost \$2.10. [Live-stock Report.

Burdock BLOOD BITTERS CURES



Dyspepsia, Bells, Pimples, Headaches, Constipation, Loss of Appetite, Salt Rheum, Erysipelas, Scrofula, and all troubles arising from the Stomach, Liver, Bowels or Blood.



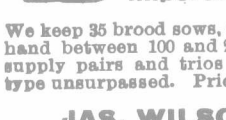
Mrs. A. Lethargue, of Ballyduff, Ont., writes: "I believe I would have been in my grave long ago had it not been for Burdock Blood Bitters. I was run down to such an extent that I could scarcely move about the house. I was subject to severe headaches, backaches and dizziness; my appetite was gone and I was unable to do my housework. After using two bottles of B. B. B. I found my health fully restored. I warmly recommend it to all tired and worn out women."

Large White Yorkshires



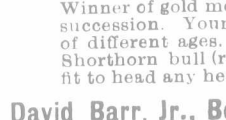
Am offering at the present time a number of choice boars and sows of breeding age, also some imported sows in pig. Also young pigs of spring farrow direct from imported stock. Pairs and trios supplied not akin. Write for what you want. H. J. DAVIS, Woodstock, Ont. Breeder of Shorthorns & Yorkshires

MONKLAND Yorkshires



Imported & Canadian-bred We keep 35 brood sows, and have constantly on hand between 100 and 200 to choose from. Can supply pairs and trios not akin. Quality and type unsurpassed. Prices right. JAS. WILSON & SONS, FERGUS, ONT. G. T. R. and C. P. R. Long-distance 'Phone

Glenburn Herd of Yorkshires.



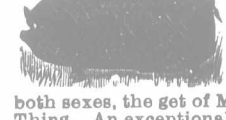
Winner of gold medal three years in succession. Young boars and sows of different ages. Also a grand good Shorthorn bull (roan) 7 months old. nt to head any herd. David Barr, Jr., Box 3, Renfrew, Ont.

Maple Grove Yorkshires



are among the leading Canadian herds for size, quality and true-ness to type, and are prizewinners all around. For sale are both sexes. All ages. Bred from imp. and home-bred stock. There are none better. H. S. McDIARMID, Fingal P. O., Shedden Station, Breeder and Importer.

Fairview Berkshires



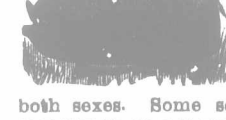
Are second to none. My herd has won high honors wherever shown. Am now offering sows bred and ready to breed and younger ones of both sexes, the get of Masterpiece and Just the Thing. An exceptionally choice lot. JOHN S. COWAN, Donegal P. O., Milverton Sta.

SUNNYMOUNT BERKSHIRES.



Sunnymount Berkshires are unsurpassed for ideal bacon type and superior breeding. For immediate sale: A few choice boars from 5 mos. up to 15 mos. old. JOHN McLEOD Milton P.O. and Sta., C.P.R. & G.T.R.

Fairview Berkshires



Bred from imported and Canadian-bred sires and dams, and bred on prize-winning lines. My brood sows are large, choice animals. Young stock of both sexes. Some sows bred to imp. boars. HENRY MASON, SCARBORO P. O. Street cars pass the door.

When Writing Mention this Paper.