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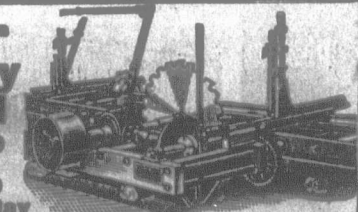
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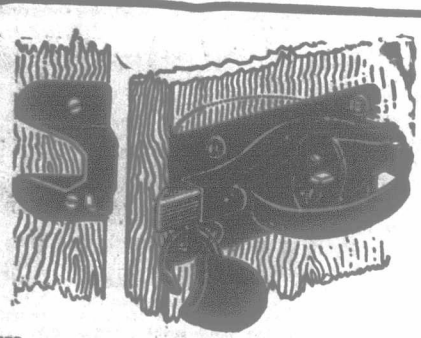
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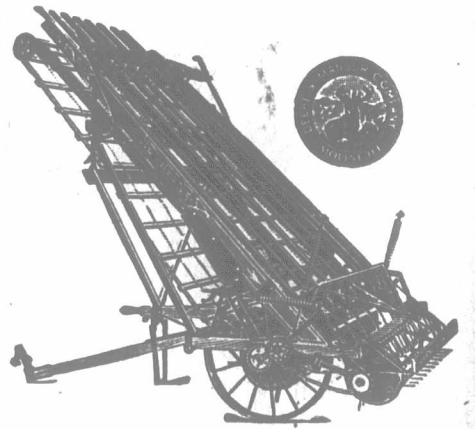
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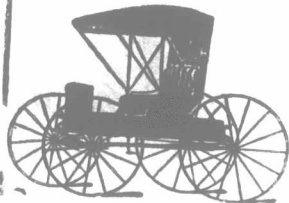
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Vol. XLII.

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LONDON, ONTARIO, MARCH 7, 1907.

No. 754

EDITORIAL.

LET US TRY THE SPLIT-LOG DRAG.

A great part of the road mileage in Canada is and will be for a considerable time to come, the virgin bosom of Mother Earth. An immediate and important problem is how to keep these earth roads in the best possible condition. It is doubly important because a good earth road is the proper foundation for gravelling or macadamizing when the time for it arrives. There are three primary essentials in the construction and care of good earth roads:

1. Good drainage, both surface and subsoil. In many cases this necessitates underdrains, not only under the ditches, but beneath the center of the roadbed as well. If half the money spent by many townships in gravelling had been employed in properly draining the roadbed, we would have far better roads to-day, and roadbeds which it would be worth while putting gravel on. Drainage demands, also, ditches that will carry the water freely away, instead of holding it to soak under and impair the road-bottom. Ditches must be kept open and plenty of culverts provided.

2. Grading is advisable in nearly every case, although undue emphasis has sometimes been placed on grading. Grading which raises the crown by dumping red clay from ditch-bottoms on top of a good loam surface often works mischief. One of the best earth roads we have ever seen is a "give road" that never received much attention. It has shallow ditches and is slightly graded, but the wearing surface is of light loamy soil and never cuts up very deeply under traffic. Grading is good, but should be done with judgment.

3. Every clay or even clay-loam road should be kept smooth by frequent use of some leveller or drag. It matters not how steeply the driveway is graded, if there be clay in its composition it will cut up under traffic. Ruts and hoof-prints will hold water to soak into the road, and each succeeding vehicle works up a deeper mire. If the road is on a hill or incline, water follows down the ruts, wearing out channels in the center of the road. Or perhaps mudholes are formed, to be punched deeper and deeper by each team. The net results are that much of the road surface is worn away and carried to ditches or creeks. Worse still, water stands and soaks down into the subsoil to soften and render it unfit to bear the weight of traffic; for the subsoil must stand this in every case. The water from succeeding rains is held, to be mucked up by travel, whereas it should shed quickly to the ditches.

We are convinced that there is more need on our clay roads for the frequent use of a leveller rather than for the annual employment of an expensive grader, albeit the latter is valuable in its place. But many townships, placing too much reliance on the latter implement, have spent their available money in buying and using it, leaving little or none to keep the roads smooth after the grading was done. Consequently the road gets into a bad shape each spring, necessitating more expensive grading to repair damages. Three-quarters of this could be prevented by dragging or levelling, with a consequent saving of money and a greatly improved condition of the road. The common Ontario leveller answers well, but of recent years the new implement, called the split-log drag, has been extensively tried in the United States, and the results seem to be excellent. The essential difference between the leveller and the drag is that the former is hauled over the roads when they are more or less dry, while the drag it is advised to use to puddle the clay surface while

still muddy. Probably the greatest advantage of the drag over the leveller is that it can be used before one can work on his fields.

So strong is the American endorsement of the drag, so favorable the few Canadian reports we have had, and so reasonable, simple and cheap is the idea, that "The Farmer's Advocate," in cooperation with the Public Works Department of the Ontario Government, has decided to institute a widespread experimentation with this implement throughout Ontario, and has concluded to offer \$100 in cash prizes for the best results in the use of the drag on our earth roads this summer. The conditions, printed elsewhere, are as simple and easy as anyone could wish. The expense of making and using the drag is trifling to each individual, and the benefits, we feel sure, will outweigh the cost of the demonstration. In any case it will be an encouragement and assistance in the solution of the good-roads problem, and we appeal to the public spirit of our readers to make the competition a success. The time for making application is short, March 27th. Read the conditions and send in your name. A post card will do, stating that you wish to enter our split-log-drag competition, and are willing to make a drag and use it at least five times this summer on a mile of road in your vicinity. The motto of this competition is, "Let us try the split-log drag." The inspection and awards will be made by Mr. A. W. Campbell, Good Roads Commissioner for Ontario, but the entries must be sent to the office of "The Farmer's Advocate," London, Ont.

WESTERN WINTER AND LIVE STOCK.

The question is being asked among Eastern stockmen and farmers, as well as those in Western Canada, what will be the immediate or ultimate effect of the present extraordinarily severe winter on the prairie plains? Not only has the weather been severe, but the snowfall exceptionally heavy for the range country, and unrelieved by the snow-melting Chinook that in former seasons was invariably relied upon to uncover quickly the satisfying herbage below. Large numbers of cattle have been starved and frozen to death, and the survivors emaciated so as to seriously curtail the Western beef supply of the early summer at least. To what appraisal the losses will finally resolve themselves, it is not easy to conjecture, though a good many estimates have put them at from 40 to 50 per cent. Some have quickly concluded that the winter has given a "black eye" to ranching. Accompanied by the great demand on the grazing areas for farm settlements, the domain of the cowboy will be steadily and surely restricted, and even on those lands particularly suited to the "free-and-easy" system of stock-rearing, the tendency, where extended leases can be got, will be to make better future provision in the way of shelters and food supplies for similar emergencies. That this season's experience will work to the permanent detriment of the West, we do not believe, because, with all its acknowledged drawbacks, compared with Eastern Canada, it is so rich and sound a land that, under more gradual and rational methods, it will continue to advance, though at a more wholesome pace. Apart from the insatiable markets of the outside world for meats and other animal products, the West, with its fever for railway construction, increasing rural settlement and town growth, which has gone on far ahead of the capacity of the railways to provide rolling stock and power to serve the people already there, will provide a largely-increased consumptive demand, and we therefore expect to see a swing in the direction of mixed farming and

stock-raising on the Western farm as the fascinations of wheat-growing wane. In other words, more meat will be wanted, and it must come from the Western farm, instead of the ranch, unless the West pursues the fatuous plan of importing their animal foods and shipping away their fertility in the form of wheat. From this point of view, the outlook for the breeder of pure-bred stock would certainly appear to be better than before the advent of the rigors of the winter of 1906-1907.

GROW MORE CORN.

The fact that Canada imported from the United States for consumption, in 1905, Indian corn to the value of \$5,588,891, besides \$634,636 worth for distillation purposes, most of which is used as feed for stock, and paid for in cash by the farmers of this country, who ought to grow on their own farms nearly all the feedstuffs they need, should cause us to pause and consider whether we cannot materially reduce that expenditure, if not wipe it out entirely. While the cultivation of corn for ensilage purposes is being steadily extended, and the silo, as a profitable source of cheap and satisfactory feed supply, is steadily gaining in favor, the raising of the crop for the ripened grain has made comparatively little headway in this country, although it has been demonstrated that there are considerable areas in Ontario and in some sections of the other Provinces where abundant yields of the matured crop may be counted on with nearly if not quite as much certainty as the majority of the cereals. And when we consider that most of the cultivation and harvesting of the corn crop may be satisfactorily performed by horse-power and machinery, the labor problem in this connection is little more serious than in the handling of grain, while corn, well managed, yields heavily of the best of fattening foods, and at the same time provides in its stalks a great weight of fodder, which, if judiciously handled, may be utilized to excellent advantage in combination with other foods in carrying cattle through the winter in improving condition.

Corn and clover has been aptly designated by a writer in this issue "a royal pair," and it is practically certain that where these crops can be successfully grown they constitute a combination of stock foods unequalled as a balanced ration, supplying the requirements of the animal economy at a minimum of cost of production, while at the same time serving an admirable purpose in a rotation of crops in maintaining the fertility of the land, keeping it free from the robbery of noxious weeds, and preparing it well for following crops of any kind.

Presuming that the foregoing claims are well founded, does it not logically follow that the possibility of extending our corn-growing area and enlarging our production of this crop should engage the earnest consideration of Canadian farmers? And to this end, should not the study of the breeding and improvement of seed corn, and the adoption of improved varieties along the lines of early maturity and increased yield, engage the attention more than heretofore of our experiment stations, experimental unions and other institutions having for their object the advancement of scientific agriculture? Much attention is being given to this subject by similar institutions in the United States, and the possibilities of improvement in the productiveness and feeding value of certain varieties of corn have been shown to be very great, while the boundaries of the territory in which corn can be profitably cultivated for the ripened grain in that country are steadily extending. Among the facts that have been demonstrated is that there is a wonderful

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JOHN WELD, MANAGER.

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difference in the productive value of different ears of corn of the same variety, selected from the same field, in the same year, and that look so nearly alike that no man can tell which will be the most productive, except by actual test, that the difference in production from the seed of these apparently-similar ears, planted on good ground, in the same field, on the same day, and given equally good cultivation, may be anywhere from ten to thirty bushels an acre. Another clearly-established fact is that seed of apparently equal quality will do better under the environment in which it was grown than under any other environment; in other words, that the corn that is grown nearest home, on similar land, will do better than corn of the same variety that is grown at a distance. For example, Leaming corn, grown at the Nebraska Experiment Station from corn grown in Nebraska, yielded 82.5 bushels on an average for two years, while Leaming brought from Illinois yielded 72.3 bushels, or a difference of 10 bushels in favor of the home-grown seed. It has also been proven that there is a considerable difference even in counties, seed of the same variety brought from a distant county in the same State producing much less than home-grown seed under similar conditions of soil and cultivation.

Another point to which our corn-growing farmers must give attention, if they would secure the best results, is the testing of their seed corn for germination before planting, as it is claimed, from experience and observation, that the outward appearance of the ear is no measure of its value for seed, and that no one can tell the germinating power of corn until he has actually tested it.

When we reflect that the bulk of the seed corn planted in this country is purchased at a distance, without a pretence at inquiries as to whether any selection of ears has been practiced, most of it having lain for months in heaps in the shelled state, exposed to the heating process, and planted without previous test for germination, the wonder is that our people have had as much success in

corn-growing as they have. It is clear that, from the neglect of the precautions indicated, our country has had no fair chance to show what are its possibilities in the production of this valuable crop. Doubtless there are a few enterprising growers in the most favored sections who have given attention to the selection, care and testing of their seed corn, and such are earnestly invited to contribute for publication in the columns of "The Farmer's Advocate" the results of their experience, in order that light may be thrown upon the question of the production of this most interesting and valuable farm crop.

OUR MARITIME LETTER.

The great revolution which has been steadily progressing in matters of dress in the Orient, is given as chiefest of the many causes which have tended to the general activity which in late years has so distinguished the wool trade in English-speaking countries. Japan, accommodating herself rapidly to European ideas in this particular, as in many others, gave it a decided impulse a few years ago when she donned pantaloons, and in her steady and extending demand for woollens ever since, has kept up the good times of antebellum days. Previously wool fetched such inferior prices that few Westerners thought of engaging in the sheep business from this point of view alone. To the pastoralists of the Australasias and some other of the South American Republics, the wool trade looked for its raw materials. As an adjunct of mixed farming, the golden-hoofed sheep was, unfortunately, disappearing. The ranches of the Western States may have enlarged under corporate influences, and possibly the same thing might be said of some instances in our own Northwest; but communities in the Eastern States and Older Canada, which had raised sheep from the pioneer days forward, now saw them disappear as if by magic, and the memory of the gentle animal almost entirely forgotten in a like position. Almost unconsciously they fell out of our husbandry. Fencing, many thought, was not to be done for the values then offered for sheep. The meat was cheap, and wool worth little or nothing.

At this stage the American lamb-purchaser discovered us, and in a comparatively short time the price of those animals mounted from 2½ to 5 cents on the hoof. This change, and the money flowing into the coffers of the few sheep-keepers left, caused the farmers to hark back; and when it became absolutely necessary to find an excuse for so general an abandonment, apart from the difficulty of fencing, which was no excuse at all, they fell back with one accord on the dog. Neither of these causes can be pleaded with any show of general success. The mixed farmer simply forgot his cunning, and in a period of low prices sacrificed a friend of the oldest possible standing, and one which had even in poor days cost him little or nothing to keep. There is now, however, a return to sheep-keeping on a moderate scale all round. There is an unlimited demand for Maritime mutton or lamb, and that demand it will be hard to overdo in the present state of affairs, with a steadily-increasing population and a fair measure of good times. Meat will sell at prices to make it worth the while to raise sheep then, and the other article of wool, apparently, may soar out of sight at any time, so great is the promising demand for it from every manufacturing center.

In this connection, it may be well to mention that the immense Empire of China has at last, it is thought, responded to the leaven of Western civilization, long within it, and will shortly garb herself after the French fashion, to which we have all been long subjected. This means a wonderful change in the material as well as the form of Oriental costuming. The army alone will make demands on our looms which it will take years to satisfy. A still greater boom in wool production than even that of late years may be expected. This has got to make itself felt on the sheep industry in general very markedly, and hence we hear more every day of the desirability of breeding a class of animal which will produce the

most and best meat and the most and best wool, at the same time. We have several excellent breeds of sheep which it will pay mixed farmers to keep pure and breed as extensively as their circumstances will permit. Following the example of Nova Scotia, which had a big sale of imported males at Canso last fall, and could not supply the demand, it would be well if the other Maritime Governments made an effort to help on this revival in sheep-raising within their limits, by the early introduction of new blood in the shape of standard-bred males. Nothing will give better results.

In the January report of the Department of Trade and Commerce, Commercial Agent Jackson, Leeds and Hull, thus speaks of the activity of British looms and the cause of it:

"There is very much in the present state of the woollen trade of the West Riding pointing to a boom. Last year's demand was much above the average in almost all branches, and the demand has remained very steady and continuous. A notable feature of the industry for some months past has been the extraordinary demands of China, whilst those of Japan have likewise been encouraging. The present Chinese requirements are so extensive and varied that it can only be assumed that China, following in the lead of her progressive neighbor, is about to adopt the Western style of dress. This would certainly seem to be the case in relation to the army, as some of the largest orders are for army cloth, similar to that which the Japs obtained, viz., a plain, dyed, heavy woolen. The rest of the demands mainly comprise cotton warp meltons, vicunas in black and blue, and plain worsted serges of a coarse quality."

There should be no longer any hesitation on the part of our people to repair the loss a sudden relinquishment of sheep-raising has caused them, by securing the nucleus of new flocks and expanding them as rapidly as their circumstances will admit. There is no limit to the demand for Maritime lambs, and whether the wool market keeps up long or not, those good times and the demands of those Oriental nations upon it must keep it firm and profitable for years to come. The Legislatures are now in session all over the land, and if there is anything serious in the dog cry, by all means let proper protection be afforded this important industry by statute.

A. E. BURKE.

SEND US PARTICULARS.

Since the publication of the article, "Warning to the Unwary," in "The Farmer's Advocate" for Feb 14th, we have received numbers of letters from readers calling our attention to a variety of "Get-Rich-Quick" propositions which had been made them through the mails and otherwise. In order to further aid in putting the people on their guard and preventing the operations of the persons behind these schemes, we desire our readers, and others as well, to send us at once the original letters of all such proposals that they or other persons in the vicinity may have received. We need hardly add that these are not necessarily for publication, and in no case will the name or post-office address of the recipient be made known.

It might have been supposed that the decrease in breeding of sheep for mutton and lamb in Australia would have reduced the average weight of the fleece. According to a table quoted from an authority not sufficiently identified by a New Zealand contemporary, however, this is not the case. It is stated that the wool from 100,930,418 sheep in 1894 amounted to 1,608,000 bales, or 15½ bales per 1,000, while in 1905 the produce of 74,527,444 sheep was 1,420,000 bales of wool, or 19½ bales per 1,000. It is suggested that, although this increase in the weight of the fleece is mainly due to the skill and enterprise of breeders, something should be allowed for the abundant feed available in the last two or three years in the lightly-stocked countries of the Commonwealth.

The wool clip of the United States during the year which has just closed indicates a remarkable increase in the consumptive demand for wool in that country, the total crop being estimated at 312,097,518 pounds.

HORSES.

CLYDESDALES: PAST AND PRESENT.

What are the leading points of a Clydesdale horse, according to current standards, and in what respect has there been modification during the past thirty years? is a question propounded by the Editor of the Scottish Farmer, and his answer is: Much in every way. At the begin-

and perpendicular, and his hind legs moving in line, with the points of the hocks inclining inward, rather than outward. The Ivanhoe-Time o' Day, thick, short-legged type is not fancied in the young horse, and the growthy, upstanding, stylish youngster is credited with the prospect of thickening sufficiently when his growth has stopped.

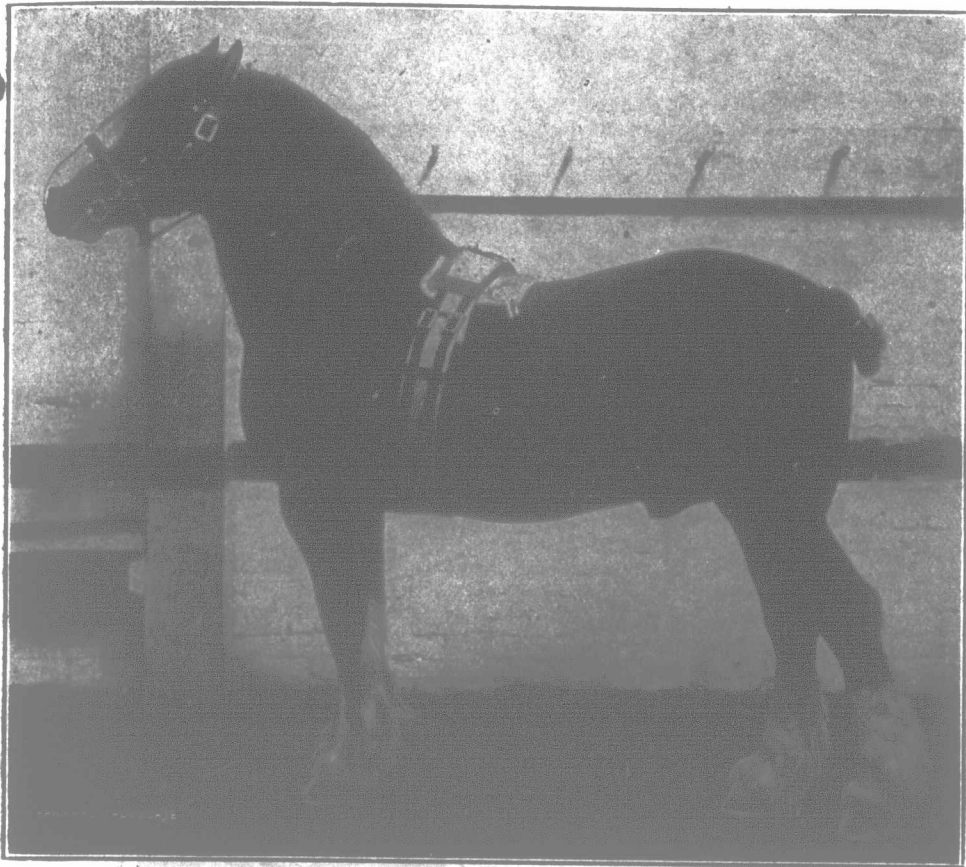
Should anyone misdoubt this account of the development of Clydesdale type during the past thirty years, let him compare the sketches published in the Merryton catalogues of 1875 to

1880 with the portraits of Clydesdales published by ourselves during the past 12 years. Let it be granted that some of the Merryton sketches may not have been true to life, in the sense in which photographs are, it will still be admitted that they represented the ideal in the mind of perhaps the best judge of draft horses in Scotland of his time. Put Mr. Drew's sketch of Lord Harry or Prince Imperial alongside the authentic photographs of Baron's Pride and Hiawatha, and the contrast is at once seen. In the Clydesdale of the present day there is as much substance and weight as in the horse which Mr. Drew aimed at producing, while there is far greater and more general uniformity in the quality of the bone, and much greater style and character. The change did not take place in a day. As we have already observed, the breed is the same; the material wrought upon has been moulded

idea after the animal is well up in his 'teens, and to a certain extent it is guess-work after nine years. After that age the differences looked for year after year become harder to distinguish, and are not as regularly present as in younger animals. Still, the changes appear with sufficient regularity to enable a person who has given the subject considerable study to avoid grave mistakes.

The horse has two sets of teeth, viz., the temporary or milk teeth, and the permanent or horse teeth. The temporary teeth differ from the permanent in being much whiter in color, much more constricted at the neck, and smoother from side to side, there being an absence of that depression or furrow noticed extending the whole length of the visible tooth in the permanent. The adult male animal has 40 teeth, classified as follows: 12 incisors, 4 canine or bridle teeth, and 24 molars. The female, with rare exceptions, has only 36, the canine teeth usually being absent. The incisors number six in each jaw; the pair in the center is called the central; the pair, one on each side of these, is called the lateral; and the pair, one on each side of these, is called the corner teeth. In male animals the canine teeth are seen in the interdental space (the space between the corner incisor and the first molar in each row); a small space exists between the corner and canine teeth. The molars are arranged in four rows, one on each side of the jaw, and are numbered 1st, 2nd, 3rd, 4th, 5th and 6th from before backwards. At birth the colt sometimes has four temporary incisors, the central pair in each jaw, but usually these do not appear for about 14 days, the laterals at about 9 weeks, and the corners at about 9 months. He always has 12 molars at birth, Nos. 1, 2 and 3 in each row, and he never gets any more temporary molars. At one year old the first permanent molar (which is No. 4) should be well up and in wear. At two years the second (No. 5) should be present. At three years Nos. 1 and 2 (temporary) should be shed and replaced by permanent ones, which should be well up; and at four years No. 3 (temporary) should be shed and replaced by a permanent one, and No. 6 should be seen well up and in wear. Hence, at four years old a colt should have a full set of permanent molars, and until this age is reached the appearance of these teeth will aid in determining age when any doubt exists. After about nine months old, at which time he has a full mouth of temporary incisors, no change takes place in these teeth, except that they become larger and the wearing surface gradually wears down and the hollows become less marked, until he reaches about 2½ years; between this age and three years the central temporary teeth are shed and replaced by permanent ones; between 3½ and 4 years the laterals are shed and replaced by permanent ones; and between 4½ and 5 years, the corner teeth are shed and replaced by permanent ones, and the canine teeth appear in males. Hence, a horse should have a full mouth at five years.

The permanent incisors are wide from side to side and shallow from before backwards, and the external surface of each presents a groove running the whole length of the tooth, the bearing surface shows a thin rim of a hard white substance called enamel, outside; internal to this is a portion of a darker substance called dentine, internal to which is a second ring of enamel, and within this is a hollow which shows a substance which becomes dark and is known as the mark. At six years the marks should be worn out of the central



Prince of Mayfield (imp.) (12289).

Clydesdale stallion; bay; foaled May, 1901. Sire Royal Stamp (10442). Winner of second prize, Ontario Horse Show, Toronto, 1907. Imported and exhibited by Smith & Richardson, Columbus, Ont.

ning of that period the popular horse was a thick, round-ribbed, short-legged animal, with a round, open hoof, but not too oblique in the pasterns. It was necessary that he should wear a considerable growth of hair on his limbs, to secure which "blistering" was regularly resorted to, and straight movement in front and in rear was called for, but a good horse otherwise was not objected to if his hocks were set wide, provided he did not twist the points of the hocks outward when walking or trotting. In 1875 and 1876 the best horses at the Glasgow Stallion Show were, respectively, Time o' Day (875) and Darnley (222). In 1878 the best aged horse was Ivanhoe (396), and the best three-year-old Strathclyde (1538). Between these horses and Hiawatha (10067) there is a great gulf fixed. Between the type represented by all of them, except, perhaps, Darnley, and the type represented by quality horses, like Revelanta (11876) and other sons of Baron's Pride (9122), which in recent years have figured prominently at the stallion show, there is almost nothing in common, yet all belong to the same breed, and the later type has been evolved out of the material of which the earlier formed part.

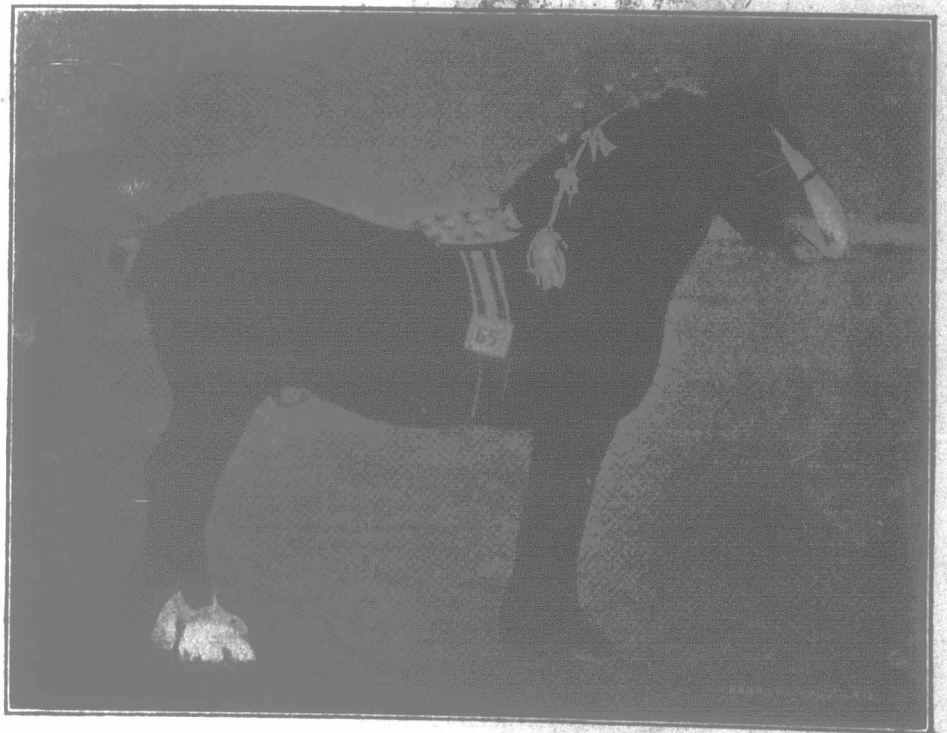
In the earlier days one often heard of "foundered" stallions. Laminitis was a common disorder among highly-fed horses, and show mares were also frequently victims of the disorder. Today, although laminitis is not unknown, it is seldom heard about, and a stallion which, in common parlance, "puts down his heels," is rarely seen in the show-yard. This means a big increase in the health and soundness of the breed. The great demand among fanciers now is for a horse which moves straight. Quality, which means durability and wearing efficacy, is above all things desired, and a term is in use as a recommendation to a young horse which the men of a generation ago would never have listened to. That term is "slender." It is not regarded as a qualification in a growing animal that he should be matured and "set." If we see a lad of eighteen "set" and built like a man who has reached manhood, we scarcely expect to see a man who will be handsome when he is matured. So with the horse. A young horse is thought highly of if his limbs are sharp and broad above feet well-shapen and well-grown; if he moves straight, with his fore legs planted well beneath his brisket,

through a gradual assimilation of the idea that wearing qualities are the only desirable attributes of the ideal draft horse.

JUDGING A HORSE'S AGE BY HIS TEETH.

A subscriber in Hants Co., N.S., asks us to print a rule for telling the age of a horse. We cannot do better than republish the excellent article by "Whip," which first appeared in April, 1902:

Dentition in the horse is more regular than in other animals. Still, it is liable to variations; and while deviations from certain rules are not common, we must recognize the fact that they occur, and even in a young horse the age cannot always be positively determined by the appearance of his teeth. In order that a person may become tolerably expert in judging the age of horses, it is necessary for him to pay particular attention to the appearances of the mouth at different ages. He should carefully examine the teeth of animals whose age he knows, and observe the general and special appearances and compare mouths of different ages. He must also note the differences that frequently exist in mouths of the same age; for while, as already stated, dentition is tolerably regular, it is not at all uncommon to observe several months' difference in dentition, especially in horses under five years. The student must not depend upon charts or lectures—he must have actual experience, and be able to recognize in the actual mouth what he has read or been taught to expect. Some people profess to be able to tell definitely a horse's age until he is thirty or over, but experience teaches us that such is not possible, and that the most expert can only arrive at an approximate



Baron Kitchener (10499).

Clydesdale stallion; foaled in 1897. Sire Baron's Pride. Winner of the Cowdor Challenge Cup, at Glasgow, 1907.

lower incisors and the bearing surface of the teeth almost level. At seven years the marks have disappeared in the laterals; and at eight years in the corners. At nine years the table or wearing surfaces of all the lower incisors should be level, and usually, if a side view be taken, with the teeth shut, a hollow will be noticed near the outer edges of the upper corner incisors, forming a sort of hook. At ten years the marks are supposed to have disappeared from the central upper incisors; at eleven from the laterals; and at twelve from the corners. It must be remembered that while this is the rule, the changes taking place in the upper teeth are not as regular as in the lower. After eight years the general shape of the teeth gradually changes; they become longer, deeper from before backwards, and narrower from side to side; the table surfaces first assume a rather round form and afterwards become somewhat triangular. In some cases, after the 'teens are past, the teeth become shorter, but this is not by any means constant. My experience has taught me that, while set rules may be laid down as to the appearances of the teeth at certain ages until 35 years or older, no definite dependence can be placed upon these rules; the condition of the teeth in an advanced age will depend to a considerable extent upon the quality of the teeth (some are harder than others, as anybody who is in the habit of dressing teeth can testify) and upon the nature of the food upon which the animal has subsisted. Below will be seen a few cuts representing the appearances the teeth should present at certain ages.

the laterals are showing wear, and the inner edges of the corners are even with the outer.

nearly round, those of the laterals becoming so and those of the corners gaining in thickness, compared to width.



Fig. 5.—Lower jaw at 7 years.

The marks have disappeared from the laterals, the corners are showing wear, and both edges are worn to a smooth surface.

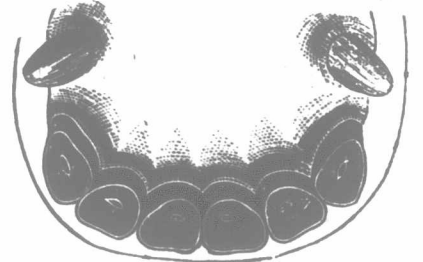


Fig. 11.—Lower jaw at 14 years.

The table surfaces of the laterals are almost round, and those of the corners becoming so.

At 15 years the surfaces of the corner lower incisors have become round, at 16 those of the central upper incisors, at 17 the lateral, and at 18 the corner. In the meantime the surfaces of the lower teeth have been gradually assuming a triangular form, and at about 20 those of the upper jaw gradually take on the same shape. At about 15 the points of the canine teeth begin to wear flat, and this gradually continues.

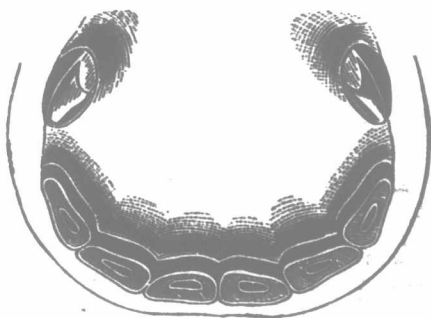


Fig. 6.—Lower jaw at 8 years.

The marks have disappeared from the corner teeth, and all the teeth are evenly in wear.

At nine years the lower incisors are all well worn down, with almost flat surfaces, there being little cavity left.

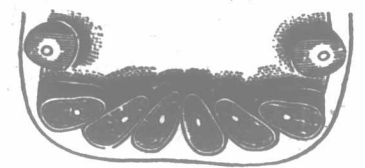


Fig. 12.—Lower jaw at 26 years.

The lower incisors are all somewhat triangular, and twice the depth from before backwards as from side to side. The canines have become quite flat on top.



Fig. 1.—Lower jaw at 2 1/2 to 3 years.

The central temporary incisors have been shed and replaced by a permanent pair, which should be up full and in wear at three years, and sometimes are at 2 1/2.



Fig. 2.—Lower jaw at 3 1/2 to 4 years.

The lateral temporary incisors have been shed and replaced by a permanent pair, which should be well up and in wear at four years, and sometimes are at 3 1/2. The central pair show a little wear on the outer edge.

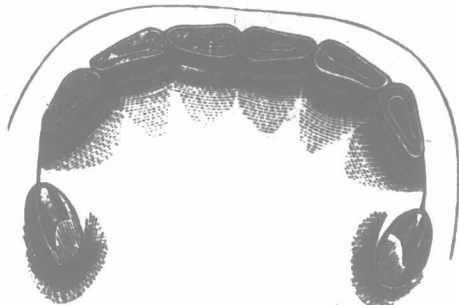


Fig. 7.—Upper jaw at 10 years.

The mark is almost gone out of the centrals, is still quite visible in the laterals, and clearly defined in the corners.



Fig. 13.—Upper jaw at 29 years.

All the teeth are somewhat triangular, and twice as thick as they are broad. The canines are quite flat on top.

While these figures show what we expect to see, as already stated, they are not reliable after the animal has reached 12 years; and the age, after that, must be judged by the general appearance of the mouth and head, and it requires a great deal of observation and experience to acquire a reasonable degree of skill.



Fig. 3.—Lower jaw at 4 1/2 to 5 years.

The corner temporary incisors have been shed and replaced by a permanent pair, which should be up full and in wear at five years, and sometimes are at 4 1/2. The centrals show wear at both edges, and the outer edges of the laterals have begun to wear. In male animals the canine teeth have appeared, and at five should be fairly well grown. It is quite rare to notice these in females, but occasionally we see them either full-sized or rudimentary. Therefore, it will be seen that at five years a horse has a full mouth of permanent teeth.

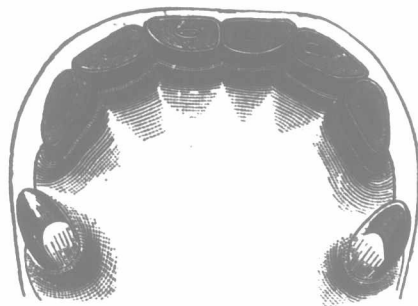


Fig. 8.—Upper jaw at 11 years.

The marks have disappeared from the laterals, but are still visible in the corners.

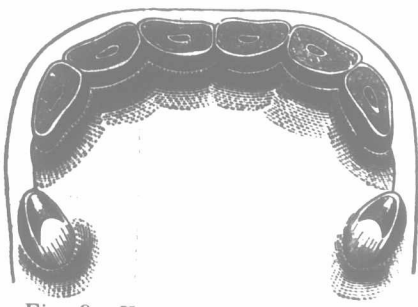


Fig. 9.—Upper jaw at 12 years.

The marks have disappeared from the corners, and the table surfaces of all are in wear.



Fig. 4.—Lower jaw at 6 years.

The marks have disappeared from the centrals,

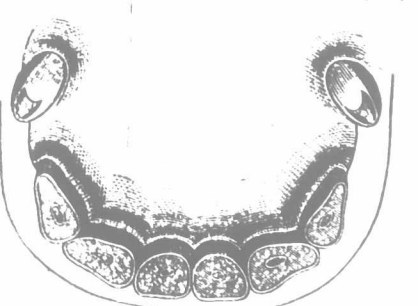


Fig. 10.—Lower jaw at 13 years.

The table surfaces of the central pair are

LIVE STOCK.

THE DUAL-PURPOSE CATECHISM.

Editor "The Farmer's Advocate":

I have been reading in an Iowa paper of the origin and development of the polled Durham (or Shorthorn) cattle, and more recently of the polled Herefords. Would it not be worth while to develop this method of dehorning, instead of using the saw or pincers? Your readers might be interested in some information along this line. Are there any polled Shorthorns in Canada?

In reference to Mr. Arkell's excellent and illuminating article in your last number, I would like to ask whether the high-grade beef cows which have suckled three calves in a year may not justly be termed "dual-purpose Shorthorns," and whether or not Mr. Arkell thinks that it would be more profitable for the Ontario farmer to use such cows to suckle calves or to milk them, sell the cream or butter, and raise the calves on skim milk? Also, if such a cow can raise three calves, where, and of what kinds, can calves be got to put on this cow?

Mr. Arkell does not think the problem can be solved by raising dual-purpose cattle, and states that "the man who tries to go in two directions at the same time usually finds himself at a standstill." Admitting the general truth of this remark, it may be doubted that Mr. Arkell does not distinctly recommend the development of a milking strain of Shorthorns. If so, is it not the raising of dual-purpose cattle, by selection inside one well-established breed, and not by crossing? Perhaps others beside myself would like to have Mr. Arkell define his views more explicitly.

Brant Co., Ont.

W. C. GOOD.

AGE TO BREED HEIFERS.

Considerable difference of opinion obtains as to what is the best age at which to breed heifers to produce their first calf. Time was when it was generally considered that a heifer of any class should not be bred to calve before she was three years old, and in the beef breeds it is probably wise yet to keep pretty near to that rule, since heifers of that class, as well as cows, are generally required to suckle their calves for six to eight months, which is a much heavier tax on their system than being milked by hand. It is now common practice among breeders of the dairy breeds to have their heifers produce at two years old, and in many instances as young as 18 months. There is no valid objection to having them come into milking at the age of two years, if they have been liberally fed and kept growing steadily from birth, as the tendency to milk is developed as the period of motherhood approaches, and should be cultivated by early milking, provided the physical system has been well nourished to give strength of constitution to bear the draft upon it which heavy milking makes. Heifer calves intended for special dairy purposes should be raised by hand on skim milk after the first three or four weeks, allowed ample exercise, early taught to eat, and fed principally on bulky foods, as grass, clover hay, silage and roots, with a fairly liberal allowance of bran and oats, the object being to develop the digestive organs and provide capacity for working up a large amount of food into milk. The idea that dairy heifers should be kept thin has been too prevalent, and has tended to weaken the constitutions of many cows that would probably have made far better records as producers had they been fed more liberally while young. Of course, it is well to avoid feeding freely of fattening, concentrated foods, and this can readily be avoided by using the class of foods above indicated, and by giving plenty of outdoor exercise. Such treatment tends to developing size, strength and capacity for work, all of which are desirable characteristics. Size, which is the least important of this trinity of qualities, could doubtless be more fully attained by having the heifers produce their first calves at three years old, but there is danger, in that case, of their running too much to beef and to barrenness. When a heifer has her first calf at 18 months or under, she should not be bred again for several months, but allowed a rest from the demands of gestation, and a chance given to gain strength, while a long period of lactation will tend to fix the habit of persistent or year-round milking, which is a desirable characteristic in dairy cows, as the system of yearly record-keeping has amply illustrated.

JUNE CONDITIONS.

Editor "The Farmer's Advocate":
I was very glad to read your editorial in Feb. 7th issue on the above subject. This striving after summer or spring conditions is, for the general farmer, who must make money, costly sentimentalism. I have felt this folly for some time, but in face of Institute workers and enthusiastic farm papers, I have not had the courage to express my views before. This fad is only admissible in the case of wealthy men who make their money in the city or who have made or inherited a fortune, and are conducting a dairy for the pleasure of spending money.

I am willing to place on record my belief that if the cost of structure, or even interest on investment in cost of buildings, cost of hired help, cost at market prices of food consumed, were placed against them, that not one cow in one hundred in Canada would pay a clear profit, even where surrounded by June conditions. The fact of the matter is that the large majority of the cows in Canada do not pay their way; but since no branch of farming pays a profit if we take labor, every item of cost, including interest on investment, etc., into consideration, we may as well stick to the cow, since her loss is not greater than many other branches, but aim to get the production and expenses so adjusted that the pail may be as nearly full as possible with the least expense, in spite of the preaching of Government Institute workers.
FARMER.
Nova Scotia.

TREAT THE DOG.

Editor "The Farmer's Advocate":
I notice a great deal of controversy about dogs killing sheep from time to time. Some years ago I had a dog which I could not keep at home four hours in a day. I castrated him, and since then have had no trouble. I have since treated two of my neighbor's dogs in the same way, and they also stay at home. Had it not been done, there is every possibility that, rambling, as they were, they would have been in mischief which would cause their owners and others loss. I feel convinced that if all the dogs in the country not required for breeding were treated in the same way, we would in a short

time hear almost no complaints about killing sheep, as it is always the rambling dog that does harm.
M. J. ARMAND.
Lanark Co., Ont.

STRAW-FEEDING STOCKERS.

Editor "The Farmer's Advocate":

Farmers who are straw-feeding their young cattle, with the intention of turning them out to pasture the coming season, should bear in mind that, in order to get the very best results, the cattle should be fed good hay for one month before being put on grass. Last year I had quite a large herd of cattle belonging to farmers in Victoria County pasturing on my ranch, and I took the trouble to enquire exactly how the cattle had been fed previous to turning them on the range, and the result of my observations are that straw-fed cattle which have lost considerable weight during the winter months, but have again started to make some gain in weight on the month's hay-feeding, do decidedly better on pasture, make bigger gains in weight, and are the most profitable to the owner. Again, I had instances where cattle had been fed grain moderately all winter, and, while they looked better than the straw-fed beasts in the spring, it was very noticeable that they did not make any better showing on pasture. The cattle that had been fed straw alone until pasture time were so poor that it took them most of the season to regain what they had lost during the previous winter, while it should only have taken a month or six weeks to have put them in a good thrifty condition had they been hay-fed for the last month of feeding. Hay is

stormy days. On these days one can water inside by pails dipped from the horse trough, which is handy to the cow stalls. The whole system cost in the neighborhood of about \$100, with quite a bit of my labor thrown in. The single-bowl system may be a little less work for the farmer, but, on the whole, I prefer to let my stock out in the open air at least once a day, for I think that exercise is an essential to good health, and, by the way, one of the principal things omitted by the "June-conditions" fad-dists.
A. W. HARWOOD.

Oxford Co., Ont.

THE FARM.

PRACTICAL FARM DRAINAGE.

II

In the previous article on this subject (see "Farmer's Advocate" of Feb. 28th we elaborated a simple method of ascertaining the total fall along a drain, and hence the fall per 100 feet of drain. In this article I shall give a method of using the plow for almost the entire depth of the drain.

USE OF PLOW IN DIGGING DRAIN.

When the drain has been staked out and the fall determined, one is ready to begin digging. Experience has shown that in the earlier stages the plow can be used to great advantage. Perhaps the most effective method is somewhat as follows:

1. Using a wide plow, open up the drain as

wide as possible, throwing one furrow each way. In stubble, fallow or plowed ground, these furrows will not need shoveling, as they will be thrown well out; in sod, they may need rolling farther back.

2. Using a narrow plow, plow two furrows, one each way, in the bottom of the ditch already formed, throwing each furrow toward the center of the ditch. The second one will turn the first back partly, but this serves only to loosen the soil more thoroughly. The sides of the ditch, which were very sloping after the first plowing, have been trimmed off perpendicular and straight by the land-side in the second plowing. This second plowing is now ready to shovel out, and it will be found in prime condition for shoveling.

The ditch at the present stage should be about eighteen inches wide. It may

be objected that this causes needless shoveling, to which I answer that the plow is to be used till the ditch is about 2 1/2 feet deep, and it is necessary to have the top wide enough to accommodate the handles. The bottom will not be any wider than necessary.

This operation should be repeated till the ditch is about 15 or 18 inches deep. In order that the horses may walk comfortably, one on each side of the ditch, the lines are opened up as wide as possible, and a long doubletree used. To permit the plow to go deep enough in the ground, a chain about 6 or 8 feet long is put in between the beam and the doubletree. This plow will not be found satisfactory after a depth of 15 or 18 inches is reached, as the drain gradually becomes narrower.

3. For the third operation, a plow must be fitted up specially; we want something to dig a narrower trench than heretofore. Take an ordinary narrow plow and remove the moldboard. This, of course, removes the attachment for the lower end of the right handle, but bolt a narrow block between the handles and run a brace to the back bolt in the beam, and the handle is as steady and as firm as ever. Put on a new narrow point.

Now, using this plow, plow right down the center of the drain, and come back in the same furrow. This forms a narrow ditch in the bottom, both sides of which are trimmed straight and perpendicular by the land-side. With a narrow shovel this furrow may now be removed. This operation is repeated again and again until the drain is almost as deep as required.

If one has much draining to do, it is advisable



Dalton King (imp.) (9592).

Hackney stallion; bay; foaled 1901. First prize in three-year-old class and champion Hackney stallion, Ontario Horse Show, Toronto, 1907. Sire Garton Duke of Connaught. Imported and exhibited by Graham Bros., Claremont, Ont.

the best feed for cattle that have to be driven any distance. My rule, in driving cattle, is to see how "slow" they will go, not how "fast," and I find that rule pays well.
S. STEWART.
Victoria Co., Ont.

A WATERING SYSTEM.

Editor "The Farmer's Advocate":

I notice in your issue of Feb. 7th four questions are asked in reference to the manner of watering stock in winter. As I have only recently begun reading your valuable paper, I feel diffident in taking up my pen to offer anything I might think of any interest to your many readers. Eight years ago I had two barns, one 44 x 50 ft., and another 40 x 50 ft. By moving and putting the end of the 40 x 50 barn against the side of the 44 x 50 one, flush on the north side, I have a barn 94 feet on the north side, and part of it 50 feet and part 40 feet on the south side, making a jog of 10 feet facing the south. In this jog or corner I have a water trough, with a roof over it which also covers one horse-stable door and one hall door. My well is near the house, 150 feet from barn. The water is forced to the barn through underground pipes by windmill into an elevated tank in the stable which will hold two days' supply of water for 20 cows, 6 horses and other stock. By means of pipes and taps the water can be turned into the outside trough, and also into a trough inside for horses, hogs and cattle on stormy and very cold days. I let my cows out to water every day, except on very

to make further and permanent alterations in the plow used for this third operation. The rods between the handles should be taken out, shortened and replaced, thus bringing the handles closer together. The top section of the ditch need not then be so wide as before. It is also wise to shorten the braces that run from the head to the handles somewhat, and the wide section of the ditch need not be so deep as before. I know men who have made these permanent alterations in a plow, which they now call their "drainage plow."

This method of digging a ditch is not given as original, but as one that has been tried and has been proven eminently satisfactory. Men of wide experience, who have used various methods, and who have discarded others in favor of this one, assure me that this is the most economical they have tried. After some practice, it is found that drains can be dug at 10 to 12 cents a rod in clean soil.

The next article will give a method of finishing the ditch-bottom uniformly to the proper grade.

WM. H. DAY.

Ontario Agricultural College.

OBSERVATIONS AT INSTITUTE WORK.

Editor "The Farmer's Advocate":

As a sketch of the doings noticed and gathered during the six weeks spent at Ontario Institute meetings, permit me at first to state that the Counties of Dufferin, Peel, York and Waterloo were visited. The meetings were fairly well attended, and more than usual interest was manifested. The discussions were free and pointed, while businesslike thought was evident, with few exceptions. The continuous progress of agriculture was seen on the surface at most points, but in a few places disappointment is the only word which will fit in properly. That we, as a class, are realizing, as never before, that thought and study of conditions are absolutely necessary to win the possible success, will go unchallenged. Growing crops, however important, is only the first step towards making farms profitable. The question of what kind of stock should the crops grown be fed to, in order to secure the largest returns from the year's labors, is to be studied more and more. Here is where good judgment and searching consideration of the available and best-paying markets count for a good deal.

Another consideration of much importance occupying many minds is, What is the proper kind of an animal for me to have, or breed, to secure the greatest profit in business? In every county the leaders in agriculture are becoming specialists, with the special-purpose animal used to convert the raw products grown (and often added to by purchase) into the finished articles of commerce. Most careful attention is being paid by them to secure the animal machinery which gives the largest returns at the lowest proportionate cost. It is found that for cream production—for city or creamery—Jerseys and Jersey grades are in the lead. For milk, sent to town, city or factory, the Holstein and their grades outclass all others; and when it comes to the butcher's bullock, the Shorthorns and Shorthorn grades head the lists. The latter, properly selected and mated, will produce the high-priced steer and give a paying production of milk which tests well in butter-fat. In Peel a herd of Jersey and Jersey grades were seen, fifteen of them, which for years—before abortion played havoc—returned their owner \$90 per head per annum for cream sent to Toronto. The skim milk fed to hogs made, with roots and grain, several hundreds of dollars, all totalling up near two thousand dollars—all produced on a 100-acre farm. The possible value of skim milk in hog-production was furnished by another Peel dairyman, when he told us that he found ground fall wheat, fed to a bunch of 120-pound hogs, grown to 200 pounds, made him \$1.80 per bushel, no value given for the milk, with the pigs bought and sold at \$7 per hundred, live weight.

A Waterloo tenant-farmer told us one afternoon that the Jersey cow or grade which did not furnish him \$80 worth of cream annually, sold in Berlin town, was not kept in his herd, which numbered above twenty. A second farmer in Waterloo related his experience in feeding barley meal with swill from the home, and water, but no roots. A strict account was kept, when it was found that every four pounds of meal fed to the lot made a pound of gain in weight. The hogs sold at \$6.50, making 78 cents per bushel for the barley fed. Another experiment in Peel, carried on by one of the directors, feeding ground wheat to 90-pound hogs, was certain to give over \$1.00 per bushel for the wheat.

The spirit of investigation and getting at the east of production is abroad. But what a contrast is met with in some parts. Great successes were noted in Peel, and yet there, in a very excellent-looking locality, the greatest disappointment was met. To find grain-growing and grain-selling still the order of the day was something to stagger a stranger; and the sure consequence was reported. While previously-unequalled prosperity has visited our Province generally, our informant assured us such was not the case among those who yet farm as was customary years ago.

Another party, driving us past a farm long rented, told us that twenty years ago \$5,000 would have been readily gotten for it. Last month it was sold for \$2,700. It is a telling fact that lands, once of the best quality, within driving distances of Toronto, in Peel and York are not worth, and do not bring the prices of bygone years. The temptation to keep on selling whole milk, timothy hay and grains in such a good market as Toronto offers, tends to keep a team or two too often on the road, and impoverish the soil at the same time. Outside of the circle mentioned, the fertility of the soil is given more study, because of necessity often, and therefore land values are not only holding up, but the better farms are held higher as the passing years bring to them greater powers of production as a result of good management.

In Peel and York, abortion in the dairy herds is causing dismay. So far no preventive is known.

Dufferin is progressing in parts rapidly, and at some points slowly. Three grain elevators at Shelburne, with, at times, streets blocked with loads of grain waiting to get unloaded, do not augur well for the future welfare of the district. How growing fall wheat, at 70 cents, on a bare, summer-fallow prepared field, as still practiced, with the hope of making it pay, can be realized, was a conundrum met in more than one county.

Waterloo is progressive and prosperous—signs of thrift on all hands. At Berlin's Saturday morning market, the greatest variety of trading, probably in all America, was seen. The hundreds (and thousands, it seemed to me) of producers selling direct to countless consumers, with no middleman and no protective tariff to curtail the profits, looked like an ideal condition of things.

Summing up all the details of our work, it may be said that we are a contented and pro-

gressive class. The good times are still with us, yet danger signals are faintly in sight. Ontario is held by its people in higher esteem than in the past years. The serious conditions of the Canadian West are not showing well in contrast with our Province and its temperate climate, with its splendid and solid financial foundation. We are, as we should be, a happy people, full of faith in our country, and also in our business on the ever-increasing-in-fertility farms of our good old Province.

J. CAMPBELL.

MIXED FARMING BEST FOR SMALL FARMS.

Editor "The Farmer's Advocate":

Having attended two Farmers' Institute meetings this year, and a great many during the last ten years, I have come to the conclusion that a great many speakers make a mistake in trying to impress on their hearers that their line of farming is the only one in which farmers can be successful, whether it be horse-breeding, dairying, feeding for beef, or something else. Now, I think it takes considerable money and a long time to make a success of any special line of farming, and I think, for the great majority of farmers of moderate means, a system of mixed farming is best. I will give you the sales of the produce of my farm of 100 acres of tillable land and 10 acres of pasture for last year:

2,000 lbs. butter from 12 dairy cows	\$ 600 00
Barley, hogs, etc.	350 00
Wheat and wool	50 00
Cattle, Milch cows, stockers, calves, etc.	100 00
Pigs and eggs	150 00
	\$1,250 00

And the feed was grown on the farm this is

all profit, except the expenses in running a farm. Now, I think this is a good showing, and what I have done others can do.

A PEEL COUNTY FARMER.

Peel Co., Ont.

HOW A 20-SHARE BEEF RING IS WORKED.

Editor "The Farmer's Advocate":

Having read your article re 20-share beef-ring, and the request for information regarding working of same, I may say my husband has done the slaughtering for a 20-share ring for four or five years, so I will try to explain the working of our ring. In the first place, a meeting must be held at some stated place some time before starting. Twenty members must agree to join the ring, and a man must be engaged to do the slaughtering and dividing. This ought to be done at a place convenient for all members to fetch their beef. A list is here made out, with numbers, names and dates on which it will suit each one to furnish a beast, which, in our ring, is to be delivered Wednesday and killed Thursday toward evening, the beef to be fetched home by members on Friday morning each week. Each member is to furnish an animal dressing as near 400 pounds as possible. It is to be stall-fed at least four weeks before slaughtering, and should not be more than two years old. At this meeting a certain price per pound is agreed on to settle up when beef-ring ends; our ring has agreed on 7c. per pound. The man furnishing cattle receives, besides his usual share of beef, the heart and tongue, also the hide, which my husband markets, and out of this he (my husband) retains \$2.00 as his fee. He also gets fat from intestines, etc., and the liver. If members wish to have liver, they must order same when furnishing their beef animal, and they can have it on payment of ten cents.

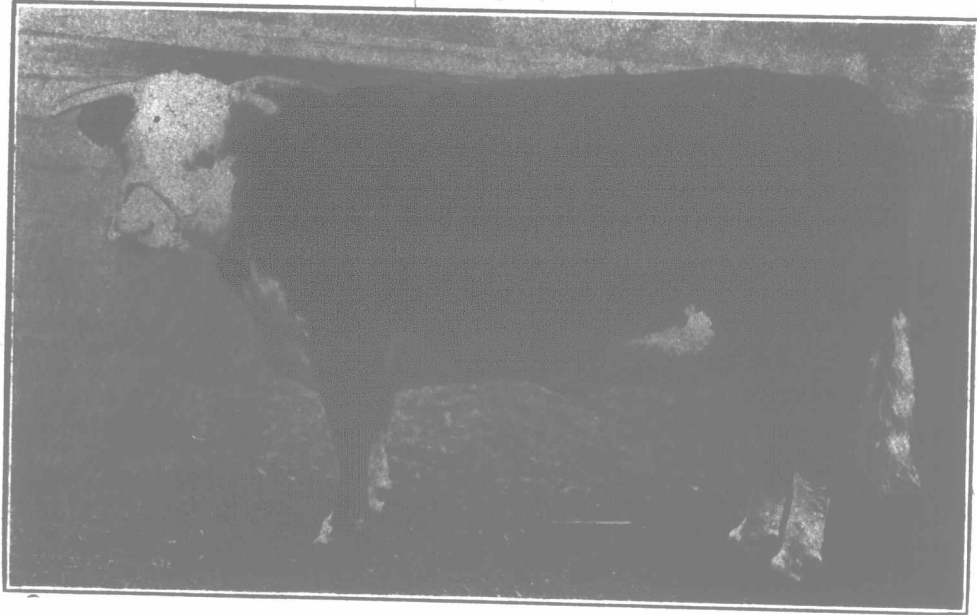
The time agreed to start our beef ring is the second week in June, at which time we always notify members. At time of starting, a list of numbers, names, etc., is tacked up in shop or room where beef is hung up. This is a reference paper for members, as the numbers on this paper show each member the number of hook where he must get his beef all through that season. There are twenty hooks, one for each member, numbering from one to twenty. Member No. 1 always receives his beef on hook No. 1, etc.

Now comes the explanation of the butcher's part.

After killing and dressing, the beef ought to hang for some time to cool off a little. We always cut up same evening it is slaughtered, as many people prefer to come quite early next morning for their beef. I send you our sketch for dividing, by which you see that one-half is divided into ten parts and steak instead of twenty. As you see by the sketch, the parts are numbered from 1 to 10. Nos. 9 and 10 do not receive any steak, as they are supposed to contain steak, so there are only 8 shares of steak cut out, which are divided between the 8 other shares. When we start, the first week we place No. 1 piece of beef on No. 1 hook, etc.

Now, to arrange it so that each member will receive a whole carcass by the end of twenty weeks, we use the following method. The 20 hooks are arranged on 2 x 4-inch scantling, and the scantling arranged in such a way that the air can circulate around the beef while cooling, so that beef will not touch wall. The hooks have nice large, plain figures (we take ours from old wall calendars) pasted above each hook. These are the numbers used by the members, also by person keeping account. At the same time, we have a small nail in wall back and above each hook. On these nails we place small pasteboard tickets, with holes punched in for changing from one nail to next. On this ticket we place numbers made with lead pencil, these numbers to correspond with numbers of sketch of beef. These are the guide for butcher in dividing, and are numbered from 1 to 10. The first week No. 1 ticket goes with No. 1 hook, No. 2 with No. 2 hook, etc. Next week these tickets are all taken off, and No. 1 ticket goes with No. 2 hook, No. 2 with No. 3, etc. This is kept up, and by the time member No. 1 gets ticket No. 10 he has had half a carcass.

At the end of season another meeting is held



Camilla.

Two-year-old Hereford heifer. First prize and reserve champion of the breed, Smithfield Show, 1906. Bred and exhibited by His Majesty the King.

for settling up. If everything is kept in correct shape, the total of columns, added from left to right, and up and down, will exactly correspond.

I may add that the butcher is usually a farmer, and it is just a little annoying through the busy season of harvest, etc., if you have to leave grain in the field and go at the butchering. However, someone must do it if we want the advantages of a beef ring, so we have stuck to it so far, but we would not mind at all if someone else would take the job for a change.

MRS. ENOS S. HUNSBERGER.
Waterloo Co., Ont.

CLOVER AND CORN A ROYAL PAIR.

Editor "The Farmer's Advocate":
I have never grown any clover seed, but I am an enthusiast on clover and corn. I reckon them a royal pair, going well together both in the field and in the feed room. There is no better preparation for a catch of clover than sowing after a crop of corn, and there is nothing better for a corn crop than a clover stubble. We sow about 20 acres of our 70 acres of arable land with clover, which rarely fails to give us two splendid crops the following year. We cut the first crop, which is never less than two tons per acre; the second crop we generally need for fall feed. This is a splendid district for clover seed, and a large quantity is grown, though not as much as formerly. I have figured it out that my two crops of clover are better value than a crop of seed. The two crops, if both were cut, would average fully three tons, which, at the low valuation of \$6 per ton (for stock-feeding), would be worth \$18. I can put this in the barn for \$4, which leaves a profit of \$14 per acre. But feeding off my second crop, I value it at \$2 per acre, leaving the profit \$12. This I obtain with the minimum of labor. I claim that this leaves the land in better condition than after taking a crop of seed, for the reason that in maturing seed the substance stored up in the root is gradually exhausted, thus leaving less to go back into the land as the plant decays. The average price I have paid for seed for the last ten years is \$4.75 (bought from neighbors at wholesale prices). I claim that I am just as well off to let others grow my seed for me. Then, again, the threshing has to be done in cold weather; often the days are stormy and roads drifted; it is anything but a picnic working in a draughty barn with the machine. If there is any money in it, the farmers do not get it. The price should never be less than \$8 per bushel, or the yield below three bushels, to make it profitable.

FRED FOYSTON.
Simcoe Co., Ont.

CLOVER-SEED GROWING IN MANITOBA.

Editor "The Farmer's Advocate":
In regard to clover-growing in Manitoba, I might say that I have been here only for five crops of grain, and did not try clover-growing till the spring of 1904, when I sent east to Lennox County, Ont., for two bushels of red clover seed that had been grown in that county. I had been told by different farmers in this part that it was no use to sow the red clover seed, as it would kill out during the winter season, but, determined to give it a fair trial, I sowed the two bushels that spring. I took the same plan for one bushel as I did in Ontario; that is, I mixed it with timothy seed, two parts timothy and one part clover, and sowed it at the rate of 10 pounds to the acre, with a nurse crop of wheat. The other bushel of clover seed I spread over about thirty-five acres of land, mixed with timothy sufficient to insure a crop of timothy hay, sown also with a nurse crop of wheat.

My experience in growing red clover in Manitoba has not been very extensive, but it has met with great success so far. The bushel of red clover that I sowed on ten acres in the spring of 1904 came through the winter in fine order, and I cut the first crop of hay on July 13th, 1905, which yielded two tons of clover and timothy hay to the acre. The second crop came on very quickly, and in about six weeks the field was all in bloom again. This I left until such time as it got ripe—or, at least, the greater portion of it was ripe—which was about the first week in October, when I cut it with a mower and raked it up with the horse rake. By this method there was a considerable waste, as the very ripest of the clover balls were broken off with the tramp of the horses and the rolling of the wheels on the clover. When it was threshed, it yielded 1½ bushels to the acre. I did not sow any red clover seed in the spring of 1905, as I was waiting to see the result of the seeding I had done the spring before. Last spring I sowed three bushels of the seed that I grew the year previous, with which I covered about thirty acres of land. I mixed it with timothy seed and sowed it with a grass-seed attachment to my drill, with a nurse crop of wheat, and it looked as fine when it was covered up with snow last fall as any crop I have ever had, either in Manitoba or Ontario.

I would have the first crop cut as soon after

June 25th as possible, and not later than the 10th of July, as it would give more time for a full formation of the seed before any frost would come that would be heavy enough to injure the seed formation.

In Ontario I always used a reaper for cutting my seed clover, which I think is the best method for saving and gathering all the seed. In Manitoba I used the mower, but there is a considerable waste, as the very best heads of clover are very easily broken off. It would be advisable to attach a table to the cutter-bar of the mower and have it gathered until there was a good forkful on it, and then have it lifted to one side in the same way as when using a pea-harvester. After it has been thoroughly dried, I would have it stacked or put under shelter, and left until the weather is very cold, when it will thresh out very much more profitably to both the farmer and thresher. I always have had the clover threshed between the 15th of December and the last of January following. In Ontario I was always able to get a regular clover mill to do the threshing, but in Manitoba there are no clover mills that I know of. In threshing my crop in Manitoba, I used the grain separator. I took out the one fork from behind the cylinder and closed it up

dry), and thresh with clover thresher in the usual way. Clover-seed buyers generally clean the seed free of charge. The yield varies much from year to year. I have had as high as five bushels and as low as one-half bushel per acre. I have kept no record of yield or prices, but I think around three bushels per acre, and the price around \$5 per bushel. I have sold as low as \$4, and once I obtained \$8. This season I grew none. I think there is money in growing clover seed; you get a fair return for the labor, and the land is left in first-class condition for any crop following it.

WM. McCULLOUGH.
Simcoe Co., Ont.

THE FARMER'S BEST PLANT FRIEND

Editor "The Farmer's Advocate":
I have chosen early red clover as the farmer's best plant-friend. Clover is what we make it. In my young days I used to cut for hay clover when turning brown in blossoms, and lost the leaf and head on field, and I hauled in the woody stalks; cattle didn't care to eat it, so I changed the time of mowing to two weeks earlier, cutting when in full bloom. Keep tedder in heavy swath going while wilting, say three hours, then rake and coil

same day as cut; leave to sweat two days in coil before hauling to barn.

The field for seed crop should be cut June 20th, and cured as above for stock, leaving the aftermath to ripen for seed; cut with mower, rake, and haul to barn from windrows. If weather is fine, you don't need to coil when ripe. I threshed the first frost, say when lakes are frozen safe for traffic, and not having a clover-huller in the county, use our grain thresher, running the crop through twice, and clean the seed with a fanning mill with special screens.

The best yield per acre grown here was in 1904—15 acres yielded 3,375 pounds, on heavy loam, well manured; and the poorest yield in 1905, when 500 lbs. was all the seed off 12 acres. The average here is low, owing to the fact that we cannot get a sure stand of clover; sometimes it is winter-killed, but the average in 10 years of growing seed, 100 pounds to the wagon-load, is about 100 pounds to the acre when hay is ripe.

The clover midge is our worst enemy in this county, providing you farm well. It is a weevil, deposited on the clover by a fly made for the purpose, and she rises early, too.

Pontiac Co., Que. WM. A. HODGINS.

FURTHER PARTICULARS FROM AMATEUR FARMER.

Editor "The Farmer's Advocate":
In compliance with your Hastings Co. Reader's request for more itemized accounts of my farming operations, and statement as follows:

EXPENSES.

Married man, with free house, wood, milk, butter, etc.	\$800 00
Single man	345 00
Chore boy, seven months	140 00
Extra help haying and harvesting, threshing and silo filling	60 85
Clover and other seeds	31 60
Feed, all kinds	505 72
Taxes	68 65
Threshing	58 88
Repairing and painting wagons	50 00
Binder twine, board bill, and all other expenses	294 88
Total	\$1,845 04

GOODS SOLD.

Grain, wheat, peas and oats	\$882 51
Hay	570 00
Straw	284 00
Cattle	471 00
Hogs	449 52
Butter, apples, poultry, etc.	145 17
Total	\$2,702 20

I threshed by measure from machine 2,669 bushels wheat, peas and oats. I weighed 100 bushels from the thresher, and it weighed 113½ bushels, which would make it figure up 3,029 bushels by weight. The hay crop was about 110 tons, and the ensilage corn about 100 tons.

Wentworth Co., Ont. JAS. DUNLOP.



Trout Creek Choice =57962=.

Two-year-old Shorthorn bull, included in dispersion sale of the herd of Jas. A. Czerar, Shakespeare, Ont., March 13th. (See advertisement.)

with sheet-iron (as close as the teeth will allow) from the elevator side to within about 8 or 10 inches of the other side. I fed the clover in on the side that the elevator spout pours in on. I put in three concaves full of teeth, and set them up as tight to the cylinder as possible. By this means you have made a very good huller out of your cylinder; then, by feeding the clover in on the elevator side, it has to work its way across the cylinder by going round it several times to the open side, where it escapes. I also got a sieve, with about six meshes to the inch, which gave me good satisfaction in cleaning the seed. Then I put it through a fanning mill twice, and it was clean enough to sow through a grass-seed sowing machine without giving any trouble.

The best and only yield I have ever had in Manitoba was 1½ bushels to the acre, with the process of handling as above stated. With a proper reaper and clover mill to thresh it, I believe it would have yielded me one bushel extra to the acre, if not more. The returns from the crop of seed that I had were eighteen dollars an acre.

JOSEPH A. RUSSELL.
Lisgar, Man.

MONEY IN CLOVER SEED.

Editor "The Farmer's Advocate":
I have been growing clover seed now for a period of twenty years, and have also grown alsike, but do not like it, and have abandoned it. I have tried a little alfalfa, but it does not appear to suit heavy land.

I usually sow in the early spring on fall wheat, about 8 pounds per acre. In the following fall, if it has made a good growth, I pasture, but not too late; if the growth is weak, I aim to keep stock off. In the spring I prefer to pasture (having tried cutting) till about June 15th, later or earlier, according to the season. As the seed begins to develop in the fall, I examine the heads here and there from time to time. When I find the majority fairly well matured, I begin cutting. When the crop has been very heavy I have used the pea-harvester, with buncher, with good effect; with a medium crop, I cut with mower and rake in small windrows. When in proper condition, I haul (but not when it is very

A SPLIT-LOG DRAG COMPETITION FOR ONTARIO.

"The Farmer's Advocate" Offers \$100 in Prizes to Encourage Experiments With the Split-log Drag on the Earth Roads of Ontario.

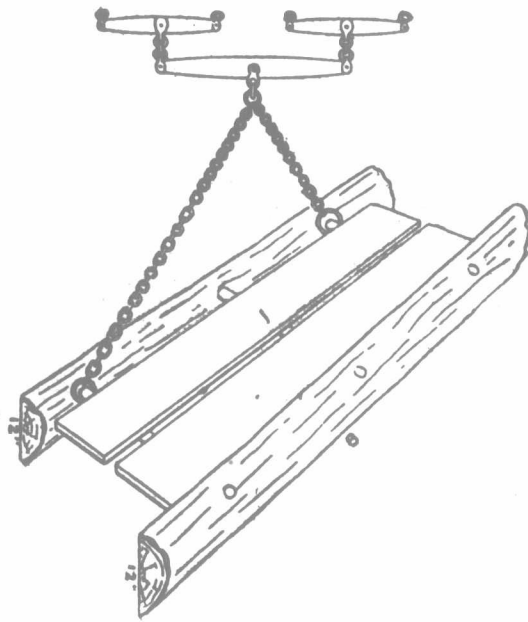
In the Province of Ontario are thousands upon thousands of miles of earth roads, in texture varying from waxy clay to loam and sand. Many of these cannot be gravelled or macadamized without great expense. For a long time to come they must remain earth-surfaced. Their condition during many weeks in the spring and fall, and sometimes during a considerable part of summer and winter, is wretched. Various means for improving them have been attempted. Under the statute-labor system, the plow and dump scraper were tried, with large outlay of time, but very indifferent results. Latterly, road graders have been widely purchased, and have done much to reduce the cost of road construction. The disappointment arising in some cases with this implement has been due to misuse, particularly on old gravel and stone roads, where much harm has been done. However, dismissing this tempting topic, viz., the misuse of the grader, let us simply point out that an annual grading will rarely be sufficient to produce good earth roads. Once the roads are graded, they must be kept smooth so as to shed rain and snow water freely to the ditches. This can only be accomplished by the use of some cheap smoothing implement that can be drawn over the road early in spring and after every summer and fall rain during which the road becomes worked up. For this purpose, a simple affair called the road-leveller, consisting of a piece of heavy timber eight or ten feet long, having its lower edge bevelled and shod with iron, and drawn over the roads angling a little towards the center, has done a great amount of good on our clay roads where used intelligently and often enough. By hauling this up and down, one or two rounds, after the roads have become crumbling dry, lumps and ridges are broken down, ruts are filled, and travel soon makes a comparatively smooth surface. The next rain is shed more freely to the ditches, the subsoil is preserved to quite an extent from soaking, and thus repeated levelling not only maintains a smooth road throughout the season of its use, but helps to preserve the crown and protect the roadbed from disintegration. If proper use were made of the leveller, the roads would be maintained in far better shape than they are. The trouble has been the leveller is so simple and cheap that people underrate its usefulness. Had some enterprising firm been exploiting these levellers with lithographed advertising literature and selling them for \$50 or \$100 apiece, they would be much more extensively used. It seems so much easier to expect benefit from a complicated apparatus for which you pay a hundred or a thousand dollars than a simple homemade leveller. But facts speak for themselves, and are sure to be heeded in time. The conviction has dawned on many a ratepayer's mind that overmuch has been expected from our expensive machinery, and that some kind of a drag or leveller is the means of maintaining earth roads in condition.

THE OLD IDEA IMPROVED UPON.

Strong as is our faith in the leveller, based upon experience and observation, we have been impressed with the new idea exploited in the United States by a man named D. Ward King, of Missouri. Simple as the leveller, and with the same purpose, its principle is slightly different. Instead of using a single iron-shod timber to rub down the lumps when they are crumbling dry, he made a drag, by setting on edge the halves of a split log, one behind the other, and joined by cross-pieces. His idea is to haul this up and down over the road while it is still muddy, the object being to puddle the surface, as one might puddle clay for the bottom of a well, silo or cellar floor. Everyone living in a clay district knows how hard and impervious he can make a clay bottom by mucking and puddling in it when wet. This is the principle upon which Mr. King reasoned, and the results of using the drag to puddle clay roads in this way are attested by the emphatic endorsement of all the best and most reliable agricultural journals of the United States, where the plan has been widely tried during the past two years; also by dozens of enthusiastic contributors to these papers. From Eastern Ontario last fall one subscriber reported to "The Farmer's Advocate" very satisfactory results. So far we have heard of no experiment being made to compare the split-log drag with the leveller, but from all accounts, our expectation is that the use of the drag, as Mr. King advises, will give better results than the leveller which we have been accustomed to use. At any rate, the drag has the big advantage that it is employed while the roads are still muddy and before one can work on his fields. Hence it is less likely to be neglected than the work with the leveller.

To encourage a general and widespread trial of the split-log drag, the publishers of "The Farm-

er's Advocate" decided to offer one hundred dollars in prizes, fifty dollars in Eastern Ontario and fifty dollars in the Western part, for the best results from one season's use of a split-log drag on a mile of earth road most convenient, in each case, to the competitors' farms. To this end we solicited the co-operation of the Ontario Good Roads Commissioner, Mr. A. W. Campbell, who has kindly agreed to do the judging. Let it be understood that we are not offering these prizes as payment for the work, and let no one hold back for fear of not receiving a prize. In the United States the rallying cry has been, "Drag from your gate to your neighbor's nearest the town." This has been done by many without a cent of pay or inducement, simply as a public-spirited contribution to the cause of good roads. Most of these consider, however, that the improvement in their own piece of road is sufficient recompense to themselves for the half hour's work they do now and then. The same motives should



actuate Canadian farmers, and our appeal is not to the desire for a prize, but to the direct self-interest and the public spirit of our subscribers. Only six men can receive prizes, but we believe the hundreds of others who enter will feel amply repaid by the improvement of their roads to market and by the satisfaction of having contributed something to the solution of the rural-road problem in Canada. There is no fee to enter this competition, and the conditions and rules are as simple as possible.

RULES AND PARTICULARS.

1. Two sets of three cash prizes are offered, one set for Eastern and one for Western Ontario, an imaginary line running due north from Yonge St., Toronto, being the dividing line. The first prize in each case will be \$25, second prize \$15, and the third prize \$10.00.

2. Any subscriber to "The Farmer's Advocate" may enter who will notify us on or before March 27th, 1907, of his willingness to construct a drag, as explained below, and use it at least five times during the summer before October 15th, at his own discretion, on a mile of ungravelled earth road of his own selection, preferably the mile from his gate towards the nearest town. Applicants must give full name, post-office address and railway station or stations.

3. On behalf of the Provincial Government, Mr. A. W. Campbell, Good Roads Commissioner, has agreed to co-operate with us by doing the judging. Each piece of road will be inspected as early as possible in the spring, and again after the conclusion of the trial on October 15th. The awards will be made according to the results evident from the use of the drag. To make a good showing, it may be well to choose a bad rather than a good piece of road, though no limitations are imposed in this respect. Each competitor will be required to keep and present in writing to the judge a statement showing the amount of time spent in dragging his beat and the dates on which it was done. This statement will not be used in making the awards, but is desired for purposes of information, and in some cases for publication.

The results of the competition will be written up and illustrated with half-tone engravings in "The Farmer's Advocate."

Send in your name at once. Let us have dozens from every county in the Province. We are offering our time and money in the cause of good roads. Will you help?

Remember, the time for entering the competition closes March 27th. Address your letters, as per rule 2, to "The Farmer's Advocate," London, Ont."

HOW TO MAKE AND USE THE DRAG.

The two halves of a split log, ten to twelve inches thick, are set on edge thirty inches apart, both flat sides to the front. The cross-pieces are wedged in two-inch auger holes bored through the slabs. In other respects the cut is self-explanatory. If working a clay or gumbo road, it is advised to put iron (old wagon tire, or something of that sort) on lower edge of drag at end of six months; for softer soil, at end of twelve months.

The inventor has prepared the following road-dragging "catechism," telling how to make and work the drag:

Would it not be better to plow the road before dragging?

No. Plowing gives a soft foundation. Plowing the middle of the road is a relic of the old dump-scraper days.

What do you do when there are deep ruts in the road?

Drag them. If you drag when the surface is quite loose and soft, you will be surprised how soon the ruts will disappear.

How do you get the dirt to the middle of the road?

By hauling the drag slantwise, with the end that is toward the center of the road a little to the rear of the other end.

But suppose the road is too narrow?

First drag the wheel tracks. After three or four rains or wet spells, plow a shallow furrow just outside the dragged part. Spread this over the road with a drag. Only plow one furrow. You may plow another furrow after the next rain. At each plowing you widen the roadbed two feet.

How many horses do you use?

Two, generally; three if it is just as handy; four when breaking colts—a good solid team in the center, and a colt on each side; two men on the drag, one to drive, the other to control the colts.

How do you drain the road?

If the earth is pushed in the middle of the road continually, the road will drain itself.

Why not make the drag out of plank?

You can, and do good work, but the split log is the best. The plank drag is not so stiff.

Why not make the drag of heavy, sawed timber?

Because drags so made have a tendency to slip over the bumps.

Don't you grade up the road first?

No. The grading is done with the drag, gradually. By so doing, the road is solid all the time, and is built on a solid foundation.

What does it cost to drag a mile of road a year?

The cost is variously estimated at from one to three dollars.

How do you keep the drag from dodging around sidewise?

By not loading it too heavily. If a drag dodges around the earth you are moving, it is because it is overloaded.

Will the dragged road stand heavy hauling?

Yes and no. A dragged road will stand more heavy hauling than an undragged road, but not so much as a macadamized or well-kept gravel road.

Don't drive too fast. Don't walk; get on the drag and ride. Don't be particular about material; almost any log will do. Don't try to drag with only one piece; use two.

SUMMER - FALLOWING.

Editor "The Farmer's Advocate":

In reading your valuable paper, I have found many helpful articles about the farm and contents, such as farming, stock-raising, stock-feeding, etc., but there is one thing that has been extremely neglected, and that is summer-fallowing. I think that is one of the things to be considered in farming. We have so many noxious weeds to contend with. I find it is hard to leave a meadow very long without summer-fallowing, as the weeds will grow, instead of first-class hay. As we go through this Ontario of ours, we can see the great need of the land being better worked. When a boy, we summer-fallowed, and had good hay crops. When I commenced managing the farm I went out of summer-fallowing, and, to my surprise, I found I was going back on the hay crop, also in the farm in general. I have adopted the plan again, and I find it has helped me in keeping more stock. I can sell hay now; it is more pleasant to sell than to buy. I would like to impress on the minds of the young farmers the

benefit of working land good. I am talking from a twenty-years' experience managing the farm. If there are any of the readers of "The Farmer's Advocate" who have any better way, I would be pleased to hear from them.
Leeds Co., Ont.

MORTON GIFFIN.

SOME INSTITUTE QUESTIONS.

DAIRY, HOGS, WEEDS, ETC.

Editor "The Farmer's Advocate":

Since the Government has offered assistance, great interest is taken throughout the dairy sections in the cow-testing associations. When 20 farmers will agree to weigh their milk and save samples three times per month, they will send a competent man to do the work. Many associations have been formed, and the weeding out of cows that do not reach a certain standard will follow. Dairymen are realizing the importance of only breeding from sires that have a good ancestry record as milk producers behind them.

In sections where hog-raising is carried on, I have heard less complaints this year than in former years of pigs crippling during winter months. Farmers realize the importance of growing a supply of sugar beets or mangels for winter feeding. I have heard several successful feeders say that they believed pork could be produced for one-third less cost where beets were fed with grain. Many successful feeders testified to the importance of scalding or cooking the feed for the young pigs from the time they first began to eat till they were nearly three months of age, thereby avoiding the danger of injuring their digestion while young. In talking to several breeders, I find that the demand for Berkshire boars as breeders for crossing is increasing. Most farmers claim that the shorter and fatter hog can be grown more cheaply, and the packer makes no difference in price. Will the future crosses give us as good a type of bacon hog as we have to-day?

In some sections a three and four year rotation is practiced: Clover sod plowed in fall, corn and roots next, grain following, and seeded to clover again, only plowing once during this time. In most sections the practice of hauling the manure out in the winter and spreading it on the fields is adopted, and seems to be favored by most farmers, if the land is not covered by a sheet of ice or very deep snow. Some approve of piling three or four loads together, just enough to keep from freezing, and spreading on land after most of the snow has gone in early spring.

The weed problem is being freely discussed at most Institute meetings, especially the perennial sow thistle. Several prominent farmers gave their experience in fighting it, and claim that the most successful way is by the bare summer-fallow, thoroughly cultivated during the season, keeping it from showing on the surface soil. Many have put in a plea for the sheep to fight it, saying that sheep are very fond of it as a food, and will eat it off very close to the roots, thereby weakening it very materially. I find in all hotels that the walls are covered with sale bills of farm stock and implements. The scarcity of labor seems to be the chief cause. I do not think that so many farmers are going West as in former years.

J. W. CLARK.

OATS MUSTED ON CEMENT GRANARY FLOOR.

Editor "The Farmer's Advocate":

In compliance with your wish to hear from some one who has had experience with cement granary floors, I may say I built a barn about five years ago, and had a horse stable in one end. For convenience, I had a small granary in it, with a cement floor and cement wall for about two feet. The floor of the granary was raised about one foot above the level of any of the rest of the floors, and inch lumber laid on the cement. I found that for about six inches from the bottom of the floor, and also around the sides of the bin, the oats would must so badly one would think they had been standing in water.

West Middlesex, Ont. JAS. G. GASGOW.

IS YOUR SEED READY?

No farmer can regulate the amount of sunshine or the rainfall upon his crops. He may, however, control, to a very great extent, the seed he sows. At this season of the year he should see to it that this very necessary part of his work is carefully done, for when seed time is on, time is precious, and labor is scarce and dear. During recent years weeds have been increasing at an alarming rate, and the farmer must keep them down or be a heavier loser than he can afford to be. Further, when skilled labor is so hard to obtain, as it has been during the past few years, the farmer is finding out that a smaller acreage under careful cultivation yields better returns than a larger acreage under comparatively poor cultivation. This being the case, too great care cannot well be exercised in the selecting of the best seeds, and having these free from the robber weeds. This is the season to attend to such matters, and nothing will take the place of the farmer's personal oversight in such essential details. The

satisfaction of sowing good grain, and the reasonable expectation of a fair return in the harvest time, and in the market, will amply repay any extra labor expended now. All chemicals for destroying fungi and kindred pests should be procured, labelled, and put away for use when needed. The fertility of seeds should be tested now. Many a man has been sadly deceived in this regard, with resulting loss of time and patience. Would it not be well, then, for the farmer to make his purchase of seeds, send away samples for analysis, both for purity and fertility. Doing so now may save a fine crop from the early frosts, to say nothing of having the roots in for the vigorous early growth of the summer.

Then there is the selection of our potatoes. The day is past when the farmer can afford to say, "Oh, anything will do for seed." It won't hurt his bin to be handled a little just now, and to have his seed set apart ready for sprouting will make matters a great deal easier later on. It is the man who comes to his work with the best-matured plans who may look for the finest returns from his efforts.

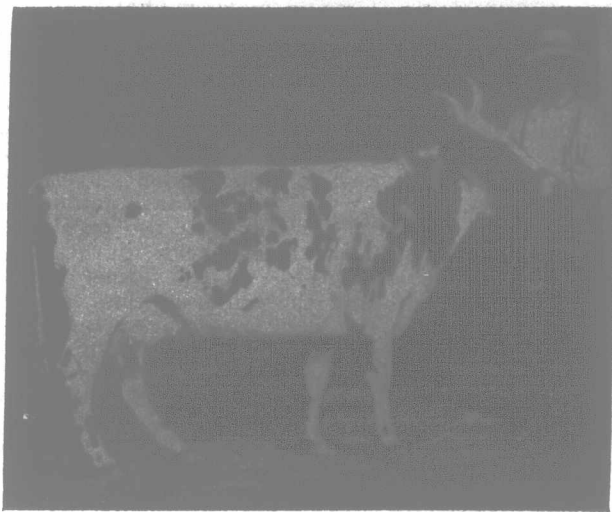
J. K.

THE DAIRY.

FUN FOR THE BOYS.

Editor "The Farmer's Advocate":

Have been keeping individual milk records for about three years. The amount of time per cow per day is too minute to be called a minute. We have the record sheets, about five for a month, on a shelf close to the window, with the lantern on one side and spring scales on the other. The time required to hang the pail on the hook and write the amount on the sheet is far too insignificant to be entered as an argument either for or against the keeping of records. I started for the purpose of obtaining more information in reference to each cow, which can only be secured by test and weight. The records show the number of pounds per month; the test indicates the amount of butter-fat in each hundred pounds. About 85 pounds of butter-fat will make 100 pounds of butter. Hence, each cow's actual pro-



Almeda of Danville 15282.

Ayrshire cow, owned by Gus A. Langelier, Cap Rouge, Que. Official record, 11,357 lbs. milk and 409.95 lbs. butter-fat in 365 days. Adding one sixth, according to the usual practice in estimating butter from fat, would give 478.27 lbs. butter.

duction can be made out at the end of every month. Records show when a cow is falling off in her flow, and enable one to ferret out the cause, and, if possible, remedy it before loss results. Weighing and testing point out the paying cow and the unprofitable one. Records will cause one to become more interested in each cow. The milker will endeavor to keep up the flow, and the feeder will be stimulated to feed a better-balanced ration. This will lead to a more thorough investigation of such matters as balanced rations, pure water, regular milking, thorough grooming, proper ventilation—consequently better cows, better conditions, better results.

Milk records are a benefit to a man who is already taking as good care of his herd as he knows how. They will show him that the cow he has booked for the butcher may be actually giving more butter-fat per day than his favorite that is giving a much larger quantity of milk.

But that is not all. Has he a boy whom he desires would take more interest in farming, I know no better way than to have each cow's milk tested, and induce the boy to look after the weighing of milk from each cow night and morning, keep the records, transfer the total of each cow's production at the end of each month to the cow-account in book provided. He will find that there is not only profit, but fun in it. After all, fun, pleasure, enjoyment of the right kind, is what we should seek in life.

P. J. CHUTE.

King's Co., N. S.

BELIEVES IN INDIVIDUAL RECORDS.

Editor "The Farmer's Advocate":

As I have been farming on my own account less than a year, my opinions may not carry much weight, though, so far as I myself am concerned, they are decided. Naturally, also, my records are incomplete, as my herd numbered only six, and the record does not yet cover a year. However, as a result of keeping a record, I have since disposed of three unprofitable cows. I have not yet met a farmer who keeps a milk record but was persuaded mainly by letters in "The Farmer's Advocate" that it was worth a trial. The time required is hardly worth considering, taking only about one minute, or less, per cow to weigh and mark down. I have a spring balance and record sheet close together, with pencil attached to string close by, so that it is always handy. Adding up the daily records takes half an hour per cow per month.

I have learned from the record not to judge by appearances. One of my best cows is a heifer which is always fat, yet a persistent milker, and tests high; she shows a fair profit, even as a heifer. One that I sold, six years old, gave a big flow of milk for the first month, then dropped rapidly, till, after six months, she was practically dry; she did not pay her board. Yet, had I not kept a record of this milk production, I would have sold the good one and kept the poor one.

To a man who is a good and careful feeder, weighing the milk will also be profitable, for he can then see exactly what returns any individual cow is making for her feed. I weigh the feed occasionally, and can thus get an approximate idea of what my cows cost to keep. Also, I can increase the feed if I find such increase will be profitable. For instance, I fed a heifer 2 pounds extra chop daily when, as I thought, she was doing her best. She responded by giving 4 or 5 pounds extra milk, which paid for the chop, with a profit.

Finally, keeping a milk record causes a man to take more interest in his cows, and, what is more, interests the hired man, too. He is do his best to squeeze an extra half pound of milk from the cows he milks, and if he can beat the "boss," so much the better.

W. H.

Waterloo Co., Ont.

FIFTEEN SECONDS PER COW.

Editor "The Farmer's Advocate":

Last year I began keeping records, but did not start until after I had been milking for some time, so cannot give you the figures asked for. However, I may say I am satisfied that it is the only way to know definitely the value of each cow, as there is no guesswork about it. You can also tell at once if any of the cows are going behind, and can then determine whether it would be profitable to feed a little more in order to try to bring them up again. I keep track of my cows by numbers, and take the weights each morning and night in a memo book, then on Saturday night I enter them for the week on a sheet for that purpose which is furnished by the Dominion Government free. I also use a set of scales I got from them, at a cost of \$1.50. It only takes 15 seconds at the outside to weigh each cow's milk and enter it in the book, which means three minutes for twelve cows. This year I intend to keep close tab on all my cows, and at the end of the season will dispose of the poor ones.

In conclusion, I might add that I would not go back to the old way of guessing what each cow gave under any consideration.

Hastings Co., Ont.

J. P. BYERS.

JUST ONE THING MORE NEEDED.

Editor "The Farmer's Advocate":

While we have not a year's record complete yet, still we are convinced of several things: First, that, with scales and sheet convenient, the time taken to weigh and record the weight is trifling, and is overbalanced by the satisfaction of knowing at the time just what each cow is doing; second, we are going to find out which are our best cows and which are the unprofitable ones. Besides, keeping records causes all hands to take far more interest in milking and caring for the cows. After we had been weighing for some time, we bought a hand Babcock tester, and now we take samples of a day's milking each month, and then an hour's work in the evening gives us each cow's test for that month. Now, there seems to be one thing more needed, and that is a simple and convenient way of keeping an account of what it costs to feed each cow through the year; for, while one cow may give the most milk, and another may show the most butter-fat, still it is the cow that produces these at the least cost that is, after all, the most profitable dairy cow.

Queen's Co., P. E. I.

D. S.

CARLETON COUNTY COW RECORDS.

I have just kept the record of five of my cows for one year, as the balance of my herd were raising calves.

I would say we have never missed the time it takes to keep the record, as we have a nice milk room, or rather separator room, near our milking stable, where we have a spring-balance scale hung, and we kept a monthly sheet, supplied by the Experimental Farm staff at Ottawa, hanging on the wall, with a lead pencil attached, and usually weighed and marked every milking.

The reason I started keeping records was to show that Shorthorn grades could be classed as dual-purpose cows, as mine were all of that class. I have one cow whose dam was a three-quarters-bred Holstein cow, and sire pure-bred Shorthorn. Another, a three-year-old heifer, was a daughter of said Holstein-Shorthorn cow, and sired by Shorthorn bull. The other three were straight Shorthorn grade cows. And I have proved that the Holstein and Shorthorn cross is one of the best crosses that can be made to produce the dual-purpose cow; that is, if you take the Holstein cow and cross with the Shorthorn bull. I may be asked why? Well, the deep-milking Holstein cow will usually transmit her milking qualities to her progeny, and the Shorthorn bull a certain amount of his beefing qualities, taking away the greater amount of the rough, bony frame of the Holstein cow, giving a cow that will give a large, even flow of milk, and then, when put dry and properly fed, will flesh up easily and put on a good share of flesh, when she is worth something to the butcher.

This has been my experience, anyway. This Shorthorn-Holstein cow has given me one-half of her progeny black, with a little white, and the other half red, with a little white.

I have learned, by the keeping of records of the past season, which of my cows are the best to raise heifer calves from for dairy purposes, so far as the amount of milk given by each cow goes. I did not have milk tested for butter-fat, but purpose doing so soon. I may say I do not consider last season's record up to what my cows can do, as we were very short of grass last summer. I give below name, age and milking term of each cow, and amount of milk given.

No. 1.—Black: Holstein-Shorthorn cross, six years old; Feb. 11th, 1906, to Dec. 11th, 1906, 7,802 pounds.

No. 2.—Young Cherrie: Straight Shorthorn grade, six years; Feb. 11th, 1906, to Dec. 1st, 1906, 7,353 pounds.

No. 3.—Durham: Straight Shorthorn grade, six years; Dec. 16th, 1905, to Dec. 1st, 1906, 7,010 pounds.

No. 4.—Beauty: Three years, daughter of cow No. 1 and Shorthorn bull; Dec. 11th, 1905, to Dec. 30th, 1906, 6,810 pounds.

No. 5.—Old Cherrie: Shorthorn grade (aged); March 1st, 1906, to Dec. 30th, 1906, 6,742 pounds.

I believe milk records are a benefit to any person, no matter how good care may be given the cows.

First, it has a tendency to giving a little better attention to the general care and comfort of the cows.

Second, it enables a person to cull his herd in such a manner as to have nothing but the best cows in his herd.

Third, keeping records keeps the young people interested in caring for the herd, and I believe helps them to become better milkers.

Fourth, you are able to sell better stock to those who are buying for dairy purposes for better prices, both as breeders and milkers.

During the past season our cheese factory paid for milk about an average of \$1.00 per hundred pounds for the season, so you will see at a glance what each cow has made for me during the season.

My cows have always been well fed, coming to the stable twice a day, and getting a little feed of some kind during summer, as well as winter.

In summer, during May and June, and part of July, they got a little bran and peas and oats mixture, ground. After that, for the latter part of July, August, September, October and November, corn and mangels were fed in stable to supplement the grass.

I try to turn my cows out in the spring in as good condition as they go into the stable in fall. We never feed ensilage, nor do we cut any fodder of any kind. In winter we feed hay, turnips and mangels, straw, and chop composed of oats, peas, barley, wheat, and sometimes add a little bran. We turn cows out of the stable every day, and often twice a day, to get water, and always have healthy, strong cattle.

WM. A. WALLACE, Carleton Co., Ont.

RECORDS REVEALED THE RECREANTS.

Editor "The Farmer's Advocate":

I do not keep milk records all the time, but generally for a week or two at different times through the season. I commenced four years ago on this plan. The reason I started was reading "The Farmer's Advocate" as to how farmers were keeping cows which did not pay for their keep. I found out by weighing that I had some of that kind, and I got rid of them at the first chance. As for the time, I am sure it did not take one minute per day for each cow. It is by far the cheapest way to test your herd. Last season my neighbor, who never weighs his individual cows' milk, had six more cows than I had, and he only sent from 15 to 25 pounds more milk a day than I, so he must be keeping cows that do not pay their keep. By weighing, a person can tell whether it pays to feed grain crushed or bran. I also know it pays well to have a good hand to milk.

G. A. RYAN, Prescott Co., Ont.

A SMALL SASKATCHEWAN HERD.

Editor "The Farmer's Advocate":

We only have three milking cows at present. The time required to make the records for each cow per day can scarcely average more than one minute. Though we have not had sufficient time to make comparisons of the annual yields, we can see that this practice is the best to ascertain whether each animal is sufficiently profitable to be retained. So far we have not fed grain, but as soon as we are in a position we shall do so. We think the milk records are, if anything, more beneficial to the man who is specially feeding his cows, to ascertain the increased yield, if any, due to the extra feeding.

LLOYDMINSTER, SASK.

GARDEN ORCHARD.

LOW HEADS NECESSARY IN THE NORTH.

Editor "The Farmer's Advocate":

From my own experience and observation in Northern Ontario, I would most emphatically say head trees low. In fact, this, as a general rule among those who have planted to any extent, admits of no doubt whatever. And I venture to say that had the Eastern nurserymen sent out low-headed trees years ago, they might to-day be doing a large and profitable business, besides saving us many thousand dollars. Twenty-five years ago, when I set out my first orchard, about 50 per cent. were what you may call the regulation height, the other half being very low-headed—from a foot to three feet. Of the former I have just one tree left, and the trunk of that is alive only on the north side; of the others, which were headed low, only a few are lost, and most of these were varieties unsuited to the climate.

Sunscauld, more than all other difficulties combined, is our great drawback in fruit-growing in New Ontario. This occurs just when the snow is going away in the spring, the sun reflecting on the snow during the day starts the sap, then during the night a sharp frost occurs, freezing the sap, causing the bark to turn brown and split. Of course, years of experience have led us to preventive measures, by using which we may largely overcome the evil.

My reasons for heading trees low are these: By doing so, sunscauld is very largely prevented; wind, ice and snow have less effect on the top; the fruit is much more easily gathered; grass and weeds do not grow so readily; and, as far as my experience goes, larger and more vigorous trees result under the same conditions. Besides, a low-headed tree is usually better rooted when it comes from the nursery.

The objection that clean cultivation is more difficult among low-headed trees counts but very little with me. Until the tree comes into bearing, any of the common implements in use will go quite close enough; after that the ground is shaded, so that little difficulty will be experienced in keeping the ground clean, if that is considered desirable, in a section where many varieties are late in ripening up the young wood. My ideal tree to plant would be to start the top 18 inches from the ground; allow three branches, if possible, to form the top; cut them back to within a foot of the trunk; after that, treat every one of these three branches as an individual tree.

Of course, there is an exception to this, as a rule. For instance, I would never think of heading a Longfield or Greening 18 inches from the ground; neither would I head a Burbank plum the same height as an Abundance. The habit of growth is to be taken into consideration.

The only objection I can see to low-headed trees, where the snow falls very deep, as it does pretty much all over the North, is that for the first year or two the tops are liable to be damaged by the weight of snow melting in the spring.

CHAS. YOUNG, St. Joseph Island, Algoma, Ont.

HORTICULTURAL PROGRESS.

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

Treating San Jose Scale: Maryland Agricultural Experiment Station, College Park, Md.; Bulletin No. 112, by T. B. Symons and A. B. Gahan.—This bulletin contains the results of experiments conducted at the Maryland Agricultural Experiment Station in 1906 in spraying, to determine the cheapest and best formula to use in spraying to control the San Jose scale. Useful hints are also given fruit-growers in the preparation of the insecticides recommended and in the time and method of spraying the trees. Eleven different mixtures made with sulphur were tried, and 1,380 trees treated, of which 840 were apple trees, and 540 peach trees. In addition to the eleven sulphur mixtures tested, the patent insecticides, Scalecide, Kil-o-Scale, and Target Brand Scale Emulsion, were also used.

The lime-sulphur washes, made with different proportions of lime, were almost uniformly successful, but the sulphur mixtures heated by fire were more successful than those prepared by heat generated by the material used, although where caustic soda was used with lime to generate heat better results were obtained than with lime alone, and the statement is made that "the self-boiled mixtures, in which caustic soda and a good quantity of stone lime are used, can be safely substituted for the heat-prepared mixtures, where apparatus for cooking by external heat is not available." The lime-sulphur mixture cooked for half an hour gave almost as good results as that cooked for one hour, but the latter time is recommended.

Kil-o-Scale, Scalecide and Target Brand Scale Emulsion did not give satisfactory results when applied in the strength recommended by the manufacturers, but where twice the quantity was used the results were good, and it is recommended by the writers of the bulletin that if these insecticides are used, to double the strength recommended by the manufacturers.

The most satisfactory formula, and the one recommended is: Stone lime, 20 pounds; flowers or flour of sulphur, 15 pounds; water to make 50 gallons (wine measure).

The method of making is as follows: "Put twenty gallons of water in an iron vat or hog-scald and bring to a boil, then add the stone lime and sulphur. The sulphur should be made into a paste with hot or cold water before placing it in the boiler, in order to facilitate its mixing. After the lime and sulphur have been boiled for some time, salt may be added, if desired. Boil the mixture, stirring occasionally, from thirty minutes to one hour, or until the sulphur is thoroughly dissolved and a clear, amber-colored solution produced. Then dilute by adding sufficient hot or cold water to make fifty gallons. Pass the mixture through a strainer with at least twenty meshes to the inch into the spray barrel, and apply to the trees warm."

This mixture may also be boiled with steam when large quantities are used.

When it is impracticable to cook the mixture by fire or steam, it is recommended to be made as follows, with the expectation of getting fair results: "Good quality, freshly-burned stone lime, 20 pounds; flowers or flour of sulphur, 15 pounds; caustic soda, 10 pounds; water, 50 gallons. Mix the sulphur with a small amount of water to form a paste, then add the lump caustic soda gradually to the sulphur paste. When the sulphur is all dissolved, pour this solution, with enough water to keep from burning, upon the stone lime, and allow the same to thoroughly slake, keeping the heat confined as much as possible by placing a sack over the barrel. Dilute with cold water to make 50 gallons, and strain into the spray barrel."

Flowers and flour of sulphur have been found about equally satisfactory. After four years' experiments, it is recommended to spray as late in spring as possible before the buds burst, if only one application is given. If it is possible to give two, and this is desirable if the trees are badly infested, spray in the fall or winter and again in the spring. If it is not possible to spray in the spring, spray in the fall.

The results will depend largely upon the thoroughness of the application. As the scale may be all over the tree, it is necessary to cover every part, and as the smaller twigs and young wood are usually infested, these should receive special attention, and it may be desirable to go over the trees after the material is dry and spray again any tips which have not been covered.

In spraying, the operator should have a rubber or oil-skin coat, hat and gloves, and it is recommended to rub vaseline on the hands and face to prevent the spray from irritating the flesh.

HEADS HIS TREES AT 3½ TO 4 FEET.

Editor "The Farmer's Advocate":

The height at which I would head young fruit trees—apple, pear, plum, cherry, etc.—is three and a half to four feet. This is the height I would also advise the farmer with a small orchard to start the heads of his trees.

The reasons in favor of low heading are that the trunks of the trees are less subject to sunscald and disease when trees are headed low. Sunscald is a prevalent disease in this section in consequence of the snow covering on the ground late into April.

The chief objection to low-headed trees is the difficulty of cultivation; but, as is pointed out in your article, it has been overcome by the extension disk harrow. Low-headed trees are less liable to drop their fruit in high winds, and the fruit is much more easily picked than from trees which are headed eight to nine feet. Nowadays, when labor is scarce, the facility with which apples may be gathered is a great factor in profitable orcharding.

Montreal, P. Q.

R. W. SHEPHERD.

EXPERIMENTS WITH VEGETABLES.

The practical nature of the educational work carried on by the Ontario Agricultural and Experimental Union through its system of co-operative experiments, is now well known and appreciated in Ontario. Thousands of farmers and fruit-growers are taking part in these experiments, and are profiting by the experience. The scope of the work is being somewhat enlarged this year by including in the work tests with a few of the garden vegetables. This, it is hoped, will help to draw attention to the importance of the vegetable garden as an adjunct to the farm home. Arrangements have been made for furnishing seed for two or three thousand tests with beets, carrots, lettuce and tomatoes, and it is probable that other garden crops will be added to the list next year. The varieties selected for each experiment, as given in the following list, are among those which have given the best results in the extensive vegetable experiments conducted in the College gardens at Guelph, and are most likely to give satisfaction in the farm gardens throughout the country:

Experiment with Beets.—Black Red Ball, Eclipse and Model.

Experiment with Carrots.—Chantenay, Danvers Half-long and Rubicon.

Experiment with Lettuce.—Black-seeded Simpson, Denver Market and Hanson.

Experiment with Tomatoes.—Earliana, Stone and Success.

Applicants for the tomato experiment should have now available the soil and materials for the preparation of hotbeds or window boxes in which to start the young plants. Any person in Ontario who wishes to join in the work may choose any one of the experiments, and send in his application for the seeds, and instructions for conducting the same. All will be sent by mail free of charge, but each applicant must agree to try to follow the directions furnished and to report the results of his experiment at the end of the season, whether successful or not.

A circular giving full instructions for conducting the experiment, and blank forms upon which to report the results will be provided with each lot of seed. Applications will be filed in the order in which they are received until the supply becomes exhausted. Address all applications to H. L. HUTT.

Ontario Agricultural College, Guelph.

POULTRY.

INCUBATION.

For a long time eggs have been incubated artificially, but it is very difficult to find any printed matter that deals with the subject in a scientific way. There can be little doubt that a scientific study must first be made of natural incubation before artificial incubation becomes a universal success. Some may say that artificial incubation is a success to-day, which is quite true; yet, at the same time, those who have given the subject careful consideration are free to admit that there are too many fully-formed dead chicks in the shell and a greater mortality among young chicks than should be.

All agree that heat is necessary to hatch eggs, and that the temperature required is about 103 degrees F. Eggs will hatch at a lower and higher temperature than this, but the question arises, What effect have these temperatures on the vitality of the chicks? Then there are the questions of ventilation and moisture. These in themselves have not been as carefully studied as one would think, and are very much of a mystery as yet.

It would be much easier for me to write about what I do not know about this subject than what I do know; but since you request me to write what little I know, I shall do the best I can.

Heat is applied to eggs by three methods:

1. Constant.—Example: The hen's warm breast coming in contact with eggs.

2. Radiation.—Example: Any tank incubator, whether hot-water or hot-air machine, of which the Chatham is a type.

3. Diffusion.—Example: Any machine which heats the incoming cold air and diffuses the same through layers of cloths or other material; machine type, The Cyphers.

So far as I know, no one has been successful in making a machine that was a good hatcher and used contact heat, so that practically all incubators are either radiant or diffusive machines, or a combination of the two.

One of the difficulties is to get a machine to heat evenly in all parts of the hatching chamber, or, it might be better to say, to have the same temperature in every inch of the egg-tray. Several manufactures have come closely to this requirement, but I have yet to find a machine that heats exactly even in all parts in all seasons. It may not be absolutely essential that we have no variation in temperature, but the variation should not be greater than 1½ degrees at the most. To get an even temperature, the machine should be set level. When machines are too warm on either end, the usual plan is to raise the cool end of the machine until the temperature registers fairly even. In some machines the egg-tray can be lowered or raised.

A machine should be automatic in its regulation of temperature. There are many devices now on the market for this purpose, and most of them are fairly successful if treated with a reasonable amount of care. The question of the regulation of the temperature has been more thoroughly investigated than perhaps any other single point

the incubator is imperfect, as compared to the hen, or how a hen hatches eggs.

W. R. GRAHAM.

Ontario Agricultural College.

THE FARM BULLETIN.

SOME GOOD DAIRY TALK.

The mass meeting of dairymen, held in the town hall, Tillsonburg, Ont., on the evening following Mr. Geo. Rice's Holstein sale, was quite a convention in its way. The audience was large, and composed chiefly of dairy farmers. M. S. Schell, M.P., recited the familiar story of Canada's ascendancy and present supremacy in the British cheese market. Of the improvement in transportation facilities, he said that whereas a few years ago we had no refrigerated storage for dairy products on our ocean steamships, the amount of cold-storage space now provided and offering is actually in excess of the demand. Himself a successful dairyman, Mr. Schell was justified in saying something about cow yields. We used to be told, he said, that the average annual milk production per cow in Canada was only 3,000 pounds. There has been considerable improvement in recent years, though the yield is still far below what it should be. But we already have many dairymen whose cows average 6,000 pounds, and some quite large herds giving 7,000, 8,000 or 9,000 pounds, and ever 11,000 or 12,000 pounds has been attained. He instanced one man who bought a cow to supply milk, and after crediting her at retail prices for her product, found she gave him \$150 worth in the year, at a feed cost of \$75. It pays to feed a cow within a measurable limit of her ability to produce. It may not pay to crowd her to her utmost capacity, but it does not pay to starve her.

The speaker paid high tribute to Mr. Rice, who is doing more for his country than half a dozen average statesmen. By his enterprise, his business success, and by his victories at Guelph, Toronto, Chicago, and elsewhere, he has established a record and reputation, and been an example to the young men of his country.

Responding to a request from the chair, Mr. Schell outlined the provisions of Hon. Mr. Fisher's bill for assisting local cold-storage enterprises. The Government is anxious to see these established in every suitable center, but, of course, those who wish to advantage themselves by it must take the initiative.

BUILDING UP A DAIRY HERD.

It is a common impression, said Prof. H. H. Dean, in opening, that you can always tell a college professor, but you can't tell him very much. He took care, however, to exonerate from this charge the staff of the Ontario Agricultural College. Proceeding to his subject, "Building up a dairy herd," he said there are five helpers of the dairy farmer: (1) His farm; (2) his cattle; (3) his products; (4) his markets; and (5) his family. The farm is the basis of all successful farming. "Show me," he said, "a neighborhood with good soil, and I'll show you people with good hearts, but on a lean, hungry soil you may expect to find poor, wizened hearts." In this connection he told a story of a Scotchman who always sat down near the church door, so as to keep his collection money as long as possible. Keep up the fertility of the farm. Upon a recent visit to his old home township, he noticed a bank had been established, and was open one day a week to take care of farmers' accounts. In contrast to the old days, dairy farmers now receive cash for their produce, and don't run store bills.

Keep a clean barn, free from dust and cobwebs; have it orderly, and if at all possible, have the buildings painted. There are a great many men polishing chairs around kitchen stoves who would be much better engaged straightening up around their barns—and the women would be glad to get rid of them, he added.

We shouldn't be satisfied with an ordinary cow. Our minimum standard should be 6,000 pounds of milk a year. During the next ten years there is going to be fought the greatest battle of the breeds we have ever known. Whereas in the past pure-bred animals have been culled by hundreds, in the coming struggle pure-breds without performance will be slain by thousands. When you go to buy a cow, the owner should be able to tell you exactly what that cow has given. No one should be satisfied with ordinary cows. Better to keep five good cows than five good ones and five



Queen =62686=.

Three-year-old Shorthorn cow, in the herd of Jas. A. Crerar, Shakespeare, Ont., to be sold at auction, on March 18th.

in connection with the manufacture of incubators. Nearly all successful machines are carefully made, so that sudden changes in outside temperature will not influence the temperature of the hatching chamber materially. To do this requires double-cased machines. Machines built with single-board walls may hatch well enough in summer, but my experience is that they are not very satisfactory in early spring or winter. Fibre board is likely, in fact, is now used in some incubators. If this material will not contract or expand with heat or moisture, it will be an improvement over what is now used in the construction of machines.

I do not know that anyone is positive as to the amount of ventilation that a machine should be given. I have so far been unable to find how much circulation of air there is under an incubating hen. We have proof, beyond doubt to my mind, that the air does circulate fairly rapidly, but just how fast I do not know. We may know before this time next year. Incubators vary in air-circulation. Most machines of the diffusion type have more circulation of air than have the radiant-type machines. This does not say that the former type is better, for as we increase the air circulation, we usually dry the eggs down more rapidly or the air cells become large, and, of course, the air is purer in the hatching-chamber. The air, as we find it beneath an incubating hen, is not very pure, nor not yet very dry.

To the best of my knowledge, the hen's method of incubation, as compared to most incubators, differs mostly in the amount of moisture in the air in the hatching-chamber, also in the composition of the air surrounding the eggs.

I shall in a later article try to show wherein

poor ones. Give the poor ones away to the man you have a grudge against.

Feed well; feed well in winter. The quantity of milk your cow gives next summer will depend not so much on her pasture then as on what she gets this winter. The time to make a cow a large producer is when she is dry. Build up her system then; build up her blood. It takes time to change food into blood and blood into milk. He hoped sometime we might be able to talk to cows in their own language. There are men now able to understand the language of monkeys. It will be a great day for the cow when cows and men understand each other better.

Probabilities point to high prices for dairy products for some time to come. There is no class of

foods equal to dairy products in economy and value. A quart of milk contains as much nutriment as a pound of beefsteak, but how shocked some people would be if their milkman asked them 15 cents a quart for it! A pound of cheese, again, has been demonstrated to be equivalent in food value to 2½ pounds of the best beef. In European countries, where the housewife has to economize, she realizes these facts. The world is waking up to the economy of dairy products and bacon as articles of diet.

Our markets are of two kinds, home and foreign. We are neglecting the home markets that are offering for fancy products. There are people in every town who would be glad to pay seven cents a quart for clean milk—milk produced by clean, healthy animals,

kept in clean stables, and milked and cared for by cleanly men. Our population and home markets are increasing. There are opportunities here. Let us seize them.

Last of all, the family. The wealth of Canada depends not upon her minerals, soil or timber, but upon her people. The question is often raised, "How to keep the boys on the farm?" The answer is easy. Keep the girls there. At the Macdonald Institute at Guelph they are trying to help the farmers' daughters. Give the boys and girls an education rather than money. Let the boys earn the money they get. "Let the boy win his spurs."

New Brunswick Farmers' and Dairymen's Meeting.

The 31st annual meeting of the above association was held at Fredericton on February 12th and 13th. President Donald Innes read a very suitable address. Amongst the many subjects treated, he said our Government must adopt a more vigorous immigration policy, and try to get some of the people that are coming to Canada to stay in our Province, instead of going West. He advised our own young men to stay at home. Here they will have more comfort, and will in the end be better off. The future is in the hands of the young men, and success is sure where there is enterprise and industry. The Farmers' Institute is doing good work. Its future will be just what the farmers make it. Union is strength. The farmer of the future will take his place in the front rank of men. To do so he must be educated. Nowadays it isn't always the man who works the hardest that makes the most money. The increased use of machinery, the rapid growth of the dairy and stock-raising interests, and the markets opening up for our farm produce of all kinds, have entirely altered conditions which prevailed a few years ago, and make a higher order of intelligence and wider information necessary. The country home should be the ideal home. While the city may have more luxuries, it lacks the quietness and seclusion necessary to make the home what it should be.

One matter we farmers should bring to the notice of our Government is the damage done to sheep by dogs. A good, well-trained dog is all right, but it is time the farmers should press the matter on the notice of the Government, so that the law may be amended in the direction of reducing this nuisance, especially regarding dogs kept in towns and villages.

On the platform were Hon. L. P. Farris, Commissioner of Agriculture; Ald. Everett, Acting Mayor; Prof. Cumming, of the Agricultural College, Truro; Prof. Klinck, of the Macdonald College, St. Anne de Bellevue; Mr. T. A. Peters, Deputy Commissioner of Agriculture, and others.

After the President's address, Ald. Everett, on behalf of the Mayor, Dr. McNally, who was unavoidably absent, welcomed the farmers to Fredericton. As an old farmer, he knew something of the joys and pleasures of farming, also something about the drudgeries; but he was glad to know that, owing to the improved methods of cultivation, the latter are gradually but surely becoming a thing of the past. Agriculture towers above all other pursuits, and there could be no doubt that exchange of thought, such as is furnished by these and kindred meetings, was doing great good to the farmers of the Province.

Hon. L. P. Farris, Commissioner of Agriculture, gave his annual address before the association. Mr. Farris spoke of the past season as a trying one, owing to the extremely dry weather which prevailed during the growing season, especially throughout the middle and eastern sections of the Province, causing a shortage in these sections in the grain and root crops. Notwithstanding this, he was glad to be able to report that there was an increased production in all crops, with the single exception of potatoes. Of wheat there were 406,853 bushels grown, with an average of 19.5 bushels per acre; this being an increase for 1905 of 2,000 bushels. Oats, 5,695 bushels, with an average of 29.2 bushels per acre, being an increase of 209,000 bushels over 1905. In barley, 99,355 bushels, a yield of 23.2 bushels per acre, being an increase of 2,500 bushels for 1905. Buckwheat, 1,179,998 bushels, an average of 20.4 bushels per acre, being an increase of 23,000 bushels over 1905. Turnips, 2,760,932 bushels, an average yield of 497.6 bushels per acre, being an increase of 135,500 bushels for 1905. Potatoes, 5,352,972 bushels, an average yield of 135.1 bushels per acre, being a decrease of 165,000 bushels over 1905. This decrease was entirely in the sections referred to.

DAIRY INDUSTRY.

The dairy industry was also handicapped to a certain extent from the same cause as injured the crop conditions, viz., very little rain during the summer months, which caused a shortage in the pastures, thereby reducing the milk supply; but in spite of this, the high prices that prevailed made the value of the product of cheese and butter made in factories during the season of 1905, \$8,106 more than the former year. The total make of cheese during the season of 1905 was 1,320,858 pounds, which sold at an average of 11.7 cents per pound.

The total amount of butter made in factories in 1906 was \$373,963. Ten years ago the total amount

of the product of cheese and butter made in factories in the Province was only \$76,151.

ASSISTANCE TO SCHOLARS AT AGRICULTURAL COLLEGES.

He was glad to say that the assistance given to young men attending the agricultural colleges, by paying their transportation expenses, is having a good effect. Twenty-one students attended the recent short course at the Truro Agricultural College.

ILLUSTRATION ORCHARDS.

The illustration orchards set out in various parts of the Provinces are, with very few exceptions, being well cared for, and are resulting in a good deal more interest being taken in the care and management of orchards. There are now twenty of these orchards established, and the work will be continued next year.

He would like to appeal to our fruit-growers, that they would, in picking their fruit next fall, select good samples of their apples and send an exhibit to the Maritime Fair at Amherst. If the exhibits were more general, and if more care were taken in selection, New Brunswick apples would compare very favorably with anything from Nova Scotia.

POULTRY PRODUCTION.

Prof. Klinck next read a paper for Mr. Baxter, of Andover, who was unable to be present.

Poultry-raising was an industry that did not at present receive the attention it deserved. It was not sufficient to simply be able to supply the home market, but farmers ought to so increase their production as to be able to ship their surplus produce to the British markets. Our main supply of poultry came from the small farmer, whose average flock was fifteen or so, though the flock ought to be increased to 40 or 50 head. What the creamery organizations were doing for butter and cheese, the fattening stations should do for poultry. It should collect poultry from its patrons and pack and ship them to the foreign markets. Poultry-raising was in its infancy here compared with other places, and there could be no doubt that it was a great mine of wealth when properly attended to.

He thought the Government ought to come to the assistance of the N. B. farmer in the matter of poultry-raising in the same way as it had done for dairying. The best results which had come under his notice were obtained at the Maine State Poultry Farm at Orono. Here 1,000 hens are kept, and by using 200 trap nests they were able to spot the best layers without difficulty. Those hens which laid 160 eggs and over per year are kept for breeding, and are mated with birds whose mothers have laid 200 eggs. This method of selection has resulted in increasing the average number of eggs per hen from 120 to 144 in their pullet year. Professor Gowell, who was in charge of this station, had been trying experiments with the dry-mash and hopper system of feeding, and was so satisfied with the results that he found himself able to keep a flock of 2,000 hens in one pen 300 feet long, and divided into 20 rooms; and one man was fully able to properly attend to the wants of the whole lot. In conclusion, he advised farmers to urge upon the Government the advisability of establishing a poultry station either at Fredericton or elsewhere, where proper plant and appliances could be placed, and where the young men and women of the Province could avail themselves of the educational advantages thereby afforded.

SHEEP-RAISING.

Prof. Cumming characterized the sheep-raising industry as one of the most important branches of the farming business, and second only to beef-raising. The Maritime Provinces are admirably adapted for sheep-raising, and our local markets are by no means yet overdone—and we always have the British market to supply, which cannot be overdone. Sheep-raising is a profitable industry, and is one which can be carried on at less expense in money and labor than almost any other branch of farming. We have not as yet begun to realize our possibilities in this direction. In Nova Scotia, for instance, there is one sheep for every 35 acres of land; in New Brunswick, one in every 98; in P. E. Island, one in every 11; and in Great Britain, one to every acre. These figures show that our possibilities are not appreciated.

Farmers give various reasons for not keeping sheep. First, because they don't pay. This is hardly the fault nowadays, because we see intelligent farmers taking up this branch of farming, and that class of man who would be glad to pay seven cents a quart for clean milk—milk produced by clean, healthy animals,

Secondly, the difficulty of fencing. It is true that sheep require a better fence than some other kinds of stock. But this is not much of an excuse, as every good farmer keeps his fences in order, and, as against the fencing, they require only cheap buildings for shelter. Thirdly, they are hard on the pastures. There is a certain amount of truth in this, but it is scarcely fair to the sheep if a man's pastures are already well stocked before, to lay the extra blame on the sheep. Sheep being omnivorous eaters, will eat up all the weeds and clean a good deal of land which is otherwise in bad shape. Fourthly, the dog nuisance. This is the principal reason given by farmers for not keeping sheep, and in a good many instances there is a certain amount of truth in it. Now, in New Brunswick you have a better law than in any other Province in Canada regarding the dog nuisance.

Generally speaking, to make sheep-breeding a success, the great secret is proper management. There is no doubt that sheep are the easiest kept stock on the farm, and there is no kind of stock which will more readily respond to good care. It only requires 9 lbs. of dry feed to make one pound of mutton, whereas it takes 13 pounds of similar feed to make one pound of beef. If they are to be profitable they must have good pasture. It is useless to expect them to thrive on the bare hillside. They require less grain than other stock to do well, but they need good succulent food, such as rape and roots. If any man purposes going into the sheep business, do not begin in an extensive manner; go quietly and feel your way, and as you get more experience and become accustomed to them, increase your stock. As to what breed to keep, this does not require much discussion. All the different breeds, be they long-wooled or short-wooled, are profitable, but the question of which breed is of small importance compared with care and feed. The chief thing is to take one breed and keep to it, and get hold of a good book on sheep-breeding and read it and profit by the information it contains.

A lively discussion on the dog question followed, in which Messrs. Hubbard, Fawcett and Tompkins took part. Mr. Justice Hannington suggested the adoption of a resolution, that the law is not sufficient to protect the sheep industry in its present state, and asking that it be remedied. The sheep industry is at present one of the most important in the country, and he was thankful that he had had the privilege of being brought up on a farm and amongst sheep most of his life. He could hardly agree with Prof. Cumming, that any kind of sheep would do to keep. He thought very strongly—and his opinion was borne out by some prominent English breeders—that either the Leicester or the Shropshire was the better breed for this country; in fact, there is very little finer mutton than is produced by the Shropshire sheep. It all depended, however, on the way they were kept and the attention bestowed on them. They will do well on any reasonable kind of pasture, and they are the greatest scavengers of weeds there are on the farm. He was entirely in sympathy with the previous speakers on the dog question, and the best remedy for the nuisance, in his opinion, was the shotgun.

RESOLUTION ON DOG NUISANCE.

Mr. Bliss M. Fawcett then moved the following resolution: "That this association ask the Local Government to have a law put on the statute book that will be more protection to the owners of sheep from the ravages of dogs, and we ask this, not in any way to reflect on any law now in force, but to strengthen the same, as at the present time no material good is obtained." This was put to the meeting, and carried by 12 votes to 9.

PROF. KLINCK ON SEED SELECTION.

Prof. Klinck said that this was a subject of great importance to all farmers, no matter what branch of farming they were engaged in. It was useless to take the result of one or two years of seeding; it requires five or six years continuous planting to really ascertain whether the seeds sown were suited to the particular locality. The size of seed sown had all to do with the resulting crop, and the results of sowing large plump seed was marked by a larger and more profitable crop. There is no grain which responds so readily to large seed as will oats, though the same principle applied to all other kinds of grain to a greater or less extent. In the case of mangolds, for instance, by the use of large seed he had obtained a crop of 33 tons, while from smaller seed only 29 tons. In the case of Swede turnips the difference was still more marked, as

from large plump seed a crop of 17 tons of fine roots was obtained, whereas from the use of undersized seed only 8 1/2 tons was the result.

It was highly desirable that only the best seeds should be sown, and farmers should see that their seedsmen supplies only the best. On receiving your seed for the year, he would advise farmers to carefully examine them, and if necessary run them through a sieve or fanning mill, and discard all the small and undersized seeds, and the result of using only the largest seeds would amply pay for the trouble involved.

If attempting to improve grain on soil not suited for the crop, one will have an uphill job in any event, and the best results can be obtained by change of seed; but on earth suitable for the crop, the lecturer advised the use of the same seed year by year, using the fanning mill to get only the best seeds.

The process of selection of the fittest applies just as forcibly in the case of seeds as of live stock, and although by the use of the fanning mill and sieve we get the largest grain, yet the process of selection will be used to further advantage if we walk through our growing crop, taking the largest and finest heads of grain and using the grains from these heads for seed.

THE DOG NUISANCE.

Mr. Alward reported that the committee on the dog question appointed to confer with the Minister of Agriculture had met, and resolved to ask the Minister to use his influence with the Government, with the view of bringing about a change in the law, so that the power now vested in the municipal council of suspending that provision of the Act relating to the tax on dogs on the petition of 15 taxpayers, be annulled.

OFFICERS ELECTED.

President, H. H. Smith, Hoyt Station; Vice-President, Rev. M. P. Babineau, St. Jacques; Recording Secretary, B. M. Fawcett, Sackville; Corresponding Secretary, T. A. Peters, Fredericton; Treasurer, Harvey Mitchell, Sussex.

SOLOMON'S PLAN.

I am a reader of your valuable paper, which I would not like to do without. We get quite a lot of papers, but the family, including both boys and girls, like to get hold of "The Farmer's Advocate," as there is something interesting in it for all of us.

ANOTHER SUCCESSFUL SALE OF HOLSTEINS.

Successful beyond expectation, was the first annual draft sale of Holstein cattle, brood sows and carriage horses, held by Geo. Rice, at Annandale Stock Farm, Tillsonburg, Ont., on Wednesday, February 27th. Mr. Rice is a man of generous ideas, and when he undertakes to make a cake he does not spoil it for the lack of a spoonful of shortening.

The sale was held on the drive floor of the immense brick barn, and though plank seats were ranged tier upon tier, amphitheatre like, every foot of sitting and standing room was so packed when the sale began that few could obtain a fair view of the animals under the hammer.

The stock was well brought out, and of a high standard, representing the fruits of twenty years' experience as a breeder. Bidding was strictly bona fide, and the whole plan on which the sale was inaugurated, such as to guarantee the success of future auctions.

The highest-priced animal was a six-year-old cow, called Rose Rattler, purchased by W. D. Breckon, of Bronte, for \$500. The total of 32 head of pure-breds,



J. W. Sangster.

Secretary Clydesdale Horse Association of Canada.

including a good many calves, brought \$5,315, or an average of \$166.09. Of this the 19 cows and heifers realized \$4,335; average, \$228.16. Thirteen bull calves, all but three being under twelve months old, brought \$980, an average of \$75.39. Ten grade sows averaged \$29.95 apiece, and a carriage mare sold for \$205. An old grade cow and a couple of heifers brought the total proceeds up to practically \$5,900, which exceeded the proprietor's calculations by nearly a thousand dollars.

FEMALES.

- Starlight Maid; W. E. Thompson, Woodstock, Ont. \$175
Rosalind Hacker; S. Macklin, Streetsville..... 485
Minnie R.'s Countess; W. D. Breckon, Bronte..... 230
Corinne Albino De Kol; J. S. McCannell, Milton... 235
Rose Rattler; W. D. Breckon, Bronte..... 500
De Kol Houwtje; Elmer Mott, Mount Vernon..... 150
Clifden Crowningshield Expectation; R. A. Penhale, St. Thomas..... 245
Calamity Jane Duchess 2nd; W. D. Breckon, Bronte 205
Rhoda Crowningshield Colantha; Fred Carr, St. Thomas..... 220
Bleske Aconeth; J. G. Blackmore, Gobles..... 155
Carrie De Kol of Howell; Geo. Robertson, Almonte 200
Clarice Clothilde 2nd; W. D. Breckon, Bronte..... 185
Cherryvale Winner; W. D. Breckon, Bronte..... 200
Iosco De Kol; H. Burrill, Holbrook..... 155
Lady Agnes of Avondale; R. C. Walker, Villa Nova 155
Elzevere Barnum 2nd; A. McIntosh, Arkona..... 205
Eunice Clay Butter Girl; J. S. McCannell, Milton 215
Countess Wayne of Ferndale; W. E. Butler, Norwich 215
Belle Dewdrop 2nd; Walburn Rivers, Folden's..... 205

MALES.

- Victor Butler Baron (b., Mar. 30th, '06); Geo. A. Leslie, Listowel \$110
Calamity Canary Prince (b., Nov. 11th, '05); Major Fred Ferguson, Inverary 140

- Wopke Houwtje (b., May 21st, '06); T. J. Lowrey, Highland Grove \$ 50
Houwtje Butter Baron (b., Mar. 6th, '06); O. H. Evans, Aylmer, Ont. 80
Houwtje Albino Butter Baron (b., Mar. 16th, '06); Marshall & Knowles, Carholme 70
Corinne's Butter Baron (b., Feb. 5th, '06); M. Moore, Springfield, Ont. 60
Gaza De Kol Calamity (b., Feb. 23rd, 1906); Fred V. Heeney, Ingersoll, Ont. 55
Irene Butter Baron (b., Mar. 19th, '06); John A. McArthur, Ash 105
Count Posch Calamity (b., Jan. 2nd, '07); R. A. Wilson, Milton 70
Prince Calamity Wayne (b., Jan. 1st, '07); Geo. Robertson, Almonte 75
Modest Butter Baron (b., Mar. 16th, 1906); A. Mitchell, Renton 70
Bull calf, out of Clarice Clothilde 2nd; Jas. Robinson, Mount Pleasant 50
Bull calf, out of Iosco De Kol; Wm. Simmons, New Durham 45

A NEW AGRICULTURAL EDUCATION SCHEME.

An educational experiment of much interest to the agricultural world is about to be made in the high schools of Ontario. This experiment is simply the introduction of classes in agriculture, taught by recommended graduates of the Ontario Agricultural College, in those schools whose trustees are willing to try the innovation.

The teachers selected for carrying on the work will be men who have taken high standing at the Ontario Agricultural College, and who are qualified, pedagogically, for the work.

The teachers will devote their time exclusively to agricultural work. If their time is not monopolized in their respective high schools, it is to be available for assisting or encouraging agricultural and nature study in the rural schools, and in sending the Agricultural Department information as to pests, new and interesting developments in connection with farming, etc. In fact, they will be the local representatives of the Department as well as teachers.

CROPS, ETC., IN ANNAPOLIS COUNTY.

This County gave in 1906 one of the smallest grain crops in some years, and as a result millfeeds are being used very freely. Roots are being fed more largely every year, better barns are being built, and we are glad to see better cattle in the stalls.

One man who aspires to dairying, proudly told that his four cows made 600 pounds butter a year, while another neighbor, after informing me that "there is money in cows," said that his two cows made \$16 for him last year, over and above what was used in the family of three.

The stock depletion of 1905 is still felt, both in prices and scarcity of stock. Very little beef is moving, and good prices rule. Farmers are stocking up for two years, with a tendency upward. For the same reason of recent under-production, horses and pigs are still high, though we must surely see lower prices in the near future.

R. J. MESSENGER.

If J. J. E., of Middlesex Co., Ont., will send us his name and post-office address, by which we may make sure he is on our subscription list, his legal query will receive attention.

THE INSURANCE COMMISSION'S REPORT.

The Royal Commission appointed by the Dominion Government to enquire into the conditions of life insurance in Canada, has made its report. In it is contained a draft of an insurance bill, embodying its recommendations to Parliament. As to the investigations made by the commission, it may be said that it revealed no such flagrant state of affairs as was found in the United States. Abuses develop more slowly here than there. Our neighbors discover a cancer eating into their vitals and use the knife. That prompts us to make a diagnosis in the same organ of our system, and we are thus able to lance the lesion in an early stage. Our insurance commission has probed some abuses which, unmolested, would have assumed larger and larger dimensions. Just here it is enough to note that the commission's findings reveal some public men in a rather unenviable light, and unless they can vindicate their action more amply than now seems likely they deserve nothing less than ostracism from public life. The insurance companies, as a whole, are none the worse for their experience under the limelight. Some have come through the ordeal with reputations untarnished. Policyholders, present and prospective, have been remiss in duty to themselves if they have failed to scrutinize the reports of the investigation as published in the press from time to time.

Following is a digest of the clauses of the insurance bill recommended by the commission:

The proposed new act is contained in a document of 76 octavo pages, and embodies the chief principles contained in the New York State law.

Quarterly statement to be submitted regarding stocks and bonds purchased.

Provision is made for inspecting the head offices of United States companies regarding Canadian business.

All policies to be valued by the Superintendent of Insurance once in three years.

All bonuses or additional commissions for new or renewal business are prohibited.

Companies holding securities which the act would render invalid, to dispose of them within a certain date after the passing of the act.

Federal or Provincial stocks the only kinds companies to be permitted to invest in.

No life insurance company to be interested in any way, directly or indirectly, with the promotion of another company.

If the Superintendent of Insurance believes real estate held by any company is over-valued, he may write off an amount.

The payment of rebates of any kind to be forbidden under a penalty of \$1,000.

PERTH AND ABERDEEN SHORTHORN SALES.

The annual spring sales of Shorthorn bulls at Perth and Aberdeen, Scotland, in the week ending February 23rd, were very successful, the average for 310 bulls at Perth being £63 17s., and at Aberdeen, £27 14s. for 210 bulls. The highest price of the week was 1,000 guineas (\$5,220), for Achilles, bred by Bruce of Heatherwick, the first-prize senior yearling bull at Perth. He was started at 200 guineas, and captured by Mr. Duthie, of Collynie. He is a red, got by the Collynie-bred sire, First Fiddle, and of the Augusta family; calved December, 1905. Mr. MacLennan and Mr. Miller, both of Buenos Aires, and Mr. Durno, of Westertown, were all after him, but Collynie proved longer winded than his rivals, and secured the plum. The second-prize bull in this class, Silver Pride, bred by Mr. McWilliam, by Pride of Avon, started at 100 guineas, and fell to Mr. MacLennan at 300 guineas. In the junior yearling class the first-prize bull, Spi Charmer, by Spicy King, bred by Mr. Anderson, Saphock, sold for 900 guineas to Mr. Hankins, London; Diamond Marksman, by Diamond Mine, bred by Mr. Durno, Westertown, for 500 guineas, to Lord Tredegar; Royal Victory (Mr. Durno's), by Royal Mint, to Sir John Gilmour, for 600 guineas; and Diamond Banner (Mr. Durno's), for 580 guineas, to Mr. MacLennan. The Ballechin group of three averaged £133, and the three from Westertown £465 10s. Heatherwick had an average of £318 for four, and Westertown an average of £258 16s. for eight.

PROF. HENRY RESIGNS.

W. A. Henry, Dean of the Wisconsin College of Agriculture and Chief of the State Experiment Station, has tendered his resignation, to take effect July 1st. The cause is ill-health. Prof. Henry has been connected with the University for twenty-seven years, having been elected Professor of Botany and Agriculture in 1880. He is the author of Feeds and Feeding, a standard American work on the subject of which it treats. He is one of the stalwart figures of American professional agriculture.

Hon. L. J. Tweedie, Premier of New Brunswick, has been appointed Lieutenant-Governor of the Province. The press despatches state it is expected that he will call upon Attorney-General Pugsley to form a new Government.

Please find enclosed \$1.50 for my renewal for "The Farmer's Advocate" for the coming year, as I cannot do without it for twice the money.
Bruce Co., Ont. WM. B. GRANVILLE

MUNICIPAL IMPROVEMENTS.

We present herewith a synopsis of an address delivered by R. H. Harding, at a Farmers' Institute Club in East Middlesex, Ont. The points raised are well worthy of discussion:

I have thought for some time past that Canada has not made advancement along municipal lines in keeping with this enlightened age. I presume the principal cause is that we farmers as a class accept the laws and customs of the past without making protest, or suggesting anything better. We should be ever ready to advance along all legitimate lines. To this end we purpose discussing what we think would be improvements from a municipal standpoint, and I believe several changes can be made without any special legislation, though, perhaps, the Municipal Act would require to be amended to allow of some others being made.

The first change that I will refer to is with reference to our municipal elections. Would it not be an improvement to elect our council boards for a term of three years, instead of yearly as at present? This system would, I think, be especially advantageous so long as the councillors act as commissioners, as they do in the majority of cases to-day. If a man is elected for three years he has a chance to plan his work on a systematic basis, do it more permanently, and get it done more cheaply than when done in dribs and drabs—here a little, and there a little. He would, therefore, be able to give a better account of moneys spent when his term in office expires. Under the present system we are continually training new men for the work, and sometimes turn good ones out of office before we really know their value. Along another line, I often wonder whether it is necessary for an assessor to travel over a township oftener than once in five years. If it is necessary, the law should be so changed that the work could be done in May and June, when assessors could see what they are valuing to very much better advantage than in the winter or early spring, when very little can be seen but snow or mud and water.

While discussing the assessing question, we might discuss the assessment law. Is the present law one that encourages the enterprising farmer? I say farmer, because I know how it affects him better than I do how it affects other property holders. I think most farmers will agree with me, that any law that makes it necessary to tax every additional improvement that you make (even though you find it necessary to insure that improvement) is not a good law to promote the erection of the best class of buildings, or even beautifying the farm with trees, etc. I admit it is a difficult problem to solve. For argument's sake, I will lay down a plan upon which I invite a free discussion. Suppose we allow that a good average farm (I mean the land, without taking into consideration shade or ornamental trees or buildings) is worth \$35 per acre, and allowing that that farm is equipped with the worst class of buildings, value them at \$1,000, which would make the total assessed valuation \$4,500 per 100 acres. Now, suppose the next farm is equal in quality of soil, put on the same valuation, viz., \$35 per acre, and even though the buildings and trees are of the best, the assessment on such buildings could not exceed \$2,000, making the total assessment for the 100 acres \$5,500; or, to make the system short, assess the naked land at full value and put the minimum valuation on farm buildings and improvements, \$1,000, and the maximum valuation \$2,000.

Is it necessary for a collector to travel over the township at all? A slight increase in the treasurer's salary, sufficient to pay for the trouble and expense of mailing tax notices, etc., to every property owner should cover the expense. Of course, in case of making a change of this kind, the owner would require to be held responsible for the taxes, instead of holding tenants responsible. Another change that I am satisfied would be an improvement, and which is quite within the power of council boards, would be to adopt certain systems of road building, and to insist upon commissioners and pathmasters building accordingly—I mean according to the requirements of the different roads, as very heavily-travelled roads require to be much wider than what we might term the average road. I think many of our average roads are built too wide; the wider the road the more work is required on it to keep it crowned so that water will not lie on it. The average road should be about 24 feet from outside to outside of ditches, and should be graded with a gradual slope from bottom of ditches to center of road to about two feet of crown, which, when gravelled, as should in every case be done immediately, would have about 2½ feet of crown; the wider roads should be crowned about the same proportion. Any place requiring deeper ditches should be tiled. I sometimes wonder if it would not pay to tile many of our roads on one side of the driveway. A judicious use of the much-abused grader or split-log drag in shaping the roads, so that the heavy rains would quickly run off, would be of great benefit, but as I have suggested, no fresh grading should be done unless it is to be immediately gravelled.

While on the subject of road-building, we might discuss the shade-tree question, as it is generally conceded that the trees along roadsides are a hindrance to keeping the roads in good repair. How shall we remedy it? I know some will say cut them down; with this idea I do not agree, but would rather prefer to see a row of trees on both sides of all roadways. They not only beautify the country, but are a protection to

some extent during storms, and are also shade for stock. I think more timber is very needful in Ontario, if we expect or wish to escape tornadoes, etc., which have already played great havoc in many parts of this country. I believe some encouragement along the line of timber-tax exemption, or along any line that would cause land owners to spare and protect their timber would show very beneficial results in a few years. With reference to the shade trees along roadsides, I think it would be for the benefit of the roads if the council boards would request, or, if necessary, compel people to keep their trees along roadsides trimmed up 10 or 12 feet from the trunk, and not to allow anyone to plant such trees upon the road allowance—at least not more than a foot or two. This would give the sun and wind a fair chance to dry up the roads, and would remove a great deal of prejudice that now exists against trees along highways. The suggestions made only skim the surface of the matters referred to. My aim is to draw out the ideas of others, rather than to make statements and ask acceptance of them without discussion.

TEACHERS' SALARIES AND THE FARMER.

Editor "The Farmer's Advocate":

During the past few weeks readers of "The Farmer's Advocate" have been much interested in the discussion on the new School Act, and as this is a question which concerns not only the present day, but also the welfare of the people of this Province in the distant future, we should be very careful to consider what the result will be, as well as the means used.

Vox Populi expresses the sentiment of the people of this section of the country when he says that the objection raised is not on account of the extra tax, but because of the extra rate, with no visible value received. Wages of teachers, like everything else, have been regulated in the past by supply and demand. The farmers of Ontario came through a number of very hard seasons only a few years ago, many failing to make ends meet, and as a result lost their property. A few went out West, but many more of our best citizens went south, where at that time prospects were brighter. Did the Government aid them so that we might retain their much-needed services? No; the Government wisely did all they could for trade, and left matters to right themselves, and "they're coming back to Canada to-day." But Sandy Fraser would have the Government raise the salaries high enough so that the teachers will not go out West or over to Uncle Sam's domains. He will also notice that the best of our hired men have gone and continue to go out West. Why should not the Government raise these men's wages and pay a certain per cent. out of its revenue? The Province will find that the best policy is to let those go who will not stay without being bonused. During the time of financial depression just mentioned, teachers' salaries suffered, as well as farmers' bank accounts. But times have changed. We have been having a number of fat years, and it is a very poor farmer who is not adding to his bank account, or its equivalent, viz., improved homes, stock and farms. But how have the teachers shared in this prosperity? Have they continued to receive such a small pittance that they cannot keep up with the times? No. In five years the salary increased 12% in this school section, and would increase at a greater ratio, because of the many other remunerative occupations now open to young men and women.

Vox Populi rather underestimates a first or second class certificate when he calls it an ordinary education. But "one school ma'am" puts a very high estimate, if she needs \$1,500 to get a certificate to teach a country school. As a matter of fact, I know of a young man of about twenty who has not attended a high school more than a few months, and began to teach after last holidays at \$400 per year on a second-class certificate. To require \$1,500 must be to go in for a good time, or else have a very thick skull.

Our "School Ma'am" correspondent also says that the domestic servant girl of her acquaintance has her holidays, and goes to Muskoka or elsewhere with her employer every summer. Well, the school teachers in Prince Edward County get a few holidays during the year, and they go to Toronto or Ottawa, or the Northwest, and without having their fare paid by an employer, whom they must please. As to dressing as their position demands, it does not demand any more than the farmers' daughters, but they are often better dressed.

"School Ma'am" seems to think teachers' moral qualifications place them and clergymen on a plane above the farmer. Being unmarried, and still under twenty-five, I have been well acquainted with a few teachers, and their conception of right and wrong was no higher than that of the average farmer's daughter. As to the character of some parents being such that her friends would not care to mingle in society with them, there are those who would not care to associate too much with some teachers. And then she says, I wonder what Vox Populi would think of a teacher who smoked, swore, gambled, or drank to excess? In answer, what does the public think of a farmer or his son who indulges in these forms of intemperance?

A FARMER'S SON

Dr. Oronhyatekha, formerly Chief of the Mohawk Indians, and widely known as the Supreme Chief Ranger of the Independent Order of Foresters, died in Savannah, Ga., on Saturday, March 2nd.

MARKETS.

TORONTO.

LIVE STOCK.

Receipts of live stock at the Junction and City markets during last week were moderate. Trade was not as brisk for shipping cattle and common butchers'; but prime butchers' were as scarce, and as dear as ever. On Monday, at the Junction market, receipts of cattle numbered 1,300 head. Market was easy, but prices remained unchanged. Sheep, lambs and calves were firm, at prices quoted below. Hogs, \$6.75.

Exporters.—Prices ranged from \$4.90 to \$5.35, the bulk selling at \$5 to \$5.25. Export bulls sold at \$3.75 to \$4.50.

Butchers'.—Prime picked butchers', 1,050 to 1,200 lbs. each, sold at \$4.75 to \$5, the demand being greater than the supply; several loads of export cattle being bought at \$5.25 per cwt. for butcher purposes; loads of good, \$4.30 to \$4.60; medium, \$3.90 to \$4.20; cows and common butchers', \$3 to \$3.80.

Milkers and Springers.—The market for milkers and springers was strong. The quality of cows offered, generally speaking, was not as good as has been coming, and prices have ruled accordingly. The bulk sold at \$40 to \$50, with a very few at \$55 to \$60. Some common to medium sold at \$25 to \$35 each.

Veal Calves.—Receipts have increased. Prices firmer at \$3.50 to \$7.50 per cwt., the latter price being for a few prime, new-milk-fed calves.

Sheep and Lambs.—Receipts were light; prices firm, and trade brisk for all of good quality. Export ewes, \$4.75 to \$5.25; rams, \$4 to \$4.50; yearling lambs of prime quality sold from \$6.75 to \$7.25; common lambs, \$5.50 to \$6 per cwt. Spring lambs, a few of which are beginning to come forward, sell at \$8 to \$10 each. Those offered were of the Dorset breed, dressing about 35 to 40 lbs. each.

Hogs.—Receipts light; prices firmer at \$6.90 for selects, and \$6.65 for lights and thick fats. These quotations are on the fed-and-watered basis.

Horses.—Business at both the Repository and Canadian Horse Exchange, for the past week has been both large and brisk, although prices have not been as high as some farmers could desire. Several buyers have been down from the Northwest, and shipments of carloads to Manitoba and the Northwest Provinces is a daily occurrence. These are for the railway construction companies, but there is also a good demand for delivery and driving horses of good quality. The demand is mainly for good, sound, active chunks, which generally bring good prices. Expressers capable of standing steady steady work also command ready sale at fair prices. The following were the prevailing prices at the Exchange for the past week: Heavy-draft horses, weighing 1,450 to 1,700 lbs., \$200 to \$250; general-purpose, 1,350 to 1,450 lbs., \$160 to \$200; delivery horses, weighing 1,100 to 1,450 lbs., \$140 to \$175; matched carriage pairs, 15.2 to 16 hands, \$350 to \$500; single cobs and carriage, 15 to 16 hands, \$160 to \$225; single roadsters, 15 to 16 hands, \$150 to \$175; sound workers, \$60 to \$100; sound drivers, \$75 to \$125.

BREADSTUFFS.

Grain.—Wheat—No. 2 white, 72½c.; No. 2, mixed, 72c.; No. 2 red, 73c., sellers; spring wheat, No. 2, 70c.; No. 2 Goose, 65c.; Manitoba, No. 1 Hard, 87½c.; No. 1 Northern, 86c.

Corn.—No. 3 yellow American, 52½c. to 53c., on cars, at Toronto; Canadian, 45½c. to 46c.

Oats.—No. 2 white, 39c.; No. 2, mixed, 38½c.

Rye.—65c.
Barley.—No. 2, 51c.; No. 3, 49c.
Peas.—No. 2, 80c.
Buckwheat.—55c. to 56c.

Bran.—Still scarce at \$22 to \$22.50, at city mills. Shorts also scarce at \$23 to \$24 per ton.

Flour.—Manitoba patent, \$3.85, on week, at Toronto; Ontario, 90 per cent. patents, \$2.67 for export; Manitoba patent, special brands, \$4.50; strong brands, \$4.

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COUNTRY PRODUCE.

Butter.—Market firmer, and prices higher. Creamery, pound rolls, 28c. to 30c.; creamery boxes, 26c. to 27c.; dairy, pound rolls, 23c. to 24c.; tubs, 21c. to 22c.; bakers' tub, 19c. to 20c.

Eggs.—New-laid, 30c. to 32c.

Cheese.—Market strong. Large, 14c.; twins, 14½c.

Honey.—Strained, 12c. per lb.; combs, \$2.60 to \$2.75 per dozen sections.

Evaporated Apples.—9c. per lb.

Potatoes.—Potatoes are scarce, with market firmer. Car lots of New Brunswick Delawares, 90c. to \$1 per bag, on track, at Toronto.

Poultry.—Receipts continue light; market firm, as follows: Turkeys, 15c. to 17c.; geese, 11c. to 12c.; ducks, 12c. to 14c.; chickens, 12c. to 14c.; old fowl, 9c. to 10c.

Hay.—Baled, market strong. No. 1 timothy, \$11 to \$12 per ton; No. 2, \$8.50 to \$9 per ton for car lots, on track, at Toronto.

Straw.—Baled, \$7 per ton, on track, at Toronto.

SEEDS.

Prices offered are unchanged as follows: Alsike, fancy, \$7; alsike, No. 1, \$6 to \$6.25; alsike, No. 2, \$5.75 to \$5.85; alsike, No. 3, \$4.65 to \$5.10; red clover, No. 1, \$8 to \$8.25; red, No. 2, \$7 to \$7.25; timothy, No. 1, \$1.50 to \$2.00; timothy, No. 2, \$1.20 to \$1.40.

HIDES.

E. T. Carter & Co., 85 Front St., have been paying the following prices: Inspected hides, No. 1 steers and cows, 10½c.; No. 2 steers and cows, 9½c.; country hides, cured, 9c.; country hides, green, 8c. to 9c.; calf skins, No. 1, city, 13c.; calf skins, No. 1, country, 12c.; sheep skins, each, \$1.30 to \$1.40; horse hides, \$3.50 to \$3.75; horse hair, No. 1, per lb., 30c. to 32c.; tallow, per lb., 5½c. to 6c.

CHICAGO.

Cattle.—Plain to best steers, \$4.25 to \$6.85; heifers, \$2.65 to \$5.25; cows, \$3.25 to \$5; bulls, \$3 to \$4.50; stockers and feeders, \$2.50 to \$5.

Hogs.—Choice heavy shipping, \$7 to \$7.05; light butchers', \$6.95 to \$7; light mixed, \$6.95 to \$7; packing, \$6.50 to \$7; pigs, \$5.75 to \$6.85; bulk of sales, \$6.95 to \$7.

Sheep and Lambs.—Sheep, \$4.75 to \$6; lambs, \$6.50 to \$7.50.

BUFFALO.

Veals.—Active, and 25c. lower; \$4.25 to \$9.50.

Hogs.—Heavy and mixed, \$7.40; Yorkers, \$7.40 to \$7.45; pigs, \$7.45 to \$7.50; roughs, \$6.60 to \$6.75.

Sheep and Lambs.—Sheep, active and steady; lambs, \$5 to \$7.70.

BRITISH CATTLE MARKET.

London.—Canadian cattle are quoted at 11c. to 12c. per lb.; refrigerator beef is firmer at 9c. to 9½c. per lb.

MONTREAL.

Live Stock.—Although the Lenten season is now in full force, there appears to be a splendid trade in all sorts of live stock. Receipts of all kinds are good for this time of year, and there is a demand, at good prices, for everything offered. Choice heaves sold at 5c. to 5½c. per lb.; fine at 4½c. to 5c.; good at 4½c. to 4¾c.; medium, 3½c. to 4c., and common at 2c. to 3c. Not a very large number of sheep and lambs was offered on the market, and prices showed little or no change, at 4½c. to 4¾c. for sheep, and 6c. to 6½c. for lambs. The offering of calves is very light, and the quality is quite poor, prices holding steady, however, at \$3 to \$10 each. Hogs show practically no change. Prices are steady at about \$7.25 per 100 lbs., according to quality, the recent alterations in the English market having no effect here, notwithstanding the claims of packers that prices here are too high.

Horses.—There is a good demand for heavy-draft horses, from city sources, and a fair demand for light-draft, from outside sources. It is about as hard to obtain one class as the other, and the market continues as firm as ever. Prices are practically unchanged, as follows: Heavy-draft, 1,500 to 1,700 lbs. each, \$250 to \$300 each; light-draft, 1,400 to 1,500 lbs., \$200 to \$250 each; express, 1,100 to 1,300 lbs. each, \$175 to \$225; common express, \$125 to \$150; old, broken-down animals, \$50 to \$100 each, and choice driving and saddle animals, \$350 to \$500 each.

Dressed Hogs and Provisions.—Dressed hogs are in good demand, and prices are not greatly different to those of a week ago. Fresh-killed, abattoir hogs, choice, are selling at 10c. to 10½c., while country-dressed are 8½c. to 9½c. per lb. Both qualities are in good demand. Provisions are steady, at 13½c. to 14c. for extra large hams, weighing over 25 lbs.; 14c. to 15c. for medium sizes, 18 to 25 lbs.; 14½c. to 15½c. for 12- to 18-lb. weights, and 15½c. to 16½c. for smaller. Choicest bacon is in fair demand, at 15½c. to 16c., and green and inferior-smoked at 13c. to 14c. Barrel pork is in fair demand, at \$20.50 to \$28.50 per bbl., according to quality.

Potatoes.—The market is stronger than ever, and stocks purchased a few weeks ago now show a splendid profit. A few cars bought here by an Ontario dealer, at 85c. per 90 lbs., and not yet delivered, will probably be sold to grocers at a profit of 20c. Shippers from the East are getting about 90c., on track, here, and receivers are re-selling, on track, at 93c. Merchants are selling this stock, delivered into store, bagged, at \$1.05. These prices are for finest white stock. Reds and inferior qualities are lower, proportionate to quality.

Eggs.—There is a splendid demand for all kinds of eggs, and prices are higher than ever. Dealers who, a while ago, thought they would have difficulty in disposing of all they had, no longer fear such a result, but are putting prices higher than ever. Fresh-laid Canadian stock is selling at 34c. to 35c. per doz., here, and costing possibly 31c. to 32c., in the country. The quality is very fair. United States fresh eggs are probably 33c. to 34c., and are undesirable, from all accounts, being small, etc. Selected storage stock ranges from 28c. to 33c., according to quality and quantity; No. 1, 26c. to 27c., and pickled, 29c.

Cheese.—There is not a very active demand for cheese at the present moment. The reason for this is not that the cheese is not wanted, but that the price is exceedingly high, and it is impossible that there should be much trading, as there are not more than 10,000 boxes left for sale. Holders are asking 13½c. to 14c. The latter figure is unobtainable, while the former is possibly being realized occasionally. Fodder cheese will not be made for a long time yet, as the cows are expected to come in late. It looks as though the price would open up strong, however, when the time comes.

Butter.—The tone of the market is very strong, and some claim that an advance is due about the first of March. Mean-time, choicest creameries are selling at 25½c. to 26c.; best makes, 25c., and mediums and returned butter, 24c. to 24½c. This returned butter seems to be still coming back to Montreal, but it is hardly likely that there is much more of it, as shippers would probably calculate to have everything back about this time of year in order to catch the market at

its best. The reason this butter has not been sent direct back to the port of New York, to which a little of choicest has been sent from here, is that a great difference is made there between finest and inferior, so that the latter would not be taken there at a profit. There is very little dairy, and prices are about 22c. for tubs.

Flour and Feed.—Although the car situation is far from satisfactory, it has improved considerably during the past few weeks. The conditions in the market for millfeed are most unusual, and millers hardly know what to expect. They continue to quote \$21 per ton for Manitoba bran, in bags, and \$22 for shorts, though why they should do so is difficult to say, as all the trade knows that bran can be sold on spot at \$23.50 per ton. Shorts, instead of being dearer than bran, as has hitherto always been the situation in Canada, is now actually cheaper; still, it can be sold at \$22.50 per ton, on spot. Millers' prices are possibly for future delivery. Certainly they would not guarantee delivery at the figures mentioned. Flour is only in fair supply. The demand is not very active, however, so that prices remain steady, at \$4 per bbl., in bags, for Manitoba strong bakers', and \$4.60 for patents.

Hay.—The market for hay is quoted a shade easier, particularly on the lower grades. No. 1 timothy is still \$13 to \$13.50 per ton. But No. 2 is \$11.50 to \$12, and clover, \$10.50 to \$11. The local price is still above the export.

Hayseed.—Dealers report an almost unchanged condition of affairs. Holders say they will commence to think of selling about the middle of March. Dealers are trying to get them to move a little earlier, and are offering 25c. more, at \$1.50 to \$2.25 per bush. of 48 lbs., red clover being \$6.50 to \$7.75, and alsike, \$5 to \$6.50 per bush. of 60 lbs., f. o. b. The tone of red clover is easier.

Hides, Tallow and Wool.—This market shows very little change. Hides are duller than ever, there being extremely little demand for them from any quarter. Dealers are offering, here, 9½c. per lb. for No. 3 beef hides, 10½c. for No. 2, and 11½c. for No. 1. Sales are being made to tanners at ½c. advance. Sheep and lamb skins, 95c. to \$1 each; No. 1 calf skins, 12c. per lb., and No. 2, 10c. per lb., paid to shippers. Horse hides, \$2.25 each, for No. 1, and \$1.75 for No. 2. Tallow is quoted at 1½c. to 3c. per lb., for rough, and 5c. to 5½c. for rendered. Wool is unchanged at last week's prices.

GOSSIP.

Mr. Wm. Meharey, Russell, Ont., advertises that, on April 2nd, at Ottawa, he will sell at auction 20 imported Clydesdale fillies, two to four years old, personally selected for size, quality and breeding, sired by Baron's Pride and his best sons, and other noted sires. See the advertisement, and note the date and place of sale.

Messrs. John W. McFarlane and W. H. Ford, of Dutton, Ont., breeders of Short-horns, report the recent sale of a nice dark red bull to Mr. F. G. Small, of Dutton, Ont. Their herd is headed by the very handsome and richly-bred bull, Protector, and they report their stock wintering well, including Berkshires and Southdowns.

The Scottish Farmer, of February 3rd, speaks in highly complimentary terms of the new importation of Clydesdale mares, fillies and stallions shipped from Glasgow the week before last, by Messrs. Innes, Schafer and McClary, of Woodstock, Ont., and which are to be sold by auction at the Caistor House in that town, on Friday, March 8th. The fillies and mares are two to five years old, some show mares, some in foal, nearly all long-pedigreed, and sired by such noted horses as the Darney-bred Carthusian; the 1,600-guinea Montrave Mac; the big cart horse, Prince of Johnston; the Baron's Pride horse, Dunure Castle; the noted prize horse, Prince of Millfield; the unbeaten Cawdor-Cup champion, Prince of Carruchan; the renowned Labori, a son of the champion Hfawaths, and the champion, Royal Chattan. Fourteen of the fillies are three-year-olds, 11 two-year-olds, and half a dozen or more are four- and five-year-olds, the bulk of them very thick, weighty animals, with quality to match.



Life, Literature and Education.

(Contributions on all subjects of popular interest, whether relating to the Literary Society discussions or not, are always welcome in this Department.)

THE EDUCATION OF THE FARMER'S DAUGHTER.

The following are the concluding essays upon this topic. Have any of our readers anything to say in regard to any phase of our educational system? If so, we will gladly make room for a few comments:

ESSAY III.

That "mother's influence" is perhaps the strongest factor in forming our characters, is a fact that few will dispute. A child is largely what its mother is, so therefore this discussion has a much deeper and broader scope than it would seem at first glance. The girls of to-day are the mothers of to-morrow; consequently, if their education be neglected, the succeeding generation will suffer as a direct result.

To a considerable proportion of the farmers' daughters of to-day the following conditions will apply: Public school for six or seven years, and then work at home. Labor is scarce and wages high, so as soon as they reach the age of usefulness in the home they are taken out of school. It is a deplorable condition for many reasons. Such children enter life with a heavy handicap.

Unless the love of knowledge and taste for good literature is acquired in school days, the chances are it never will be, as there is so little time or desire when the working life begins. The outlook for life of such a one must of necessity be very limited, and, as a result, we have narrow-minded people. Then, as I stated before, the children of such people have the effects to contend with.

How feeble and childish are the thoughts and actions of those who have no love for the pure in literature.

For those who have been thus unfortunate, there is a cure, slow but certain. Tersely expressed, it is this: Spare moments well applied. It is astonishing what a broad education may be obtained by spending spare moments in reading and study in literature of first quality. As someone has said, "The equivalent of a college education may be obtained by reading," and, for their encouragement, some take the fact that "many of the great leaders in the world's history were self-educated."

But the greater percentage of farmers to-day can afford both time and money to educate their children, and the question to answer is, "How to educate them for the farm, and not away from it." Some people are never satisfied to live on a farm, and to such I would say, the sooner off of it, the better for yourself and all those you have any influence over, for discontent is a wonderful thing to spread.

With the pioneer days past, and conveniences as numerous as they

are, life on the farm should appeal to a healthy-minded girl.

Now, a course of study that should help a farmer's daughter in her work and give her a healthy mind might be outlined as follows: Public school first, followed by High School for a couple of years, in which time a desire for good literature should be formed and the mind broadened by the general studies, as well as by meeting others and exchanging ideas. Then a year or two could profitably be spent at home learning the practical in farm life. If the home be pleasant and the girl's strength not overtaxed, she will probably see the advantages of the farm as a home and profession; but if you yourself sneer at farming as a calling, and make a drudge of her, then thank yourself if she leaves it when opportunity presents.

After a year or two at home she will know whether or not she is going to stay on the farm; then, a course, as given at the Macdonald Institute, or some other practical school of the same nature, would be a boon indeed. It is needless to enumerate here the advantages of such a course.

By all means have music also as one of the studies. It can be profitably studied along with other studies, and is a pleasure and recreation at the same time, and its enlivening effect on the home life is far-reaching.

A girl thus equipped should be ready to make the most of life on the farm—the course at the institute teaching her the why and how of her work, and the other studies giving her a mind rich in "the best that has been said and thought in the world," the taste for which makes life fruitful, no matter how full of toil.

Bruce Co., Ont.

ESSAY IV.

As a farmer's daughter, I should like to say a little concerning the question open for discussion, viz., "The Education of Farmers' Daughters."

If, as we believe, the future welfare of our country depends greatly upon the girls of to-day, it is very essential that the girls be trained and educated in such a way that they will be best fitted to fill the vocation—that of wife and mother—which God intended they should fill.

Keeping this end in view, I think that parents should see to it that every daughter has a public-school education, and, if at all possible, a High-school education as well. Too many fathers and mothers have the idea that a High-school education is necessary only to the girl who wishes to teach or earn her own living. Under these circumstances, it is little wonder that girls become discontented with farm life. One father, I know, was afraid to let his boy attend the O. A. C. for fear he would become dissatisfied with the old farm. I think the way to keep boys and girls on the farm is to educate them; for, though education does not consist in mere book-learning, in acquiring the latter the boy or girl is bound to become broad and liberal minded, and one who is that cannot help but see the superiority of country life. Then, too, if a girl is to

be a true helpmeet to her husband, she must be able to understand and appreciate the things which interest him (I am taking for granted the necessity of educating the boys).

After she has received the education possible for her to attain at the public and high schools, and been taught by her mother to cook and bake, and do the hundred things necessary that a girl should know how to do, and has been given as good a musical education as it is possible for her parents to give her, I think it very beneficial for her to take a course at the Macdonald Institute, if only a three-months' term. The advantages of this college course do not consist alone in the course of studies marked on the curriculum. Every girl who attends, in coming in contact with other girls of the college, and being thrown, to a great extent, upon her own responsibility, receives a very essential part of her education. To the father who thinks this too expensive, let me ask, "Is not the safest and best way of investing money investing it in one's own children?"

MARGARET ALBRIGHT.
Lincoln Co., Ont.

ESSAY V.

The first essential is a liberal education. This would mean a thorough training in all the different branches, and should be such as to develop the thinking and reasoning powers, and teach that work is honorable and idleness degrading.

(2) The care of the body; for is this not the temple of the Lord, which may be kept pure by daily communion with God. The necessity of abundance of pure air and sunshine, and strict attention to the bath and toilet; also proper exercises, in order to develop a healthy body and sound mind, should be taught.

(3) Cheerfulness; if we are cheerful and contented, all nature smiles with us, the air seems more balmy, and home happier.

Housekeeping and homemaking are two of the highest vocations in a woman's life. These would require a thorough training in the principles of domestic economy, including sanitation and ventilation, and the hygienic values of food, fuel and clothing, and what a balanced ration should be for a growing boy or girl; also the preparing, cooking and serving of foods, that they may be rendered more nutritious and appetizing. Then there is home nursing, such as of a fractured limb, or scalds, burns, sprains or frostbite, or any slight emergency.

Young women should be encouraged in the use of needles, sewing, knitting, darning; also to understand the proper care of milk, and how to make first-class butter. Recreation is always necessary to a full, rounded womanhood.

I do not mean to say that a girl should learn nothing except what she will require as a housekeeper. By all means encourage reading good books, magazines and newspapers. Let the reading be varied. There are books that are tainted with impurity; all such are to be excluded. Let there be music, if possible; also the art of entertaining well. Music is one of the most suc-

cessful agencies to interest our girls on the farm. There are the care of poultry and gardening, and the proper handling of the honeybee to make it profitable. The list is almost endless; but the hope of our country is the home, and the most important factor in the home is its women, for it is "the hand that rocks the cradle that rules the world."

"GRANDMA."
Hastings Co., Ont.

ESSAY VI.

The modern farmer's daughter should, to begin with, acquire the same education as would be necessary to fill any other position or calling. She should study the beautiful and artistic as well as the practical part of housekeeping. I would advise a course in the Macdonald Institute. She must not overlook music, as no girl's education is complete without it. She should be well versed in a few of the simple home remedies to be used in the case of illness, and, therefore, be a sort of nurse and housekeeper combined. Through such a medium as "The Farmer's Advocate," she may keep herself posted in the science of farming in all its details, so she may be an adviser as well as a helper.

In order that she may converse intelligently in society, she should know how to treat freely, in a literary way, all matters which have to do with politics, industry, philosophy, science, art, etc. She must also know how, in cases of emergency, to do a few of the more material duties in connection with the farm, such as milk a cow or hitch up a horse. Such work does not detract one iota from a girl's elegance or refinement, so long as she evinces a proper grace and dignity in connection with it.

The farmer's daughter should cultivate a cheerful disposition, and, by her ambitious nature, show that she is aiming at all that is noble, pure and good. She, to a great extent, is the connecting link between the farmer and the social world. It is important, therefore, that she be a zealous helper in all things that tend to benefit her fellow creatures, especially in church and Sunday-school work, for, after all, what sociability is there to equal that of a good and earnest country church? With such an influence in the home, the boys will be loath to leave the farm for the more—might I say?—dazzling deceptions of a city life.

Simcoe Co., Ont. FREDDIE.

REGARDING "SED'S" COMMENT

With reference to "Sed's" comment on line 3, stanza 9, Pelee Castle, as it appears in your issue of February 21st, I would like to say that, with all due respect to the criticism offered, I could not by any means agree with "Sed" when he says, "A very strong desire that the third line in the ninth stanza had been left out. Why did he write that, to stand out in such painful prominence, changing the aspect of the whole poem? A person can smile, talk cheerfully, say manly, noble things because it is right and he has been accustomed to it, while his very heart is aching and breaking. His grief was so fresh that, although he was striving to take up life brave-

ly, yet there seems something contradictory about it."

Wordsworth did not write this line to stand out in painful prominence and change the aspect of the whole poem; he wrote it because he knew it was true. That is what makes the poem as great as it is. When Wordsworth saw a beautiful, calm-kissed sea, a scene of rest and peace, and quite a soul-thrilled joy, he told about it just as he saw it. When, on the other hand, he saw that sea, tempest-tossed in the fury of an awful storm, and knew a sorrow, the memory of which would endure as long as life itself, he did not smile, talk cheerfully, say manly, noble things, and act as though no such a thing as sorrow ever existed. He told us about that sorrow just exactly as it was, and then calmly conquered it, in the words, "Welcome fortitude and patient cheer, and frequent sighs of what is to be borne . . . Not without hope we suffer and we mourn." Wordsworth said, "The feeling of my loss will ne'er be old" because he knew it was true, and who, as he rises to the overcoming of his sorrow by the divine hope expressed in the last stanza, which follows, may say he was in any sense morbid or weak, or deteriorated any from the value of the poem by expressing his sorrow just as he did? No; God allows us to have sorrow just as well as he gives us joy, and the idea is not to laugh sorrow out of court and treat it as though it were not a fact at all. If a person's very heart is aching and breaking, as "Sed" says, why should he pretend that it isn't so? He shouldn't pretend so, but he should stay by his aching, breaking heart till God shows him that, though for all sorrow is very real, yet "earth has no sorrow that Heaven cannot heal," and then come forth and be cheerful and happy, and hope and conquer again. I am glad Wordsworth used these words; the "construction" of the poem, if nothing else, demands their use. The poet made no mistake here. His argument is beautiful, powerful and sound. The plain, simple words breathe a music that is plaintive and tender and sweet. The construction, rhetorically or logically, with the exception of the line, "That which I know I speak with mind serene," is perfect; and this line is necessary, whether logically so or not. The poem is all right. One mightier than we are didn't pass sorrow by unnoticed. "He wept." We had better be conscious of sorrow, treat it as a fact, conquer it, or it will conquer us, no matter how smiling, cheerful, manly and noble we try to be. Wordsworth isn't contradictory here; he is simply true to himself.

W. B. F.

OUR ENGLISH LETTER.

WHAT ONE READS ABOUT CANADA.

I think in a previous article I sent you some quotations from a letter in the Spectator, headed, "Colonization by Women: An Imperial Question." Since then I have noted, from time to time, frequent allusions, not so much to the matrimonial aspect of the subject—one is thankful for that—but upon the leavening power of women in colonial life in more ways than one. For instance, I clipped the following from the Bristol Times and Mirror, a paper largely circulated throughout the south of England, from whence comes many a sturdy son of Britain to help people our glorious Dominion. It is headed "Woman's Power, and Ways in Which She can Help the Empire," and is written by an Englishman residing in Canada. After giving facts and figures to prove his contention that Canada is doing more trade per head, in proportion to her population, than the United States, and that the enormous influx of American settlers, tempted by the great opportunities of the Dominion, should not be without its danger signal for those whose rightful heritage they come to share, he brings his

arguments down to a very simple and practical point:

"If only women would use their influence and persuade their relations and friends to keep within the Empire and never desert the old flag, some good would be done. I myself went to the States, and was not long before I discovered an anti-British feeling, and the Yankees told me they would actually have Canada before long. This sort of talk does not altogether agree with an Englishman, and I was only too glad to once more get on British soil, amongst people who are one with you in your loyalty, aspirations, etc. Now, if we want to develop our colonial trade, we must demand colonial products, and not buy any foreign stuff that is first put up before us.

"Why help to make foreign nations powerful and strong, and help them indirectly to keep great armies and build big navies in preference to supporting our own kinsmen in our own colonies? I ask this of British women because they are, in reality, more powerful than they imagine. The husbands work, but much of the money is spent by the women, and if only people would shun absolutely these "made in Germany" goods, there would be less unemployed in the Old Country to-day. In Germany the percentage of the unemployed to the population is 1.6, or one-third of the percentage of the unemployed in England. If, instead of buying Quaker oats made in the United States of America, you demand Quaker oats made in Peterborough, Ontario, Canada, you would be helping to develop the latter country and find work for your own people. The Canadian tariff keeps out American Quaker oats, so the oats we eat are made in Canada.

"Finally, the work of consolidation and development of our colonies is of the utmost importance. The time has come when the British woman must put her foot down, and make a determination to buy only goods made in this Empire—capable of supplying all our wants. If the women of England will do this, we shall see that they are patriotic and that there is some grit in them, and thus they will, in some measure, prove their capacity for votes and will draw all men unto them. Believe in your Empire, stand firm, be united, and work for the welfare of your own kith and kin. Other people are capable of looking after themselves."

A great deal of good advice to intending emigrants is given by "A Bristolian in Canada," who fills a column in a very large paper with most useful information. He begins by telling his readers that it is now seven months since he left them to become "a citizen of a portion of our vast Empire, the largest colony of the British possessions—Canada." He ridicules the impression which is so prevalent in the Old Country that Canada is a land of perpetual ice and snow. It might be so, he says, thousands of miles further north, near the North Pole. "Why," he tells, "during the past summer and fall I saw grapes and tomatoes ripening off in the open, and fine fruit, too; and the gardens were full of cabbages, potatoes, celery, sweet corn, kidney and French beans, onions, rhubarb, vegetable marrows, pumpkins, strawberries, apples and pears." No mean list, to which others might be added. Then follows, with emphasis: "One thing I desire to impress very strongly upon your readers, and that is, when landed here, don't be forever complaining because this and that thing is not the same as in England. Settle down and be content, and take things as they are. Don't be continually using such sentences as these: 'I did not think this and that would have been like this,' 'I wish I had never come,' 'I shall go back,' etc. For, as sure as fate, if you persist in this course you will never settle and be happy. When a person is in Rome, he must do as Rome does. Canada is not England. A new country is not like an old one. Canadians will help you in every possible way to soothe the parting from friends and relations; but if you are grumblers you will lose their friendship. As a rule, the Canadian motto is, 'Help one another.' Especially is this applicable to new arrivals—deserving parties. As soon as the latter are 'fixed up,' they are expected to do likewise. Long may this continue in this portion of our great Empire! Persons coming to this country must be wide-awake, and able to look after themselves. It is no use for anybody to come here, sit down in his chair, and expect employers to run after him when they want assistance. There is plenty of work here, however, for men, women, boys and girls who are not afraid of work, want to work, and will work—at extremely high wages, too. A large number come over, with and without trades, and, failing

to get what they want and can do right away, go back again, saying they have been deceived, thereby giving our vast Dominion a name which it does not deserve. I should advise everyone, immediately on landing, to buy a daily paper, and read the columns of vacant situations, and act accordingly." All of which I think you will allow is good common sense, and proves that the writer is just the class of Englishman Canada desires to welcome.

In the Home Notes of a very popular little weekly magazine, and evidently in answer to a request for advice, I found the following a few days ago: "Yes, useful women of the educated class are required as 'home helps' in Canada and British Columbia, and refinement is no obstacle if it is the real thing and not, what is so often mistaken for it, a fastidious dislike of any sort of work which may soil the fingers, and a hankering after the amusements of town. A girl brought up in a refined country home, who has been accustomed to help in all sorts of domestic work, would be gladly welcomed in scores of colonial households, and I advise you and your sisters to consider the matter, rather than struggle for office work in London."

The crux of the whole matter, as touching the problem of lady-helps for Canada, lies in the allusion to the "refinement" being "the real thing or not." Those who are neither ladies nor helps had far better not come to Canada.

In proof of the fact that there is a much clearer understanding than heretofore of the qualifications necessary to make a successful settler in the Dominion, this is what a London daily paper had to say, under the caption of "Woolwich Men for Canada," who are probably already landed on its shores:

"Hundreds of discharged employees from the Royal Arsenal are leaving Woolwich to make a fresh start with the New Year in Canada. They will swell the stream of 10,000 emigrants which the newly-constituted Central Emigration Board hopes to transport during the year. On board the Empress of India, the first batch of carefully-selected, suitable candidates are already on their way to situations awaiting them on Canadian farms. All these emigrants are able-bodied and anxious to work at agricultural employments, and they have had to answer satisfactorily a comprehensive list of thirty-seven ques-



"Summer will come again, by-and-by." Some of the pleasures of a bachelor in the West.

tions. They have been asked if they have any knowledge of farming, experience of cattle, horses and sheep, and whether they can milk and plow. Their wives have been required to state if they can cook, milk cows, make butter, and bake bread, so that they may be able to join their husbands in the Far West when the new homes are ready."

And my last clipping shall be a quotation from a Canadian paper, copied with emphatic approval into an English leading journal, and which is the ruling sentiment in the heart of every son and daughter of the Dominion:

CANADA'S ONLY FLAG.

"The Union Jack was carried into the woods where Canada was hewn out. It was the Flag of Canada's infancy. It is the Flag of Canada's youth. It will be the Flag of Canada's old age. The Union Jack may be old and tattered, but it will be good enough for Canada so long as grass grows and water runs."

H. A. B.

Current Events.

A scheme is afoot for constructing a railway to the top of the Matterhorn.

Lieut.-Governor Snowball, of New Brunswick, dropped dead in Fredericton, Feb. 24th.

Mr. Chas. A. Kelly, of Petrolia, has been presented with a medal for heroism in life-saving.

An effort is being made in the U. S. Congress to limit the hours of service among train crews.

King Haakon, of Norway, is advocating an international agreement to prohibit the use of airships and submarines in war.

Japan is preparing for a great international exhibition in 1912. A preliminary exhibition will be held this year in Tokio.

The greatest popular demonstration ever seen in Old London occurred on Feb. 23rd, in opposition to the socialistic policy of the London County Council.

The report of the Insurance Commission was presented to the House of Commons on Feb. 26th. Many improvements in the conducting of life insurance are foreshadowed.

Newfoundland is considering the establishment of a trans-Atlantic line of steamers between Green Bay, on the east coast of Newfoundland, and Killery, on the west coast of Iceland.

Measures have already been taken by school-teachers' associations of Canada for the erection of a monument to Miss Sarah Maxwell, who so heroically gave up her life in the Hochelaga school on Feb. 26th. Seventeen lives in all were lost.

In the new Transvaal Colony Ministry, General Botha is Premier and Minister of native affairs. Colonel Smuts, the Colonial Secretary, was also a general during the war, and was formerly State's Attorney in the Government of President Kruger.

An interesting feature in the British naval estimates for the current year is the fact that the construction of battleships will depend somewhat upon the decisions of the next peace conference at The Hague. Provided the Conference does not object, two or three battleships of the Dreadnaught type will be built.

The Quiet Hour.

AGAINST THE COLD.

"Peter stood and warmed himself."

The very Christ for whom he bore
Such brave, bold witness, but a few
Brief days ago—the Christ he knew
Had raised from death one week before
His friend at Bethany—he saw
Now in the clutch of Roman law,
Reproached, dishonored, helpless, lone,
Dragged rudely o'er the pavement stone,
And—stood and warmed himself!

He watched the jeering soldiers strip
Away the robe the Marys made,
Tear off the inner garment frayed
By brutal wrenchings; marked the lip
Quiver, as o'er the flesh made bare
Blew gusts of chilling midnight air;
Yet by the sight not stricken dead,
Above the brazier's coals he spread
His hands—and warmed himself!

He heard a maid say, "Here, behold!
One of this man's disciples: see,
He speaks the speech of Galilee."
Ah then—ah then his blood ran cold,
And as the leaping flame rose higher,
Amid the crowd that girt the fire,
With sharp, reiterate, angry "Nay!"
He thrust his arms, and pressed his
Way,
And crouched—and warmed himself!

"Yea, thou art one of them,"—he heard
The charge come back and back again,
Tossed from the mouth of mocking men,
And as with oaths he flung the word
Straight in their teeth, he sudden turned—
And oh, that look! It burned and
burned,
As if Gehenna's hottest coal
Had down into his central soul
Dropped, while he warmed himself!

His hands he could no more uphold,
Remorse, despair, self-loathing, woe,
Clutched at his heart; he did not know
If it were night,—if it were cold;
He cast no gaze behind, before,
Nor cared that she who kept the door
Said, "Surely this was he who drew
The sword on Malchus,—Malchus knew,
The while he warmed himself!"

Remorseful on the ground he lay,
So sunk in self-aborrent shame
He dared not breathe the Master's name,
Recounting, till the break of day,
How through that mystic anguish dim,
He had not spoken a word for Him,
Forsaken in the high-priest's hall,
But midst the mocking, watched it all,
And stood and warmed himself!

So do we still: we skulk afar,
With scarce the scoffed-at Christ in sight,
Nor dare the wrong, nor brave the right,
Poor, cowardly cravens that we are!
And while we see our Lord betrayed,
We linger mid His foes, afraid
To own Him; yet like him of old,
We comfort us against the cold,
And stand and warm ourselves!
—Margaret Preston.

ENDURE HARDNESS.

Thou therefore endure hardness, as a good soldier of Jesus Christ.—2 Tim. 2, 3.

"Meanwhile thy life by loss instead of gain;
Not by the wine drunk, but by the wine poured forth!
For love's strength standeth in Love's sacrifice;
And whoso suffers most has most to give."

This is a luxurious age, and we need to re-use ourselves to follow St. Paul's counsel to the young bishop of Ephesus to "endure hardness." Indeed we need the advice much more than he did; for in these days anyone who confessed Christ was usually forced to endure hardness, and he was willing or not, unless he possessed the faith. Though outward conditions have changed we are still soldiers in the army of Christ, we have to stand in allegiance to Him and to His cross. "Follow Him wherever He goeth, and abide in the

steps of such a Leader, we must be prepared to encounter "hardness." He has set before us no ideal of an easy, comfortable existence. If that is the kind of life that attracts us, then we must choose some other Captain. His orders are that we must not wait, like Simon the Cyrenian, until we are "compelled" to bear the cross, but we must take it up daily. That implies a willingness to endure hardness, for a real cross can never be anything but hard and painful. But it does not mean that a true follower of Christ has a more unhappy life than other people—far from it! The mother of a large family may have to endure disturbed nights and busy days; but no mother who is worthy of the name would willingly change places with the woman whose house is in perfect order always and who has no little disturbers of the peace to make her work hard. If she should grumble at her hard lot, and God should step in and take away the troublesome children, how much greater would be the hardness she must endure.

Did you ever wonder how St. Peter could bear to seek comfort for himself while the Master he loved was enduring insult and facing a death of awful agony? Can you imagine a loving mother trying to make herself comfortable while her child was on trial for his life? I once knew a widow who cried bitterly because, as she said, "I was sleeping comfortably all night while my husband was dying. Oh, if only I had known. If I could not be there to comfort him I could have stayed awake." Some people might think that, as it was impossible for her to go to him, it was much more sensible to get a good night's rest. But was it? The wifely instinct made her feel that to sleep in easy comfort while her dear husband was suffering the agony of death was failure in loyalty and faithfulness—as it would certainly have been if she had known. Our Lord did not think the three chosen disciples were doing a sensible thing when they slept during His agony in Gethsemane. There is a beautiful little story which describes how Lazarus and his sisters kept faithful watch all through that night of suspense—at a distance from their Master, but with Him in spirit. It is a true instinct which keeps a loving heart from wanting to be very luxurious when a loved one is suffering. It is a very astonishing thing that so many Christians should change Good Friday from a holy-day to a holiday. Surely on that one day, at least, we should fix our thoughts as far as possible on our Lord's sufferings and death. And if our hearts are with Him through the agony and shame, we can hardly bear to turn our backs on the Cross, and go away to seek our own pleasure or amusement.

But it is not only on Good Friday that we should deliberately choose to "endure hardness" as good soldiers of Christ. I certainly don't think it would be a good thing for us to become ascetics and torture our bodies in the hope of perfecting our souls. But a life of luxury and soft ease is an opposite extreme, which injures body, mind and spirit; and, as disciples of the perfect Man, we are bound to keep our whole being as perfect as possible. This body is not really ours, but God's, and luxury is always enervating—we want to grow strong and hardy both in body and soul, and need both physical and spiritual culture to give us grace. Then we are so inclined to shirk any disagreeable or hard duty, putting it off as long as possible, or, perhaps, even trying to shift some especially unpleasant burden to the shoulders of someone else. Let us make a brave determination to endure hardness, and then look round for something to do which we know needs to be done, but which we might—if we were not good soldiers of Jesus Christ—leave for some more unselfish person to look after. There are plenty of opportunities close at hand, not only for bearing our own burdens bravely, but also for lightening those of others in little ways which may have been unnoticed by careless observers. We all have our own "chores" to do, but, without leaving these undone, we can all sandwich in some kind of act

word, which will make the "chores" of the people around us less heavy.

To "endure" hardness does not mean that we are to grumble and complain about our hard work or hard troubles. Real endurance of the small vexations and trifling annoyances of everyday life is as rare as it is beautiful. The "hardness" generally comes to us, whether we go forward willingly to accept it or try to get out of its way, but we have always the chance to "endure" the disagreeable or painful things bravely and cheerily. There is the opportunity of a victory lying close beside our path all the time. Of course if we don't "endure"—simply submitting to what we can't escape—we shall grow weaker and more enervated as the years roll on, and be too awkward and undrilled to stand up successfully and fight when some great temptation has to be met. Now is our time for laying up a store of strength, a reserve force against some sudden strain. Some day great results may hinge on our swiftness to obey a sudden call from God. Are we training ourselves to obey His ordinary orders promptly every day? If we are forming habits of dilatory, unready obedience—if that sort of unsoldierly conduct may be called obedience—then we need not be surprised to find that the strong cord of habit will hold us back when everything depends on instant action. If we neglect our daily morning and evening prayers, or are too lazy to read our Bibles, we shall find, when it is too late, that we have been, by slow and imperceptible degrees, weakening ourselves. And we all want to be strong and brave. When we read of deeds of noble heroism we are fired with the desire to emulate them. It is easy to dream enthusiastic dreams about the beauty and glory of martyrdom, but our readiness for heroic self-sacrifice is always tested in the commonplace atmosphere of ordinary everyday life. If we, in actual fact, refuse to sacrifice time, money, strength or anything else, we may have to give—right here and now—then we are never likely to lay down our lives grandly in the dim future.

"Blessed are those who die for God
And earn the martyr's crown of light—
Yet he who lives for God may be
A greater conqueror in His sight."
HOPE.

THE BATTLEFIELD.

A desert place where grew no kindly herb;
A waste of sand where splintered rocks lay dead,
Where rivulets flowed not, nor flowers swayed—
And smiting rays fell from the sun o'erhead.

One lonely figure robed in ashen gray,
Whose patient eyes saw nothing, seeing all;
Nor marked the shadows' slow-revolving course,
The flush of dawn, the purple darkness fall.

There rode no hosts led on by warrior kings;
No trumpets sang; there waved no banners gay;
No fierce assaults nor routed quick retreats.
But silent hours wore out the night, the day.

Alone against a world the leader stood—
Alone where ages met the parting ways,
To guide aright whoever seeks the light,
To shame from wrong with level loving gaze.

There was the battle waged, the victory won,
That conquered conquerors, that high above
All greatness, glory, power, and all law
Forever fixed, the empery of love.

There triumphed He, our conqueror and king,
Who won for us, and made all earth his prize;
Who gave his life for victory over death,
Who fell that mankind evermore should rise.

—Tudor Jenks, in The Century.

About the House.

REPLACING THE FRUIT.

At this time of the year the canned fruit begins to diminish alarmingly in quantity, and it becomes necessary either to save it in some way by substituting, or to refill some of the gem jars. In doing this, the following recipes may prove useful:

Spiced Apples.—Make a syrup of equal parts of sugar, water and vinegar, adding a few whole cloves and some stick cinnamon. When the syrup is scalding-hot, put in firm, tart apples, peeled and quartered, and cook very gently until tender, but not broken. Remove with a skimmer. Boil the syrup until it thickens, and pour over the apples.

Orange Jam.—Take 1 doz. oranges and 6 lemons, and wash well. Slice very thin, removing all the seeds. Let them stand in 1 gallon water 36 hours, then boil gently two hours. Add 10 pounds granulated sugar and cook one hour longer. Put in jelly glasses or pint jars.

Lemon Marmalade.—Slice 12 lemons and remove seeds. Lay the sliced fruit for 12 hours, or over night, in 6 or 7 quarts of water, and boil gently for two hours. Let stand till next day, then weigh it; add an equal weight of sugar for each pound of pulp, and boil all together till clear and beginning to set. Put in glasses and tie down while hot.

English Marmalade.—Seven oranges and three lemons. Quarter and cut in very fine chips, taking out seeds. Pour over pulp 3 quarts cold water; let stand 24 hours. Boil 1 hour; let stand till next day; add 9 lbs. white sugar, and boil till chips are clear and syrup jellies.

To Cook Dried Fruit of Any Kind—prunes, peaches, apricots, figs, etc.—Wash well and soak about 12 hours in warm water. Pour this water off

into a saucepan, add sugar to taste (very little for prunes), and boil 15 to 20 minutes. Pour boiling-hot over the soaked fruit, and let simmer very gently until tender; prunes will require about two hours. Let cool gradually. Dried fruit cooked this way should be soft, plump and appetizing. Lemon or orange peel, or sliced lemon or orange, may be added if liked.

Fig Preserve.—To 1 pint chopped figs add 1 cup water, 2 slices lemon, a pinch cinnamon and clove. Let simmer until soft. Good served with rice or cornstarch.

Lemon Butter.—One pound white sugar, add $\frac{1}{2}$ pound butter, yolks of six eggs and whites of 4, juice of 3 lemons and grated rind of 2. Let simmer until sugar is dissolved, stirring all the time, until it looks like honey. Keep in a cool place, and use for tarts, or on rice or cornstarch pudding.

Cider Apple Butter.—One gallon boiled cider, $\frac{1}{2}$ bushel tart, juicy apples. Boil down cider to one-half quantity in a porcelain kettle. Quarter the apples, pare and core them, setting skins and cores aside to make jelly from. Cut the apples in small pieces and cook in the boiling cider, putting in as many at once as the cider will cover. When soft, skim them out and add more, until all are cooked, then mash fine and put back into the cider. Cook very slowly until thick, stirring frequently, as it burns easily. You may put in orange or lemon with grated rind, or any kind of flavoring.

SOME SEASONABLE RECIPES.

Southern States Corn Bread.—Mix 1 pint of blended corn meal and wheat flour in the proportion of one-third corn and two-thirds flour. Beat 3 eggs light and whip into them 1 tablespoon sugar. Then add butter size of an egg, softened but not melted, and one pint sweet milk. Stir this mixture gradually into the

flour, and beat hard for several minutes. Add two teaspoons baking powder, whip again, and pour into greased pans. Bake in moderate oven.

Another Corn Bread.—Scald 1 quart corn meal with just enough water to accomplish the purpose, and let stand till cold. Add 2 beaten eggs, level teaspoon salt, bit of butter, and 1 pint sour cream. Beat well and add 1 teaspoon soda dissolved in 2 teaspoons boiling water. Mix and bake in a rather hot oven 40 minutes.

Boston Brown Bread.—To 1 $\frac{1}{2}$ pints rye meal add an equal quantity corn meal. Mix and add 1 teaspoon salt, 1 cup New Orleans molasses, and sour milk to make a thick batter. Beat well and add 1 teaspoon soda dissolved in boiling water. Pour into a greased mould, cover tightly, and steam four hours. Serve hot with butter.

Excellent Substitute for Plum Pudding.—1 cup raisins, 2 cups breadcrumbs, 1 pint milk, butter size of an egg, 1 egg, teaspoon cinnamon, $\frac{1}{2}$ cup molasses. Place in buttered baking dish, and bake in a slow oven about an hour. Serve hot with pudding sauce.

Bread Pudding.—Put 1 quart milk in a double boiler, and grate into it one square chocolate. Add one heaping cupful crushed dried bread, and half cup brown sugar. When hot, thicken with a tablespoon cornstarch dissolved in milk. Flavor with vanilla, and serve with sugar and cream.

Another Excellent Bread Pudding.—Boil 1 cup milk and 1 dessertspoon butter together and pour over 1 cup breadcrumbs. Let soak a few minutes, then add yolks of 2 eggs, the grated rind of a lemon, and enough sugar to sweeten. Pour into a buttered dish and bake till set. Take out of the oven, spread with jam, cover with whites of the eggs beaten stiff, sprinkle with sugar, and bake pale brown.

Substitute for Pumpkin Pies.—Boil carrots till tender in salted water, drain well, and use as you would pumpkin.

Spiced Liver.—Split a calf's liver and parboil. Scoop out centers, mince this, and add to it one onion, sage, a little browned salt pork, salt, pepper, and some breadcrumbs. Refill the cavities, sew the edges of the liver together, put in pan and bake, basting with water and vinegar while baking.

Herring Salad.—Flake boiled herring; mix with it some chopped, cold, boiled potato, minced onion, a hard-boiled egg and minced pickled cucumber. Dress with hot vinegar in which a little butter has been melted. Let cool and serve.

Muffins.—Dissolve $\frac{1}{2}$ yeast cake in $\frac{1}{2}$ cup warm milk; add pinch salt, 2 cups lukewarm milk, $\frac{1}{2}$ cup sugar, $\frac{1}{2}$ tablespoon butter, 1 egg, and flour to make a batter. Mix at night, and bake in muffin rings or deep patty pans in morning.

Baked Bean Croquettes.—Press cold beans through a ricer, or mash them. To each pint add two tablespoons tomato sauce and a teaspoon of grated horse-radish. Shape into balls, roll in eggs, then in breadcrumbs, and fry. Serve hot.

Buttermilk Bread.—For three loaves use 1 quart sour buttermilk, 1 large tablespoon sugar, 1 teaspoon soda, and 2 $\frac{1}{2}$ quarts flour. Heat buttermilk to boiling-point, stirring frequently. Put the sugar in a mixing-bowl, and pour the hot milk over it. Now gradually sift into this 1 quart flour, stirring well. Beat, cover, and let stand in a warm room over night. In the morning dissolve soda in 3 tablespoons water, and add to the batter with the salt and butter melted. Beat well, then beat in the remainder of the flour, reserving half a cupful for kneading. Knead 15 or 20 minutes, shape into loaves, and put into the oven immediately. Bake one hour in a hot oven.

With the Flowers.

SOME DAINY FLOWERS FOR NEXT SUMMER'S GARDEN.

Last issue we promised a consideration of some of the more dainty kinds of garden flowers. First on the list will be placed, probably, by a great many people, the sweet pea. The leaves and vines are not, perhaps, especially attractive, yet, when the blossoms come out, fluttering like myriads of white, mauve, pink and crimson butterflies along the border, and whiffing their faint, sweet perfume all over the garden, one surely feels that the time expended upon the sweet-pea division has been well rewarded. Moreover, there is nothing prettier for a table bouquet than a bunch of sweet peas, loosely bunched together in a clear glass vase or rose-bowl. The colors never seem to clash, no matter how many are put together; in fact, when planting sweet peas, a "mixture" is usually found to be much prettier and more artistic than a more symmetrical arrangement, a clump of white here, one of crimson adjoining, etc.

Do not wait until the weather is warm before planting sweet peas. Dig a trench 8 to 12 inches deep just as soon as the frost is out of the ground and plant the seed, covering lightly, but firming the soil down well. If the soil is not very moist and rich, it may be well to dig in some very old, well-rotted manure at the bottom of the trench. As the stems grow, fill in the earth little by little. When the weather becomes dry watering will be necessary, but care must be taken to soak the soil right down to the roots; wash-day suds is very good for this. When the vines require it, be sure to furnish support; poultry wire is as good as anything, but, failing this, brushy branches placed upright in the ground will do. Shallow cultivation at frequent intervals will help to con-

serve the moisture, and a little hardwood ashes worked in from time to time will be beneficial. Sweet peas do best in a good loam, well enriched with old cow manure or thoroughly-decayed chip-mould.

Another never-failing favorite is the pansy—a flower that seems to work its way, somehow, into the heart of the flower-lover. Almost a pity, it would seem, that it has lost its quaint old name, Heartsease, for the bright little faces almost speak a word of cheer as they look up, radiant, alike in rain or sunshine. The best plan is to sow pansy seed in August, and protect the plants during winter; but seeds started in the house in February or early March will often yield an abundance of bloom during the late summer. A clay soil, well enriched with very old, well-rotted manure, a position sheltered from high winds and exposed to the morning sun, and frequent sprinkling to keep the soil moist, are the conditions of the greatest success in pansy-growing.

One cannot have the pansy without mentioning its cousin, the English violet, whose sweet perfume lends such a charm to any garden. Plant out a few roots this spring in the moistest, shadiest part of your garden, pay no more attention to them, and in a few years you will marvel to see how the little plants will have pushed themselves into spare corners and out among the grass, never aggressive, never staying where they are not wanted, like some less sensitive plants, but modestly giving way before the spade that would make room for more showy neighbors.

One of the very daintiest plants that can be in any garden is the Gypsophila, or "Baby Breath." This plant is not especially showy when isolated, but when massed in clumps is quite effective, reminding one a very little of the feathery meadow-rue of the swamps. Its chief value is, however, for mixing with other flowers for bouquets, as it lends the grace and daintiness which might otherwise be lacking. There are

two species of Gypsophila—the Gypsophila elegans, rather the prettier, but an annual; and the Gypsophila paniculata, a perennial. These plants grow from 1 $\frac{1}{2}$ to 2 feet in height, so should be placed in an out-of-the-way corner, or at the back of the border.

No dainty garden is complete without the mignonette, with its faint, sweet perfume, different from that of any other plant under the sun. This plant, like the beautiful, fragile Shirley poppy, does not bear transplanting very well, yet a few specimens for early bloom may be started in the house, provided the utmost care is taken in transplanting, enough soil being removed to ensure that the roots are not disturbed in any way. Later sowings in the garden in early May, and again in June, will provide a succession of bloom through the summer. Mignonette needs a cool, partially-shaded situation and good rich soil. If the white cabbage butterfly attacks it, sprinkle lightly with white hellebore.

Forget-me-not—one of the very daintiest of our flowers—needs a good rich soil and plenty of moisture. Its pale-blue blossoms are especially attractive when mingled with white Lily-of-the-valley. Those who are especially fond of clear light blue in flowers will do well to get a few seeds of the fragile blue garden Lobelia, which comes into bloom later than the Forget-me-not.

Since abundance of white is necessary in any garden, by all means have plenty of sweet alyssum. Its tiny blossoms are not especially striking when isolated, but when massed or in borders are very effective, forming clumps of bloom that will remain in all their beauty for weeks. Alyssum is very valuable for filling in bare spaces between taller plants that might otherwise be unsightly. The dwarf variety is especially good for edgings. Any good rich soil, and almost any situation will suit this plant.

Has it ever occurred to you that the old-fashioned corn flower is one of our dainty plants? And yet it

must be so, else how account for the never-flagging popularity of this dear old flower of our grandmothers' gardens? In buying corn-flower seed, it is seldom wise to send for a "mixed" packet, which is nearly sure to contain a few seeds of the purple variety, so likely to clash with all the other flowers in its neighborhood. Centaurea Margaritæ, a beautiful white variety; Centaurea Americana Alba, also almost white, and Centaurea Imperialis, a perennial; are, perhaps, the most satisfactory species.

PROVIDING FOR SUCCESSION OF BLOOM.

In a country so extensive and of such varying climates as Canada, it is impossible to give a universal time at which any flower may open. The following list may, however, be found approximate enough to be of some use:

To provide for bloom from April to the end of June.—Crocus, Narcissus, Daffodils, Rock Cress, English Daisy, English Violet, Lily-of-the-valley, Tulips, Bleeding-heart, Iris, Columbines, Forget-me-not, Heliotrope, Ageratum, Peonies, Oriental Poppy. Shrubs: Forsythia, Spiræa thunbergii, Flowering Plum and Cherry, Honeysuckle, Japanese Quince, Smoke-tree, Flowering Almond, Spiræa Van Houtii, Snowball, Lilacs, Syringa, Siberian Currant, Roses.

Midsummer to end of August.—A riot of bloom: Sweet Peas, Nasturtiums, Zinnias, Salvia, Gladiolus, Marigolds, Phlox, Verbenas, Shirley Poppy, etc.—no need to enumerate. Shrubs: Altheas.

Fall-flowering plants.—Dahlia, Stocks, Fall Phlox, Anemone. Shrubs: Hydrangea paniculata, Barberry Thunbergii, with red berries.

PRIMROSE.

Would be pleased if you could tell me why my primrose does not flower; it appears to be in a healthy condition. The flower seems to make a start, but does not mature. It is a

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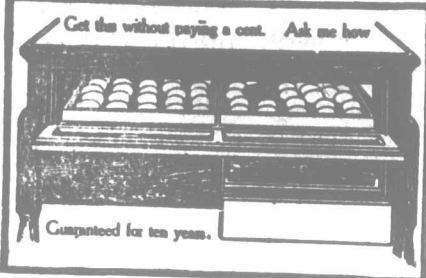
Promise to pay for them in three years' time—that's all I ask you to do.

I will tell you exactly what to do to make a success of poultry raising. I will work with you as your expert advisor, if you want advice. I will see you through—show you just how to make most money quickest.

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And I will put a Ten-Year GUARANTEE behind the incubator and the brooder—an absolute, plain-English guarantee that puts ALL the risk on me, where it belongs.

I can afford to, because I know for sure you can make money if you go at it right,—and then I will sell you more incubators and more brooders—



So I can afford to give you a ten-year guarantee—and three years' time to pay for the outfit in.

It will earn its whole cost and plenty besides in the very first year, if you will do your part—and it's no hard part, either.

I know every incubator that's sold on this continent. I don't hesitate to say that the Peerless has them all beaten a mile as the foundation for a poultry-for-profit enterprise.

Unless I can prove that to you beforehand I won't be able to sell you a Peerless. What I ask you to do is just to let me submit the

proof for you to examine.

You do your own thinking, I know. Read my free book—it's called "When Poultry Pays"—and think over what it says. Then make up your mind about my offer to start you raising poultry right—

Remember that the risk is on me. The incubator and the brooder will easily earn you much more than their cost long before you pay me for them.

Suppose you send for the free book anyway—and send now. That commits you to nothing and costs you nothing

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year old. Also a primula does not flower. Any suggestion will be thankfully received.

Grey Co., Ont. MRS. J. R. P.

Ans.—There must be something wrong with the conditions of growth or your primrose would flower all right. Possibly you are keeping it in too warm a place; the primrose flowers best in a rather cool temperature—from 45 to 60 degrees. Primroses, when in flower, should be occupying pots six inches in diameter,

with a rather rich soil composed of fibrous loam, leaf-mould, well-rotted manure, and a little sand. If in smaller pots, they may become root-bound. When the pot has become filled with roots, a weekly application of weak liquid manure will be found beneficial. The primrose and primula require the same treatment. The primrose really belongs to the primula family. All of these must be kept in a shaded place in summer.

Children's Corner.

[All letters for Children's Corner must be addressed "Cousin Dorothy," 52 Victor Ave., Toronto. Otherwise they will not be published.]

A SHORT SPIDER STORY.

Madam Spider was what you might call an ugly old thing, and her manners were not pretty, but she understood her own business, and went steadily about it. You never saw her gossiping on a neighbor's doorstep on a fine summer morning. No, indeed! she was too busy keeping her pantry filled. There were no shops out in the field where she lived, and Madam Spider had to be her own butcher. First, she built her house in a nice breezy spot in a wild blackberry bush. There was no need to go out to buy bricks. Madam Spider had only to walk from one branch to another, and a fine thread of silk came out of a hole in her body, and there was the foundation of her house. When she had gone across a good many times, she began to walk round and round, till she had a neat cobweb made, with a thick spot in the center for her to sit under. Then she shut off the silk supply, and curled herself up in a ball to rest, and wonder what she would have for dinner.

In the meantime, a little fly was sitting in the sun on the fence, thinking of the very same thing. "I believe I sniff a nice scent of cow over there," said he. "I'll just fly across the field and see." But alas for him! bang he went into Madam Spider's web. The damp threads stuck to his legs, but he kicked hard, and got one loose, and if Madam Spider had been out gossiping, she would have lost her dinner. But the instant the fly struck her web, up she jumped, and was on him in no time. Pinning him down with her strong front legs, she let out a stream of silk, and wound it round his legs and wings with her back legs. In a second he was all tightly wrapped up, and Madam Spider ran swiftly up to her sitting-room, and sat down to enjoy him in peace. But a terrible danger was swiftly approaching, and it seemed likely that this would be our industrious friend's last meal.

(To be continued.)

Not Her Fault.

A small girl came home from school one day very indignant because she had been kept in to correct her problems, after the others had been dismissed. "Mamma," she said, "I'll never, never speak to Edna Bates again as long as I live." "Why, my dear?" asked her mother. "Because," pouted the child, "because I copied all my samples from hers, and every one of them was wrong."

Riddles.

1. Why does a goose stand on one leg? Ans.—Try it and see.
2. I went to France and stopped there. I did not stay there, because I did not go there, and I came away from there because I did not go there at all. Ans.—A watch.
3. Why is the ankle between the foot and knee? Ans.—To keep the calves from the corn.

HAROLD WILLIS.

Aylmer, Ont.

1. What stands on one foot, and has the heart in its head? Ans.—A cabbage head.

2. What's the difference between a rooster, a Yankee and an old maid? Ans.—One says cock-a-doodle-do, and one says Yankee-doodle-do, and the other says old-doodle-do.

3. Why is a husband like dough? Ans.—Because a woman needs him.

4. With what must we fill a barrel to make it lighter? Ans.—Holes.

5. What goes up when the rain comes down? Ans.—An umbrella.

6. What goes upstairs on its head? Ans.—Shoe nails?

7. What flies and has no wings? Ans.—Dust.

Waterloo, Ont.

What has neck, but cannot rubber? Ans.—Bottle.

What is the most useful letter to a deaf old lady? Ans.—A, because it makes her hear.

What is the first thing a man sets in his garden? Ans.—His foot.

Around the house, around the house, and only one track it leaves? Ans.—Wheelbarrow.

When is a barrel like a tree? Ans.—When blown over.

A. A. N. (age 11).

THE LETTER BOX.

Dear Cousin Dorothy,—We have taken this paper now eight years; we like it the best of any farmer's paper yet. We have two working teams. I drive one team. We also have two ponies; one pony raises a colt every year. We sold her suckling colt last week for \$85. It's a Prince Fragrant colt. We have two stallions; their names are Prince Fragrant and Gay Spark, both imported horses. I am a lover of horses myself. Prince Fragrant is my horse. We have had Prince Fragrant now three years, and he has beaten everything in the ring yet. He has taken the silver and gold medals, and sweepstakes over all wherever shown. Any person who comes here can see the prizes and medals, and his stock has never been beaten yet. Wherever shown, they took first, second, third and sweepstakes for the best colts on ground. Gay Spark we have had one season. He will beat Prince Fragrant yet, if he keeps on like he is doing. I do all the chores, and clean the stallions besides. They look slick. My father does a lot of teaming in the winter, drawing logs.

LEANDER GOOD (age 15).

Greenoch, Ont.

Dear Cousin Dorothy,—We have only taken "The Farmer's Advocate" for twelve weeks, but find it a very useful book in many ways. We live a mile and a quarter from town, and are getting the electric lights in our house. We have ten pigeons, a rabbit, a chipmunk, a cat, three cows, and a horse. The fruit garden we own consists of eleven acres, counting hay field and pasture field. In the orchard, there are two hundred apple trees and five big patches of strawberries, off which we got one thousand four hundred boxes last summer. I think I have written an extra long letter, so I will close now, wishing "The Farmer's Advocate" every success.

MILDRED RITCHIE.

Orillia, Ont.

Dear Cousin Dorothy,—I thought I would write a few lines for the Children's Corner. I am nine years old, and I am in the Second Reader. Last summer, our school got burned down by a tramp, and I have not been to school since then. I feed the hens, and look after them. I feed wheat and barley in the morning, and corn at night. I get about nine eggs a day.

A. SCOTT AMOS.

Woodstock, Ont.

Dear Cousin Dorothy,—I have never written to you before, so I guess I had better start my letter. I live on a farm. I have two sisters, named Freda and Etta. Papa has taken "The Farmer's Advocate" for years. I do not think he could get along without it. We look for "The Farmer's Advocate" to get the Children's Corner. I should like to see



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my letter in print, so, with asking a few riddles, will close:

- 1. You name me and you break me. Ans.—Silence. 2. If a prince give a princess a kiss, and she return it, what public building would it name? Ans.—Royal Exchange. 3. What is it that no one wishes to have, and no one wishes to lose? Ans.—A bald head. 4. What word is there of five letters by taking away two leaves but one? Ans.—Stone. 5. Why do we buy shoes? Ans.—Because no one gives them to us. 6. What is large for being cut at both ends? Ans.—A ditch. 7. What trade is more than full? Ans.—Fuller. BLANCHE FULLER (age 9). Bible Hill, Truro, N. S.

A Trapper's Hut.

One day as a few friends and I were walking along in a woods, we noticed something ahead of us that looked like a pile of logs, but as we went on, we could see that it had a window and a door. We went up and knocked at the door,

and soon heard the step of the trapper on the boards he had put down for a floor. Then the door was opened, and a man of about thirty-six years old asked us in. His beard was long, and his clothes looked as if they had not seen water for about as many months as he was years old. He asked us to sit down, so we did so.

We looked all around to see what kind of a bachelor he was.

In one corner stood a bed, with some dirty bedclothes on it, and in the middle of the floor stood a table, without even an oilcloth. There were boards all around for seats, and an old-fashioned stove, with something cooking in a big black kettle for his dinner. In another corner stood a big old-fashioned cupboard. The walls were only logs, just the same as the outside.

The trapper told us some of his trapping experiences, and added that a squirrel in the trap was worth two out of it. He invited us to stay to dinner, but we said that we must go on. Then we continued on our way.

ALMA McCUTCHEON (age 10). Croton, Ont.

Bob, Son of Battle.

By ALFRED OLLIVANT.

[Serial rights secured by "The Farmer's Advocate and Home Magazine."]

CHAPTER XXVII.

For the Defence.

That night a vague story was whispered in the Sylvester Arms. But Tammas, on being interrogated, pursed his lips and said: "Nay, I'm sworn to say nowt." Which was the old man's way of putting that he knew nowt.

On Thursday morning, James Moore and Andrew came down arrayed in all their best. It was the day of the squire's annual dinner to his tenants.

The two, however, were not allowed to start upon their way until they had undergone a critical inspection by Maggie; for the girl liked her mankind to do honor to Kenmuir on these occasions. So she brushed up Andrew, tied his scarf, saw his boots and hands were clean, and titivated him generally till she had converted the ungainly hobbledohoy into a thoroughly "likely young man."

And all the while she was thinking of that other boy for whom on such gala days she had been wont to perform like offices. And her father, marking the tears in her eyes, and mindful of the squire's mysterious hint, said gently:

"Cheep up, lass. Happen I'll ha' news for you the night!"

The girl nodded, and smiled wanly. "Happen so, dad," she said. But in her heart she doubted.

Nevertheless it was with a cheerful countenance that, a little later, she stood in the door with wee Anne and Owd Bob and waved the travellers Godspeed; while the golden-haired lassie, fiercely gripping the old dog's tail with one hand and her sister with the other, screamed them a wordless farewell.

The sun had reached its highest when the two wayfarers passed through the gray portals of the Manor.

In the stately entrance hall, imposing with all the evidences of a long and honorable line, were gathered now the many tenants throughout the wide March Mere Estate. Weather-beaten, rent-paying sons of the soil; most of them native-born, many of them like James Moore, whose fathers had for generations owned and farmed the land they now leased at the hands of the Sylvesters—there in the old hall they were assembled, a mighty host. And apart from the others, standing as though in irony beneath the frown of one of those steel-clad warriors who held the door, was little M'Adam, puny always, paltry now, mocking his manhood.

The door at the far end of the hall opened, and the squire entered, beaming on every one.

"Here you are—eh, eh! How are you all? Glad to see ye! Good-day, James! Good-day, Saunderson! Good-day to you

all! Bringin' a friend with me—eh, eh!" and he stood aside to let by his agent, Parson Leggy, and last of all, shy and blushing, a fair-haired young giant.

"If it bain't David!" was the cry. "Eh, lad, we's fain to see yo'! And yo'm lookin' stout, surely!" And they thronged about the boy, shaking him by the hand, and asking him his story.

'Twas but a simple tale. After his fight on the eventful night he had gone south, drovering. He had written to Maggie, and been surprised and hurt to receive no reply. In vain he had waited, and, too proud to write again, had remained ignorant of his father's recovery, neither caring nor daring to return. Then, by mere chance, he had met the squire at the York cattle-show; and that kind man, who knew his story, had eased his fears and obtained from him a promise to return as soon as the term of his engagement had expired. And there he was.

The Dalesmen gathered round the boy, listening to his tale, and in return telling him the home news, and chaffing him about Maggie.

Of all the people present, only one seemed unmoved, and that was M'Adam. When first David had entered he had started forward, a flush of color warming his thin cheeks; but no one had noticed his emotion; and now, back again beneath his armor, he watched the scene, a sour smile playing about his lips.

"I think the lad might ha' the grace to come and say he's sorry for 'temptin' to murder me. Hooliver"—with a characteristic shrug—"I suppose I'm onreasonable."

Then the gong rang out its summons, and the squire led the way into the great dining-hall. At the one end of the long table, heavy with all the solid delicacies of such a feast, he took his seat with the Master of Kenmuir upon his right. At the other end was Parson Leggy. While down the sides the stalwart Dalesmen were arrayed, with M'Adam a little lost figure in the center. At first they talked but little, awed like children: knives piled, glasses tinkled, the carvers had all their work, only the tongues were at rest. But the squire's ringing laugh and the parson's cheery tones soon put them at their ease; and a babel of voices rose and waxed.

Of them all, only M'Adam sat silent. He talked to no man, and you may be sure no one talked to him. His hand crept oftener to his glass than plate, till the sallow face began to flush, and the dim eyes to grow unnaturally bright.

Toward the end of the meal there was loud tapping on the table, calls for silence, and men pushed back their chairs. The squire was on his feet to make his annual speech.

He started by telling them how glad he was to see them there. He made an allusion to Owd Bob and the Shepherds' Trophy which was heartily applauded. He touched on the Black Killer, and said he had a remedy to propose: that Th' Owd N should be set upon the criminal's track—a suggestion which was received with enthusiasm, while M'Adam's cackling laugh could be heard high above the rest.

From that he dwelt upon the existing condition of agriculture, the depression



GRAY AND FADED HAIR

restored to its original color in ten days when Princess

Hair Rejuvenator

is used. It is neither greasy nor sticky, clear as water, free from all injurious ingredients, prompt to act, easy to apply, safe to use, sure in its results. Price \$1.00, express paid.

PRINCESS DANDRUFF CURE

prevents premature grayness and baldness, promotes a healthful condition of scalp, and clears it of dandruff. Price \$1.00, express paid.

Superfluous Hair, Moles, etc., eradicated forever by our method of Electrolysis. There is positively no other treatment that will destroy hairs on face and arms. Satisfaction guaranteed. Send stamp for booklet "F." Established 15 years.

Graham Dermatological Institute, 502 Church Street, Toronto.

You cannot possibly have a better Cocoa than

EPPS'S

A delicious drink and a sustaining food. Fragrant, nutritious and economical. This excellent Cocoa maintains the system in robust health, and enables it to resist winter's extreme cold.

COCOA

Sold by Grocers and Storekeepers in 1/2-lb. and 1-lb. Tins.

Here's a Snap for a Syndicate!

5,000 acres a few miles south-west of Vermilion, \$7 per acre. Terms: one-tenth cash, balance 9 years at 6%.

Nobody Can Beat This!

W. 1-9-10-3, west of third. Price, \$8.50 per acre; \$5.40 cash, balance in 4 years, 6%.

This is rated A1 first-class farming land. One of the best half-sections in the West. Only seven miles from the station.

DAVID REID & CO., Room 22, Stanley Block, WINNIPEG.

Heinmiller & Schaab

Real Estate and Financial Agents,

REGINA, SASK.

We have some good bargains in improved farms to suit the most particular settler. Prices and terms reasonable.

We deal in none but the choicest farm lands.

Have also prairie lands for sale in best districts, and good bargains in Regina City property.

Correspondence solicited. Any information desired cheerfully given.

WHEAT LANDS

Good values in wheat lands (improved and unimproved) in tested districts, near railways, elevators, churches, schools, etc., where water is easily obtained and homesteads are yet available. We have what you want. Write for particulars. Prompt attention given to all enquiries.

PEOPLE'S REALTY CO. Box 737. REGINA, SASK.

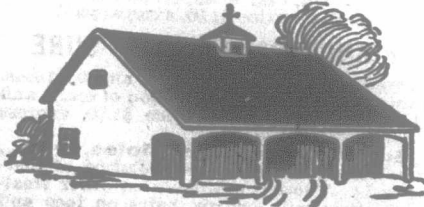
BRANTFORD ROOFING

FOR HOUSES, BARN, SHEDS, ETC.

What it is! How to lay it!

Made from the best wool-felt. Saturated and coated under a new process with asphalt coated on both sides with silicate. Resists the action of vapor, water, acids and fire. Not affected by heat or cold after laid. Will not stick in roll.

Put up in rolls 32 inches wide, 40 ft. 6 in. long. For flat or pitch roofs.



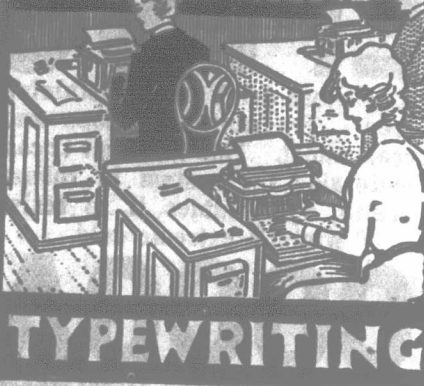
Laid with three-inch lap, cemented and nailed to directions.

We make green, terra cotta paints for roofing houses.

Write us for samples and prices direct if your dealer cannot supply you.

BRANTFORD ROOFING CO'Y, BRANTFORD, ONTARIO.

SHORTHAND



Office Help Wanted

The commercial expansion of Canada is creating every day a greater demand for skilled office workers. By our method you can get a thorough training at home in Bookkeeping, Shorthand, Penmanship, Typewriting, Commercial Arithmetic, Commercial Law, Business Correspondence, etc.

Full information on request. Clip out and send this advt.

HOME CORRESPONDENCE SCHOOL OF CANADA, LIMITED

Temple Building, TORONTO, CAN.

In consolidation with the Canadian Correspondence College, Limited.

By Auction: Entire Lot of Registered CLYDESDALES, CATTLE, AND IMPLEMENTS

The property of D. & R. McEACHY, Beaver Stock Farm, Coleraine, Lot 10, Con. 11, Toronto Gore, Peel Co.

TUESDAY, MARCH 19, 1907.

Representing Scotland's best blood, including the highly-bred stallion, Star of Peel 3266. TERMS—11 months' credit on bankable paper. Conveyances will meet the north and south Trains at Elder station, Owen Sound branch C. P. R., on morning of sale.

J. K. McEWEN, Auctioneer, Weston.

Keep Posted

Farmers, manufacturers and professional men wishing to keep posted about Western Canada should subscribe to the

FARMER'S ADVOCATE AND HOME JOURNAL

of Winnipeg, Man., the only weekly agricultural journal edited and printed west of Lake Superior. Subscription, \$1.50 per year. Address:

FARMER'S ADVOCATE AND HOME JOURNAL
14 and 16 Princess St., Winnipeg, Man.

The only medium which conveys weekly to the farmers of Canada, the advertiser's place of business, 52 times a year, is THE FARMER'S ADVOCATE AND HOME MAGAZINE. Subscription, \$1.50.

in which he attributed to the late Radical Government. He said that now with the Conservatives in office, and a ministry composed of "honorable men and gentlemen," he felt convinced that things would brighten. The Radicals' one ambition was to set class against class, landlord against tenant. Well, during the last five hundred years, the Sylvesters had rarely been—he was sorry to have to confess it—good men (laughter and dissent); but he never yet heard of the Sylvester—though he shouldn't say it—who was a bad landlord (loud applause).

This was a free country, and any tenant of his who was not content (a voice, "Oo says we bain't?")—"thank you, thank you!"—well, there was room for him outside. (Cheers.) He thanked God from the bottom of his heart that, during the forty years he had been responsible for the March Mere Estate, there had never been any friction between him and his people (cheers), and he didn't think there ever would be. (Loud cheers.)

"Thank you, thank you!" And his motto was, "Shun a Radical as you do the devil!"—and he was very glad to see them all there—very glad; and he wished to give them a toast, "The Queen! God bless her!" and—wait a minute!—with her Majesty's name to couple—he was sure that gracious lady would wish it—that of "Owd Bob o' Kenmuir!" Then he sat down abruptly amid thundering applause.

The toasts duly honored, James Moore, by prescriptive right as Master of Kenmuir, rose to answer.

He began by saying that he spoke "as representing all the tenants,"—but he was interrupted.

"Na," came a shrill voice from half-way down the table. "Ye'll except me, James Moore. I'd as lief be represented by Judas!"

There were cries of "Hold ye gab, little mon!" and the squire's voice, "That'll do, Mr. M'Adam!"

The little man restrained his tongue, but his eyes gleamed like a ferret's; and the Master continued his speech.

He spoke briefly and to the point, in short phrases. And all the while M'Adam kept up a low-voiced, running commentary. At length he could control himself no longer. Half rising from his chair, he leant forward with hot face and burning eyes, and cried: "Sit doon, James Moore! Hoor daur ye stan' there like an honest man, ye whitewashed sepulchre? Sit doon, I say, or"—threateningly—"wad ye hae me come to ye?"

At that the Dalesmen laughed uproariously, and even the Master's grim face relaxed. But the squire's voice rang out sharp and stern.

"Keep silence and sit down, Mr. M'Adam! D'you hear me, sir? If I have to speak to you again it will be to order you to leave the room."

The little man obeyed, sullen and vengeful, like a beaten cat.

The Master concluded his speech by calling on all present to give three cheers for the squire, her ladyship, and the young ladies.

The call was responded to enthusiastically, every man standing. Just as the noise was at its zenith, Lady Eleanor herself, with her two fair daughters, glided into the gallery at the end of the hall; whereat the cheering became deafening.

Slowly the clamor subsided. One by one the tenants sat down. At length there was left standing only one solitary figure—M'Adam.

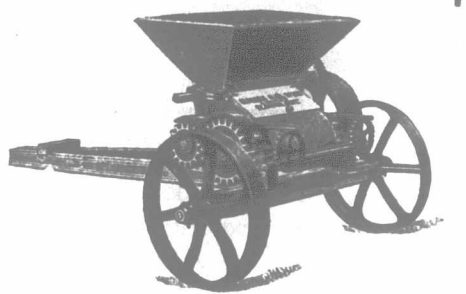
His face was set, and he gripped the chair in front of him with thin, nervous hands.

"Mr. Sylvester," he began in low yet clear voice, "ye said this is a free country and we're a free men. And that bein' so, I'll tak' the liberty, wi' yer permission, to say a word. It's maybe the last time I'll be wi' ye, so I hope ye'll listen to me."

The Dalesmen looked surprised, and the squire sneezed. Nevertheless he nodded assent.

(To be continued.)

Elmira Grain Crusher



Roller 16 ins. long by 8½ ins. diameter. Especially adapted for farmers' use. Superior to any plate grinder for grinding all kinds of grain, especially for horses and cattle. Write us if interested.

ELMIRA AGRICULTURAL WORKS Company, Limited.
Elmira, Ont.

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 50 cents.

BUY rich farming and grazing lands in the Edmonton District, the most fertile district of Alberta. Pendleton Co., Lamont, Alta.

FORTY leading varieties of strawberry and cane berry plants. Seven varieties of seed potatoes. Catalogue free. Jno. Downham, Strathroy, Ont.

FOR SALE in Saskatchewan—A section of first-class land; 300 acres ready for crop; 80 acres fenced for pasture; house, barn and well; \$16 per acre for quick sale; \$8,000 down, balance time. Box 31, Vonda, Sask.

FOR SALE—A wonderful strawberry. Any farmer can grow successfully 300 to 500 bushels per acre. Berries large, attractive, delicious, and a canning favorite; 135 plants, post-paid, for \$1. Other varieties. Send for circular. N. E. Mallory, Blenheim, Ont.

FOR SALE—To settle up the estate of the late John Brown, a farm of 40 acres, near Freeleton, will be sold. Possession April 1st. For particulars apply to Jas. A. Gray, agent for the administrator, Freeleton, Ont.

FOR SALE or to rent—The Chatham Gore Cheese Factory. Apply to Wm. George, Tupperville, Ont.

FOR SALE—Two-story brick house. Ten rooms. With six acres of land. One hundred fruit trees. Outskirts of town. Three thousand population. Great bargain. Drawer F, Clinton, Ont.

IMPORTANT to stockmen—Humanized dehorn applied to your calves will effectually dehorn them. The operation causes no pain, and is uniformly successful. Fully guaranteed. Price \$1 per calf, prepaid. Write for literature. G. H. Tully, box 55, Bracebridge, Ont.

STRAWBERRY PLANTS—Best varieties; first-class plants; prices lower than most growers; send for list. H. D. Clemenson, Wilmington, Ont.

TO RENT, dairy farm at Islington; 100 acres; basement stable; on a milk route. Apply Montgomery, Canada Life Building, Toronto.

Special—Several first class farms; ready for crop; close to elevator. Fourteen dollars per acre. Also several choice unimproved three-hundred-and-twenty-acre farms near Moose Jaw. Ten dollars. These exceptional bargains. A. & F. MAYBERRY, Moose Jaw, Sask.

CLYDESDALES AND SHORTHORNS—Two Imp. Clyde mares, 2 and 3 years old, bred in the purple and both in foal. Two fillies rising a year, both sired by the great Macquea, both will register—a grand pair. Three Shorthorn bulls from 6 to 11 months of age, Scotch, and a few heifers. JOHN FORGIE, Claremont P. O. and Station.

AUCTION SALE
Of Farm, Farm Stock and Implements, including

6 Pure-bred Clydesdales 6
Mares in foal and fillies.

Must be sold to wind up the estate of the late Mrs. B. Smillie. These animals have massive size, lots of quality, true action. Bred from imported stock. High-class pedigrees.

Friday, March 22, at 12:30 p.m.
WM. MOIR
BENJAMIN SMILLIE, Executors.

Write for particulars
B. SMILLIE, Hensall, Ont.

When Writing Please Mention this Paper

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 30 cents.

AT Valley Mills Poultry Ranch—Fertile eggs from Single-comb White Leghorns, Buff Orpingtons, \$1 per setting, \$4.50 per hundred. Mottled Anconas, settings only, \$2. No better winter layers. Free circular. Edmund C. Apps, Box 234, Brantford, Ont.

CHOICE White Wyandottes—Great layers. Eggs \$1.50 per 15; \$5 per 100, Chas. A. Goulding, Vinemount, Ont.

EGGS for hatching from McCormack's prize-winning White Leghorns at \$1 per 15 upwards. Send for mating list. Jas. L. McCormack, Brantford, Ont.

EGGS—White Wyandottes, White Leghorns. Standard stock. Fertility guaranteed. Dollar per setting. E. W. Burt, Paris, Ont.

FOR SALE—Roupe ducks, prizewinning strain. Prices reasonable. Write for particulars. John Inrie, Romney, Ont.

INCREASE your profits by buying eggs from healthy heavy-laying Barred and White Rocks, White and Silver Wyandottes, Buff and Black Orpington, Brown and White Leghorns, Black Javas, \$1 per fifteen. Black and Silver Spangled Hamburgs, Blue Andalusians and Rhode Island Reds, \$1.50 per fifteen. F. W. Krouse, Guelph.

MAMMOTH Bronze Turkeys—Toms, 25 to 30 pounds. Satisfaction guaranteed or money refunded. G. E. Nixon, Arva, Ont.

MAMMOTH Bronze Turkeys, Silver-Gray Dorkings, Barred Rocks, from prizewinning pairs not akin. Alfred E. Shore, White Oak, Ont.

MAMMOTH Bronze turkeys—Heavy bird. Bred from imported prizewinning toms and hens. Part of stock from the first prize Pan-American winners. Pairs not akin. I won first and second prizes in cockerels and first on pullet at London last September. Eggs in season. R. Rose, Glenworth, Ont.

MAMMOTH Bronze turkeys, bred from imported stock. We have an extra heavy and well-colored lot. T. Hardy Shore & Sons, Glenworth, Ont.

P. P. Edwards, Prop. South Salt Springs Poultry Yards, British Columbia. Eggs and stock for sale. E. C. R. I. Reds, Black Minor, Buff Rocks, Blue Andalusians, Pekin Ducks. Write for prices.

WHITE Wyandottes—Few fine, vigorous cockerels. Eggs in season. W. D. Monkman, Bond Head, Ont.

150 BUFF Orpingtons (pure-bred); pullets and yearling hens laying now. Good stout cockerels. Prices reasonable. Eggs in season. Satisfaction guaranteed. Hugh A. Scott, Caledonia, Ont.

BARRED PLYMOUTH ROCKS

Wings 1906:

At Ontario Show, Guelph—In open class, 1st and 4th hens, 1st and 10th pullets 5th cock. Specials—Best colored female, best hen, best pullet and best cock-bird.

At Toronto Show (in six entries)—In open class, 1st cock, 1st cockerel, 1st and second hens, 1st and 2nd pullets. Specials—Best cock, best hen, best cockerel, best pullet and best collection—cock, hen, cockerel and pullet, and the Hiram Walker & Sons, Limited, Grand Challenge Cup for best pair of birds, male and female, any breed, at the show. Some excellent cockerels and pullets for sale at low prices.

JOHN PRINGLE, London, Ont.

MORGAN'S ROUP CURE

Is guaranteed to cure Roup in all its forms, is a preventive of Colds, Gapes, Cholera, Diarrhoea and all Germ Diseases; not trouble. Price 25c. postpaid. Ask for Free article on Feeding Chicks and Poultry.



POULTRY PAYS Our Book, "Poultry for Profit" showing 35 best paying varieties mailed for 10 cents. Delavan Poultry Farm, F. E. E. Goetz, Manager, Box 33, Delavan, Wis.

TRADE TOPIC.

MORGAN'S POULTRY SUPPLIES.—Mr. A. J. Morgan, 113 Dundas St., London, Ont., has issued a calendar of special interest at this season to all persons engaged in poultry-raising. It describes and illustrates the long list of supplies and appliances, including incubators and brooders, manufactured or handled by Mr. Morgan.

GOSSIP.

On Tuesday, March 19th, D. & R. McGahey, of Beaver Stock Farm, Coleraine, Peel Co., Ont., will hold a sale of registered Clydesdales, cattle and implements. The entire lot of horses, we are informed, is an extra well-bred bunch from some of the best Scotch Clydesdale sires. The stallion, Star of Peel, is reported to be an exceptionally sure horse, and last year, at his own stables, served 100 mares, of which, according to present appearances, about 85 per cent. will foal. Keep the date open.

GOSSIP.

A GREAT SALE IN SIGHT.

The attention of farmers, breeders and dealers is directed to the half-page advertisement in this paper of the great sale, to take place at Paris, Ont., on March 12th, 13th and 14th, of over 90 head of pure-bred and high-grade Shorthorn cattle, about one-half of which are registered and richly bred, 15 fat cattle, 15 heavy-draft unregistered Clydesdale mares and geldings, together with a number of good road horses and colts, brood sows, all the harness and implements and household furniture of the estate of the late Captain D. Milley, of Oak Park Farm, Paris, Ont. Those who know this fine farm of 540 acres will agree that there is not a better farm in the Dominion of Canada, an opinion that is justified by the fact that it has recently been sold privately for \$40,000. And the entire stock and chattels will be sold without reserve to the highest bidder. All the stock is in excellent health and condition, nothing over-fed or pampered, but in the best possible condition to go on and do well for the buyers. The 42 head of registered Shorthorns are a very useful lot, most of them of excellent Scotch families, and a number of them of good old strains, noted for their superior milking qualities. The main stock bull in service, the sire of most of the young things, is the roan three-year-old, Banff's Pride =49806=, by Trout Creek Banff, by the \$5,600 bull, Lord Banff, and out of Imp. Rosie 3rd. He is a bull of excellent type, straight, level, thick-fleshed, and has proved a capital sire of sappy, well-fleshed and well-haired stock. The red two-year-old bull, Oak Park Duke =55485=, by Red Cloud, dam Jolly Jilt 3rd, is of much the same type, and should find a place in some good herd. The bull calves are very promising, having handsome heads, deep-ribbed bodies, and splendid handling qualities. Among the families represented are the Kinellar Clarets, of which there are a number of really good things, tracing to the fine imported cow, Cleopatra 1st, by Gravesend. Another excellent family represented are the Kinellar Jilts, of which there are a considerable number, including the dam of the grand bull, Justice, a first winner at the Chicago International a few years ago. The Red Empress and Rose of Autumn families are also largely represented.

One of the most attractive features of the sale, and one which has not been brought out as prominently in the advertisement as it should be, is the grand lot of high-grade Clydesdale mares, fillies and geldings, of which there are seven matched teams, four of them being extra good, well-matched pairs of mares, mostly young, or in their prime, weighing up to 3,200 pounds, and in excellent condition. These should find ready buyers now that heavy horses are in such brisk demand. There are five useful light road or carriage horses and colts. The feeding cattle are in fine condition, more than half finished. Five good brood sows, Yorkshires and Berkshires, due to farrow in April, will be good stock to buy, and a capital Yorkshire boar, bred by D. C. Platt & Son, is in the sale. Some very fine sets of harness are included, and the household furniture is of the highest class, mostly heavy walnut and mahogany, of finest designs, and nearly new. The farm lies about midway between Brantford and Paris, about four miles from either place, and the electric cars stop at the farm every hour in the day. No catalogue has been provided, but certificates of registry of the Shorthorns are on hand, and will be furnished to buyers. Note that the horses and implements will be sold on the first day; the cattle on the second day, and the furniture on the third day, and that the sale commences at 9 o'clock each day.

RECIPES.

Tea Cakes.—One lb. Five Roses flour, 1/4 teaspoon salt, 1/4 lb. lard, rubbed together. Beat an egg, stir to it yeast cake, half the size of a walnut, add to the flour, with enough warm milk to make a smooth paste. Knead well, let rise, form into cakes, let rise again, and bake. Peach Shortcake.—Make a rich pastry, using Five Roses flour. Roll thin, and bake three crusts in pie-pans. Let get cold. Mash some left-over peaches, spread between crusts, and serve with whipped cream.



Let Me Sell You a Chatham Incubator — On Time

Do you know there is big money in raising poultry? Do you know there is more money in running a good incubator than in almost anything else you can do for the amount of time and trouble it takes? Do you know my incubator will pay you a bigger profit than any other thing you can have on your place?

Well, all these things are true, and I can prove it. Thousands of people all over Canada have proved it every year for the last five years.

I want to quote you a price on my Chatham Incubator, —sold ON TIME. I want to send you my Chatham book. This incubator book is free— I'll send it to you for just a postal card. It tells you a lot you ought to know about the Poultry business—it tells you how to make money out of chickens—it tells you how my Chatham Incubator will make you more money than you can make with hens—far more, and with less trouble.

This book tells you how my Incubators are made—why they are the best ever invented—and why I sell them ON TIME and on a 5-Year Guarantee.

My Company has been in business in Canada for over 50 years. We are one of the largest wood-working factories in the country. We also operate a large factory at Detroit, Mich. We have the incubator and Brooder business down to a science.

Chatham Incubators and Brooders will make you money, for a Chatham Incubator will hatch a live, healthy chicken out of every fertile egg put into it, in 21 days.

Will you write for my book today? Do it now while you think of it. Just say on a postal "Please send me your Incubator Book"—that's all. Address me personally.

Manson Campbell

President

The Manson Campbell Co., Ltd.

Dept. 5, Chatham, Ont.

NOTE—I carry large stocks and ship promptly from branch houses at Calgary, Alta., Montreal, Que.; Brandon, Man.; Halifax, N. S.; Victoria, B. C., and factory at Chatham.



EGG MACHINES

From a practical standpoint hens are simply egg machines. They take the feed, convert it, and lay the eggs. But like every other kind of machine, to do the most work, the hen must be in perfect order. The digestive apparatus is the important factor in egg production. Many poultrymen feed an abundance of good albuminous food such as should produce a profitable egg yield, but if the digestion is impaired and the egg-organs dormant, no amount of food will produce the desired results. But give the fowls a tonic to increase the digestion, a little iron for the blood, and regulate the system generally, toning up the egg-organs and you are certain to get eggs even in the coldest weather.

DR. HESS Poultry PAN-A-CE-A

the prescription of Dr. Hess (M. D., D. V., S.), contains all these principles to increase egg production and cure cholera, roup, indigestion, etc. It has the indorsement of leading poultry associations of the United States and Canada, costs but a penny a day for about 30 fowls and is sold on a written guarantee.

1 1-2 lb. package, 35 cents; 5-lb., 85 cents; 12-lb., \$1.75; 25-lb. pail, \$3.50.

Send 2 cents for Dr. Hess 48-page Poultry Book, free.

DR. HESS & CLARK, Ashland, Ohio, U. S. A. Instant Louse Killer Kills Lice.

Advertise in the Farmer's Advocate.

45 SHOW 45 Shorthorns BY AUCTION

(Straight Scotch)

The property of **JAMES A. CRERAR, Shakespeare, Ont.,** on

Wednesday, March 13th, 1907

At his farm, one mile north of Shakespeare, Ont., on above date, he will sell his entire herd of **45 head of Imp. and Canadian-bred Shorthorns**, representing the Daisy, Bellona and Roan Duchess strains, the get of high-class prizewinning bulls. Very many to be sold are Toronto and London winners. All are in splendid condition. There are 35 females and 10 bulls, including the stock bull, Trout Creek Choice 57962.

Shakespeare is on the main line of the G. T. R., a few miles east of Stratford. Conveyances will meet all morning trains.

Terms: Six months' credit, or 5 per cent. per annum off for cash.

Lunch at noon. Catalogues ready by end of February.

JAS. A. CRERAR, Shakespeare, Ont.

**CAPT. T. E. ROBSON } Auctioneers.
SANDY FRASER }**

GOSSIP.

SALE DATES CLAIMED.

March 8th.—Innes, Schafer & McClary, Woodstock, Ont., imported Clydesdale mares and stallions.

March 12th.—Hay Brgs., Tara, Ont., Shorthorns.

March 13th.—Jas. A. Crerar, Shakespeare, Ont., Shorthorns.

March 12th-14th.—Estate of D. Milloy, Brantford, Ont., Shorthorns, horses, fat cattle, etc.

March 19th.—John O'Brien, London West, Ont., Aberdeen-Angus and Jersey cattle, and farm stock.

March 19th.—D. & R. McGeachy, Coleraine, Ont., Clydesdales and cattle.

March 29th.—H. E. George, Crampton, registered Holsteins, at Napanee, Ont.

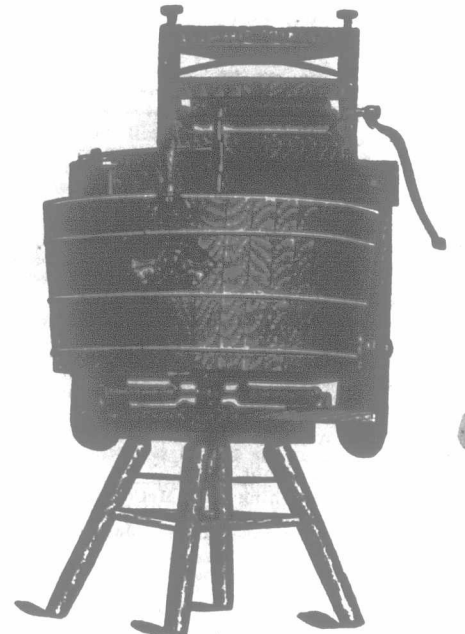
April 2nd.—Wm. Meharey, Russell, Ont., imported Clydesdale mares, at Ottawa.

WOODSTOCK CLYDESDALE SALE.

Remember the great auction sale of 50 imported Clydesdale mares and fillies and 10 imported stallions, to take place at Woodstock, on Friday, March 8th. No better opportunity has offered, or is likely to be offered, for securing good, big, quality mares, single or matched pairs, two to six years old, richly bred, and some in foal to high-class horses in Scotland. This class of mares is needed in this country to breed the sort of horses that are wanted, and will bring big prices. The stallions are also of desirable size, type, quality, breeding and age, from two to six years old, sons of some of the best sires on the old sod. There will doubtless be bargains in store for those who attend this sale.

CRERAR'S CLEARING SALE.

March 13th is the date of the dispersion sale of Mr. James A. Crerar's splendid herd of Shorthorns at his farm, near Shakespeare Station, G. T. R., six miles east of Stratford, Ont., as advertised in this paper. This is one of the very best herds of Shorthorns in Canada, having for years ranked among the principal winning herds at Toronto and other leading shows, winning second for herd in the great competition at the Dominion Exhibition, at Toronto in 1903, when this herd also had the first-prize cow, Gem of Ballechin (imp.), still in the herd, her daughter, Gem of Ballechin 2nd, winning first as a three-year-old, and the senior championship at the same show. As evidence that the herd has been kept up-to-date in character, we note that, at Toronto last fall, it won third in the graded-herd competition, and first at the Western Fair, at London, besides a creditable share of the first prizes in other sections at both these shows. The herd as it stands to-day is principally made up of Scotch-bred females, personally selected and imported by Mr. Crerar, and the produce of these sired by first-class imported and prize-winning bulls, the more recent being Captain Mayfly (imp.), a Toronto first-prize winner, and the imported Claret bull, Scottish Hero. The present stock bull is Trout Creek Choice, a massive roan two-year-old, purchased at a long price, included in the sale, was bred by W. D. Platt, sired by Imp. Pride of Windsor, bred by the King, and out of the Dutch-bred cow, Sweet Fragrance (imp.), by the champion Alistair. Trout Creek Choice is registered in the American herdbook as well as in the Canadian. He is a show bull, and is proving a capital sire. Another richly-bred bull used is a son of the first-prize three-year-old and senior sweepstakes cow at Toronto, and got by Imp. Captain Mayfly, by Captain of the Guard. His breeding, and the extraordinary individual excellence of his dam, should insure this young bull a prepotent sire of the best class. Among the females, besides those above mentioned, are the three choice three-year-old cows, Queen (whose portrait appears in this issue), Scottish Lass and Rosabel 6th, all by Imp. Scottish Hero, winners at Toronto and London in 1906, and having heifer calves at foot, and the beautiful roan yearling heifers, Scottish Lass 2nd and Hero's Lass, by the same sire. Several excellent young bulls and bull and heifer calves are also included. These cattle will not disappoint intending buyers looking for first-class up-to-date cattle of the thrifty, good-doing and regular-breeding sort, and the catalogue shows that for breeding they are equal to any herd in the country.



Let this Machine do your Washing Free.

There are Motor Springs beneath the tub. These springs do nearly all the hard work, when once you start them going. And this washing machine works as easy as a bicycle wheel does. There are slats on the inside bottom of the tub. These slats act as paddles, to swing the water in the same direction you revolve the tub. You throw the soiled clothes into the tub first. Then you throw enough water over the clothes to float them. Next you put the heavy wooden cover on top of the clothes to anchor them, and to press them down. This cover has slats on its lower side to grip the clothes and hold them from turning around when the tub turns. Now, we are all ready for quick and easy washing. You grasp the upright handle on the side of the tub and, with it, you revolve the tub one-third way round, till it strikes a motor-spring. This motor-spring throws the tub back till it strikes the other motor-spring, which in turn throws it back on the first motor-spring. The machine must have a little help from you, at every swing, but the motor-springs, and the ball-bearings, do practically all the hard work. You can sit in a rocking chair and do all that the washer requires of you. A child can run it easily full of clothes.

When you revolve the tub the clothes don't move. But the water moves like a mill race through the clothes. The paddles on the tub bottom drive the soapy water THROUGH and through the clothes at every swing of the tub. Back and forth, in and out of every fold, and through every mesh in the cloth, the hot soapy water runs like a torrent. This is how it carries away all the dirt from the clothes, in from six to ten minutes by the clock. It drives the dirt out through the meshes of the fabrics WITHOUT ANY RUBBING,—without any WEAR and TEAR from the washboard. It will wash the finest lace fabric without breaking a thread, or a button, and it will wash a heavy, dirty carpet with equal ease and rapidity. Fifteen to twenty garments, or five large bed-sheets, can be washed at one time with this "1900 Junior" Washer. A child can do this in six to twelve minutes better than any able washerwoman could do the same clothes in TWICE the time, with three times the wear and tear from the washboard.

This is what we SAY; now, how do we PROVE it? We send any reliable person our "1900 Junior" Washer, free of charge, on a full month's trial, and we even pay the freight out of our own pockets. No cash deposit is asked, no notes, no contract, no security. You may use the washer four weeks at our expense. If you find it won't wash as many clothes in FOUR hours as you can wash by hand in EIGHT hours you send it back to the railway station,—that's all. But, if, from a month's actual use, you are convinced it saves HALF the time in washing, does the work better, and does it twice as easily as it could be done by hand, you keep the machine.

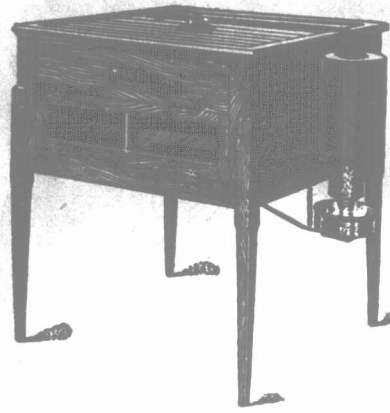
Then you mail us 50 cents a week till it is paid for. Remember that 50 cents is part of what the machine saves you every week on your own, or on a washwoman's labor. We intend that the "1900 Junior" Washer shall pay for itself and thus cost you nothing. You don't risk a cent from first to last, and you don't buy it until you have had a full month's trial. Could we afford to pay freight on thousands of these machines every month, if we did not positively KNOW they would do all we claim for them? Can you afford to be without a machine that will do your washing in HALF THE TIME, with half the wear and tear of the washboard, when you can have that machine for a month's free trial, and let it PAY FOR ITSELF? This offer may be withdrawn at any time it overcrows our factory. Write us TODAY, while the offer is still open, and while you think of it. The postage stamp is all you risk. Write me personally on this offer, vis: F. A. A. Bach, Manager "1900" Washer Co., 356 Yonge St., Toronto, Ont.

Rupture Cure

New, natural remedy. Absolutely certain. Scores cured lately. Write for free booklet to **LY N MFG. CO., 435 Yonge St., Toronto.**

CLYDESDALES AND SHORTHORNS—Canadian-bred, registered. One stallion, rising 3, by Imp. Macqueen Tw stallions, rising two, by Imp. Primo e. One filly, rising 2, by Imp. Macqueen. These are a choice lot. Show stuff among them. Also my stock bull, Gilbert Lean 36424; roan; weighs 3500; seven years old. Safe and sure. **W. O. PUGH, Claremont P. O. and Station.**

OUR MODEL INCUBATORS AND BROODERS



Are the only panacea for failure past, present and future. Just take a few minutes and read the following two of many hundreds of unsolicited testimonials from our satisfied customers:

Bayham, Ont., Jan. 31, 1907. After using Model Incubator for one year Mrs. Mitchell writes us: "I would not be without my incubator for the price of two if I could not get another of the Model Incubators."

Orangedale, N. S., Feb. 11, 1907. Sirs.—No trouble to run your Model Incubator, as I was away from home for 11 hours each day and machine run itself. Temperature of cellar changing 26 degrees in 12 hours; temperature of machine did not change in the least, only the last days showed an upward tendency of half to one degree. Ran machine at 103, hatched 148 chicks from 178 eggs. There was only one chick dead in the shell in the lot. Dead germs of about 8 days in the rest. Eggs were very dark-shelled, making safe testing very difficult.

OUR CATALOGUE MAILED FREE. **MODEL INCUBATOR COMPANY, LIMITED, 193 River St., TORONTO, ONT.**



**SMITH'S OVARY TONIC
MAKES HENS LAY**

Your hens will lay all the year round, if you will give them Smith's Ovary Tonic once a week.

One teaspoonful to four fowls keeps hens healthy—strengthens and invigorates the egg-producing organs—and renews wasted tissue due to prolific laying.

Only 25c. and 50c. a bottle. Sold by druggists, grocers, etc.

NATIONAL DRUG & CHEMICAL CO., LIMITED, MONTREAL.

Clydesdale Stallions!

first-class Hackney.

I have on hand for sale another choice lot of Clydesdale stallions, newly imported, ranging in age from two to six, with plenty of size, style and good disposition. Also one first-class Hackney. **Wm. Colquhoun, Mitchell, Ont.** 'Phone to residence.

AUCTION SALE

OF VALUABLE

PURE-BRED AND GRADE STOCK CHATELLETS AND HOUSEHOLD FURNITURE

Belonging to the late **DONALD MILLOY**, and situated at the premises on the south of the Paris Road, known as the "Oak Park Farm," Township of Brantford, on

Tuesday, Wednesday and Thursday,
MARCH 12th, 13th and 14th, 1907
AT THE HOUR OF 9 O'CLOCK. LUNCH AT NOON.

The implements and horses will be sold the first day. The cattle on the second day. The furniture on the third day. Forty-five head of pure-bred Shorthorn pedigree cattle. Thirty-four cows and calves. Twenty-four steers and heifers. Fifteen Clydesdale mares and geldings of excellent quality. Also the implements and carriages, etc., used in carrying on of the business, and all the household furniture now in the dwelling, etc. Intending purchasers can see the above property by applying on the premises. The farm can be reached by electric railway from Paris or Brantford. **Terms**—Cash for all purchases of \$25 and under; cash or approved joint notes, payable within 9 months, on amounts over \$25, bearing interest at 6 per cent. per annum. For further particulars apply to

THE TORONTO GENERAL TRUSTS CORPORATION, ADMINISTRATORS,
Cor. Yonge and Colborne Sts., Toronto.

Or to Messrs. Hoskin & Ogden, Solicitors, 28 Toronto St., Toronto.

Auctioneer, Welby Almas, Brantford.

GOSSIP.

HOLSTEIN-FRIESIAN COW RECORDS.

From Feb. 1 to Feb. 14, 1907.

Records for 120 cows have been accepted by the Supt. of Advanced Registry in the United States, four of which were begun more than eight months after freshening. All made seven-day, two made eleven-day, six made fourteen-day, and three made thirty-day records. The averages by ages were as follows:

Thirty-two full-aged cows averaged: age, 7 years 24 days; days from calving, 25; milk, 437.7 lbs.; per cent. fat, 3.53; fat, 16.541 lbs. Three senior four-year-olds averaged: age, 4 years 7 months 22 days; days from calving, 32; milk, 433.9 lbs.; per cent. fat, 3.19; fat, 13.835 lbs. Eight junior four-year-olds averaged: age, 4 years 2 months 27 days; days from calving, 17; milk, 467.4 lbs.; per cent. fat, 3.47; fat, 16.225 lbs. Ten senior three-year-olds averaged: age, 3 years 9 months 4 days; days from calving, 29; milk, 405.8 lbs.; per cent. fat, 3.37; fat, 13.764 lbs. Seventeen junior three-year-olds averaged: age, 3 years 2 months 29 days; days from calving, 21; milk, 387.3 lbs.; per cent. fat, 3.53; fat, 13.685 lbs. Eleven senior two-year-olds averaged: age, 2 years 8 months 9 days; days from calving, 35; milk, 333.5 lbs.; per cent. fat, 3.20; fat, 10.678 lbs. Thirty-five junior two-year-olds averaged: age, 2 years 1 month; days from calving, 37; milk, 282.7 lbs.; per cent. fat, 3.38; fat, 9.558 lbs. This herd of 116 animals, of which nearly three-fifths were heifers with first or second calves, produced in seven consecutive days 44,251.4 lbs. milk, containing 1,522.961 lbs. butter-fat; showing an average of 3.44 per cent. fat. The average yield for each animal was 381.5 lbs. milk, containing 13.129 lbs. butter-fat; equivalent to 54.5 lbs. or 27 quarts milk per day, and 15.13 lbs. of the best creamery butter per week. It will be noted that the averages for these herds under test seldom falls as low as 15 lbs. of creamery

20 Scotch SHORTHORNS By Auction

ON

TUESDAY, MARCH 12th, 1907

Belonging to the estate of the late **WM. HAY, Tara, Ontario**. Will be sold at the farm, 1 1/2 miles east of the Village of Tara, where conveyances will meet morning trains from north and south. Nine breeding cows, 5 heifers and 6 bulls, including the stock bull, Scottish Knight 58248, representing the Marr Floras, Cruickshank Lovely, Stamford and Wildame strains. There will also be sold the **Imp. Clydesdale stallion, Kelvinside**, by Baron's Pride, dam by Maogregor, and two registered Clydesdale mares.

Terms: 10 months' credit on bankable paper. Six per cent. off for cash.

Tara is on the Owen Sound branch of the G. T. R.

HAY BROS., Props., TARA, ONTARIO.

James Cass, Auctioneer.

Catalogues.

Dispersion Sale of Pure-bred Aberdeen-Angus and Jersey Cattle, Grade Cattle and Horses.

Property of **Mr. John O'Brien, London West, Ontario**, 3 miles from the City of London, on **TUESDAY, MARCH 19th**. 16 Aberdeen-Angus Cattle—3 bulls and 13 females, 14 Jersey Cows and Heifers, 1 Pair Grade Clydesdale Geldings 6 and 7 years old, 1 Heavy Draft Gelding—3 years, 2 Carriage Fillies by Hildenby, 1 Filly and 3 Foals (general purpose) by Lennox. This herd of Jerseys has produced many prizewinners. Spot Cash's Ella was champion at Western Fair, London, in 1900, and is dam of four in sale. Four cows of same breeding as heifers in the herd, made an official average record of 24 lbs. 8 ozs. butter in 7 days. The Aberdeen-Angus cow, College Bloom, winner of second at Western Fair, and several daughters, are in the sale. **TERMS**—8 months' credit on approved joint notes; 6 per cent. per annum off for cash. Sale to commence at 1:30 p. m.

CAPT. T. E. ROBSON, Auctioneer.

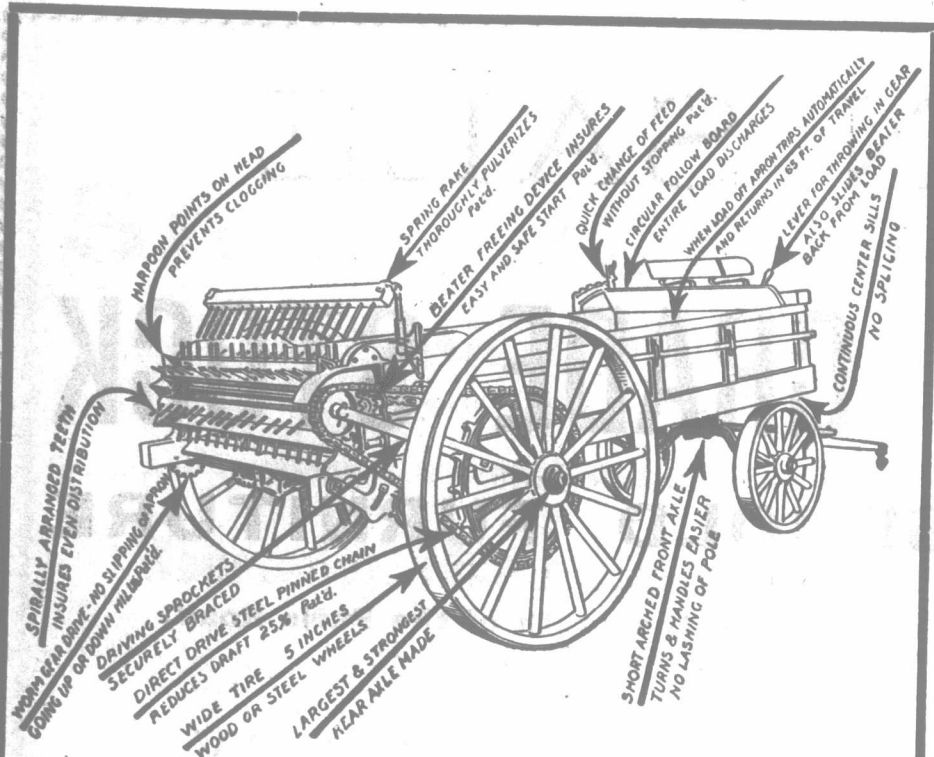
JOHN O'BRIEN, Prop., LONDON WEST, ONT.

butter per week, and that the milk at but 4c. per quart will always come to more than one dollar per day.

The records begun not less than eight months after calving show up finely, and that of Calamity De Kol Spofford is especially noteworthy. This heifer at the earlier record of this lactation period produced 342.9 lbs. milk, containing 11.898 lbs. fat; again, tested 279 days after calving, she produced in 30 consecutive days 44.979 lbs. fat, from 1,192.2 lbs. milk, the best seven days out of the thirty showing 10.677 lbs. fat. This is the first thirty-day record begun more than eight months after calving that has been reported; and if the daily yield for the thirty days be compared with the daily yield for the selected seven days, it may be noted how very evenly the test ran. Such records as this are very conducive to showing the wonderful staying powers of Holstein-Friesian cattle.

Two Jersey cows in the herd of Mrs. Murray Smith, at Market, Harborough, Eng., are reported as making remarkable milk records for a long term of years: Dahlia, calved in 1893, gave, in the 12 consecutive years, 1895 to 1906, inclusive, an average milk yield of 7,096 lbs. a year. Lorna, calved in 1898, gave, in the nine years, 1898 to 1906, inclusive, 7,291 lbs. a year. This is a fine example of the wisdom of keeping individual cow records. It will be interesting to figure out the financial returns from these records at a fair price for the milk produced.

Ursulina 17th, an English dual-purpose Shorthorn cow, in the herd of the Marquis of Winchester, at Andover, has a fine record as a breeder and milker, as reported in the Live-stock Journal. She was calved in Feb., 1894, is now thirteen years old, has produced eleven calves at single births, and is now giving over four gallons of milk daily. Ursulina 6th, one of her ancestors, gave 26 quarts of milk per day, and three of the family sold, at public auction, for an average of \$640 each.



"Success" Manure Spreader is Simple and Easy to Operate.

So simple and easy to operate that a boy of eight or nine can sit up in the seat and control perfectly the distribution of manure.

Everything within easy reach of the seat. Pull up a lever to the right of seat, and machine is securely locked in gear until load is distributed.

At same time machine is thrown in gear the beater is automatically moved back from contact with the manure—has plenty of time to get under way before manure strikes it—entirely eliminates any strain in starting.

A lever on the left controls the speed of the apron. Distributes any number of

loads—3, 6, 9, 12, etc., to the acre as you desire.

By this same lever the speed of the apron can be instantly changed—slower or faster—without stopping the apron for a second, or allowing an inch of ground to be skipped.

When load is distributed, just turn a little lever to left of seat and the apron automatically and rapidly returns—so quickly that machine is ready for another load in driving the short distance of sixty-five feet.

We would like to send you our Free Illustrated Catalogue, which explains the construction of "SUCCESS" in detail. Write for it to-day.

THE PARIS PLOW COMPANY, LIMITED

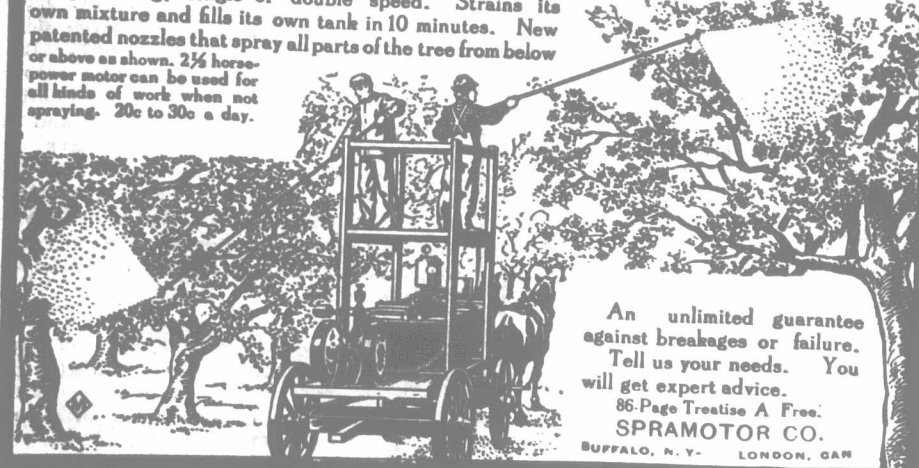
Paris, Ontario.

Western Branch: Winnipeg, Man.

Power Spramotor

SPRAYS 250 TREES PER HOUR.

16 to 30 nozzles with 125 lbs. pressure. Automatic, compensating, single or double speed. Strains its own mixture and fills its own tank in 10 minutes. New patented nozzles that spray all parts of the tree from below or above as shown. 2 1/2 horse-power motor can be used for all kinds of work when not spraying. 20c to 30c a day.



An unlimited guarantee against breakages or failure. Tell us your needs. You will get expert advice. 86-Page Treatise A Free. SPRAMOTOR CO. BUFFALO, N. Y. LONDON, CAN.

Imp. Clydesdale Fillies by Auction

20—From 2 to 4 years old—20

At OTTAWA, ONTARIO.

I have personally selected in Scotland 20 of as good fillies as ever came over for size, quality and breeding. Sired by Baron's Pride and his best sons and other noted sires. A number prizewinners. Sale at one o'clock.

APRIL 2nd, 1907,

At Butler House, OTTAWA.

Terms cash, or two months on bankable paper.

WM. MEHAREY,

Russell, Ontario.

ADVOCATE ADVERTS. ALWAYS PAY

GOSSIP.

Lew W. Cochran, of Crawfordsville, Indiana, advertises in this paper Percheron, Shire and Hackney stallions and mares, and claims to have the largest stud in the world, and to have won more gold medals and championships than any other exhibitor at leading shows. His prices are moderate, and terms easy. See the advertisement, and write for particulars.

SHIRES SELL HIGH.

At the fifth of the unreserved sales, held by His Majesty the King, on Feb. 8th, at Wolferton Stud Farm, some pretty stiff prices were paid. The black five-year-old stallion, Ravenspur, by Blythwood King Maker, sold for 825 guineas (\$4,380); the three-year-old, brown, Goldstone, for \$3,150; the brown yearling colt, Blondel, by Calwich Blend, for \$1,525, and the yearling filly, Lady Forrester, by Lockinge Forest King, for \$1,860. The average for the 45 head sold was £124, or \$620.

At a draft sale, on Feb. 14th, from the Dunsmore stud, of Sir P. A. Muntz, 51 head sold for an average of \$745 each. The gray mare, Dunsmore Fuchsia, selling for 520 guineas; a three-year-old filly for 460 guineas; a two-year-old filly for 240 guineas, and a two-year-old stallion for 460 guineas, all by the same sire, Dunsmore Jameson. The sixteen, sired by this noted horse, averaged £236 (\$1,325) each. Shires are evidently popular where they are best known.

JOHN O'BRIEN'S SALE.

The attention of readers of "The Farmer's Advocate" is again called to the advertisement of the dispersion sale, on March 19th, of the herds of registered Aberdeen-Angus and Jersey cattle and work horses, etc., belonging to Mr. John O'Brien, of London West, three miles from London, Ont., all of which will be sold without reserve, as Mr. O'Brien is retiring from farming. The Aberdeen-Angus are a good, useful herd of this excellent beef breed, that grow no horns, and, hence, need no dehorning. Several prizewinners at London and other shows are included. The Jerseys are richly bred, from deep-milking and large butter-producing strains. The stock bull, St. Ion of Highfield, is a typical son of Highfield Prospect, dam Elena of Oakdale, official record, 19 lbs. 4 ozs. in seven days. Four cows of the same breeding as heifers in the sale made official average records of 24 lbs. 8 ozs. butter in a week. The terms of sale are easy, and the place easy of access. Parties wanting either beef or dairy cattle of high-class quality should plan to attend the sale.

TRADE TOPICS.

The Bank of Toronto has now 48 branches in Ontario, besides a number of sub-branches in the larger cities, 7 in Quebec, 6 in Manitoba, and 4 in Saskatchewan. If the prosperity of the country is measured by its bank extension, this should be a happy people.

It takes more than knowledge of soils and fertilizers, stock and poultry-raising, to make a good and properly-successful farmer. If health, the one big asset, is lacking, the value of all other assets, the value of years of experience, is greatly discounted and decreased. The farmer needs a healthy and vigorous body, and an alert and clear mind. There are a thousand and one things about the farm that require his personal attention; no one can do it as well. He must get around and see to these things personally, and he cannot do it if he is tormented by bodily ills, if he is continually tormented by chronic complaints. Often a farmer will worry night after night over the health of some favorite animal, but will utterly neglect his own health. This is wrong! The farmer should use all available means within his reach to get and to keep health. The full-page advertisement of the Theo. Noel Company, in this issue, offers means by which many suffering with chronic ailments have found health and strength with which to wrest prosperity from the soil. No money is asked. The applicant can get the treatment for the asking, is allowed to test it for one month's time, and only to pay if it helps. Read the advertisement, and write to the Theo. Noel Company immediately, mentioning this paper.

Doctors Tried for 3 Years to Cure Me

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

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

Mrs. Dave W. McCall, Lombardy, Leeds Co., Ont., writes: "I desire to acknowledge 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 dealers, or Edmanson, Bates & Co., Toronto.

STOCK MEN



Advertise your fancy stock by means of first-class

DRAWINGS

AND

ENGRAVINGS

Send us your photos, and our stock artist will bring out the points.

THE TORONTO ENGRAVING COMPANY LIMITED
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DESIGNERS ILLUSTRATORS ENGRAVERS

Special Low Rates West



\$41.95

\$39.45

VANCOUVER
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TACOMA

NELSON, B. C.
ROSSLAND
TRAIL
ROBSON
SPOKANE, WASH.

FROM LONDON.

SECOND CLASS. ONE WAY.

Proportionately low rates from all Ontario stations to above points and many Western and Coast points not named.

Ask for particulars. Tickets good going March 1 to April 30.

See nearest C. P. R. Ticket Agent.

City Office: Corner Richmond and Dundas Sts., London, Ont.

Advertise in The Farmer's Advocate and Get Good Results

QUESTIONS AND ANSWERS
Miscellaneous.

STIFLE DISLOCATION.

Yearling colt was, one morning, unable to back; one hind foot came off the floor with a snap. She was all right for some days, when we found her one morning the same way. After we make her back and step up, her toe will drag for a step or two. She is in good health and thriving.

W. J. M.

Ans.—This is evidently partial dislocation of the stifle. Place a rope around the fetlock of the effected leg, and have an assistant draw the limb well forward, while with the hand you press the bone forward and inward at the same time, when it will usually fly into place with a sharp click. Keep colt tied in stall, and the limb well forward by means of a sideline tied to a collar or strap around its neck. A smart blister of cantharides (Spanish fly), one part to six parts lard, applied twice, with a week between, will assist in effecting a cure.

FANNING-MILL SCREENS.

Is there any method or scale by which fanning-mill sieves or screens are numbered, according to size of mesh? W. B.

Ans.—The Manson Campbell Co., Chatham, Ont., furnish the following list of the sizes of the screens and riddles in use in their ordinary mills:

Size.	Wire or zinc.
2 x 2 mesh.	Wire.
5-16 hole.	Zinc.
1 hole.	Zinc.
5-64 hole.	Zinc.
20 x 20 mesh.	Wire.
4 x 5 mesh.	Wire.
9 x 8 mesh.	Wire.
2 x 1 1/4 mesh.	Wire.
9 x 9 mesh.	Wire.
7-32 hole.	Zinc.
7-32 hole.	Zinc.
9-64 hole.	Zinc.
7-64 hole.	Zinc.
3-32 hole.	Zinc.
1/4-inch hole.	Zinc.
20 x 20 mesh.	Wire.

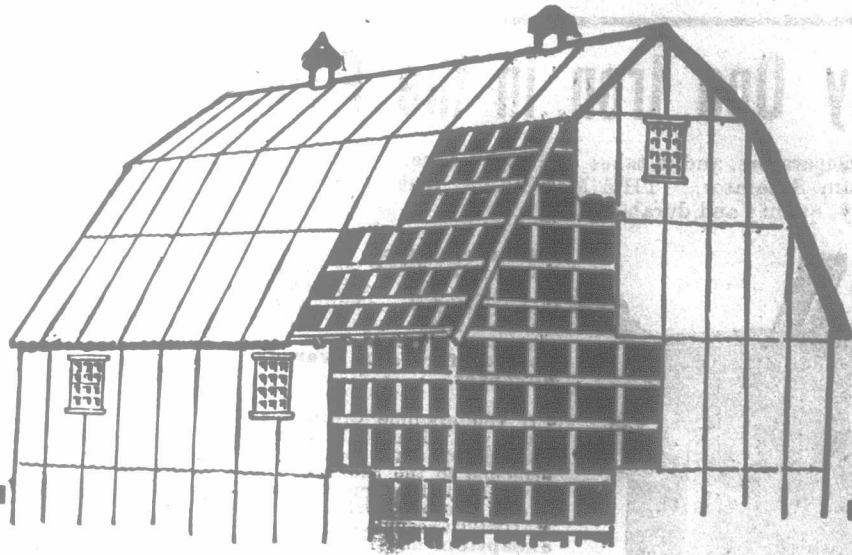
Screen.	To clean.
1	Oats and chaffing.
2	Barley and fall wheat.
3	Peas, beans and oats.
4	Red clover seed.
5	Timothy seed screen.
6	Peas, beans and oats screen.
7	Fall wheat for seed.
8	Cheas and oats from wheat.
9	Wheat for market and oats.
10	Spring wheat riddle.
11	Oats from wheat riddle, also
12	Cockle and wild peas from wheat.
13	Cockle from wheat.
14	Timothy seed from wheat.
15	Fall wheat riddle.
24	Alsike clover screen.

FEEDING YOUNG CALVES.

Please advise me in regard to feeding flaxseed meal to young calves, three weeks old. I am putting them gradually on to separator milk. Should it be boiled or scalded? What quantity should be given? Could you advise anything better? Is flaxseed meal good for young pigs?

SUBSCRIBER.

Ans.—If flaxseed is fed to calves, it should be the whole seed, soaked for 12 hours, then slowly boiled to a jelly, and about half a teacupful of this fed to each calf in warm milk, and increased to a cupful later. Flaxseed meal will almost certainly upset the digestive organs and cause diarrhoea if fed in milk, and is also liable to affect the joints of the legs, if fed too freely. Boiled flaxseed is safe to feed, but we do not consider it necessary if a little trouble is taken to teach the calves to eat dry feed early, which can be done at three weeks to a month old by putting some whole oats or oats and bran in its mouth after it has taken its milk, then keeping fresh sweet clover and oats and bran within its reach. Successful calf-raisers claim that there is no more suitable gran feed for calves than whole oats. We have had no experience in feeding flaxseed meal to young pigs, and would be cautious about using it, except in very small quantities, and would think it safer if boiled. Oil-cake meal would be safer, and might be fed in moderation, uncooked, to either pigs or calves, but to the latter, dry, mixed with bran and oats.



A Lightning Proof, Fire Proof Barn

is actually cheaper, when covered with "Acorn Quality" Corrugated Galvanized Sheets, than the dangerous all-wooden structure.

There is a big saving in both lumber and carpentry, when using Corrugated Sheets. For the metal, being very rigid, may be applied to a much lighter framework than any other construction, and no sheeting boards are required.

There is no trick in applying

"Acorn" Corrugated Galvanized Sheets.

Anybody can use them to roof or side any barn or outbuilding, and such a roof will outlast a generation without repairs. It is absolutely proof against lightning and fire from the outside. Being heavily galvanized, it will never rust and admit the rain. It is the best you can buy, and the cheapest, in both first and last cost.

DELEWARE, February 20th, 1905.

"I cannot speak too highly of your metal roofing. If I had another barn to roof I would prefer your corrugated galvanized iron roofing and pay for it, than use wooden shingles for nothing."

Yours respectfully, CHAS. BATMAN.

Write us and ask for our literature, with names of users in your own locality. Then stand by their opinion of our Corrugated galvanized sheets for barn-building.

THE METAL SHINGLE & SIDING CO. LIMITED

PRESTON, Ont.



THERE ARE NO "WEAKLINGS" IN
FROST WIRE FENCE

From top to bottom it is a distinctly superior fence.

A special grade of No. 9 heavy coiled wire is used for the laterals, which are securely locked to the stiffest kind of No. 7 heavy hard steel wire stays. Built entirely of hard steel material and not weakened by any peculiar kinks or knots, the Frost Fence may be justly termed the "better fence"—the longest-lasting, most economical fence to buy.

The greater strength of the Frost Fence makes it exceptionally well-suited for a hog fence. With the additional short stays at the bottom (as shown in illustration) the little pigs are effectually prevented from squeezing their way out. The weight, strength and rigidity of the Frost makes it a waste of effort for your most ambitious roofer to attempt to get under the fence.

You really cannot afford to overlook the Frost when you buy, so write us to-day for our free illustrated Catalogue, which gives a complete detailed description.

FROST WIRE FENCE COMPANY, Limited
Winnipeg, Man.
Hamilton, Ont.

"Frost" fence

Seeds for the Farm

You Want Good Clean Clover and Timothy.

	Per bushel.
"Sun" Red Clover.....	\$10 50
"Ocean" Alsike.....	10 00
"Gold" Lucerne.....	10 00
"Diamond" Timothy.....	3 50

MY BEST BRANDS.
You can not make a mistake in ordering these. Send for samples and see for yourselves.

SEND FOR 1907 CATALOGUE.

GEORGE KEITH, 124 KING ST., Toronto, Ont.

Mention the Advocate when writing.

TELEGRAPHY

Is the first step towards positions paying from \$5 000 to \$15 000 per ann in railway service. You can become a good operator in six months if you study in the Central Telegraphy School, 3 Gerrard St. east Toronto. The finest school in Canada. Write for particulars.
W. H. SHAW, Pres. T. R. JOHNSTON, Prin.

I am offering for sale my entire flock of pure-bred OXFORD DOWN SHEEP, consisting of 10 ewes, all in lamb to a pure-bred; also 7 shearings; all in splendid condition. Prices right. G. GRIEVE, Maple Lodge Ont.
When Writing Advertisers Please Mention this Paper.

We've Only One Iron in the Fire;

That is, making Cream Separators, and it takes our entire time. That is why we manufacture a Cream Separator, "THE MAGNET," that we are able to guarantee as to accuracy, quality and durability.



When you propose to buy a carriage the first thing you do is to examine its construction. Should you find one built to run on one wheel you would immediately condemn it as being no good for your everyday purposes.

If you examine Cream Separators you will find all makers except one apply the one-wheel principle to the running of the bowl; that is, the support is placed at one end of bowl only. The MAGNET Cream Separator is the exception, and it is made by us. It has its bowl supported at the top as well as at the bottom. Examine the accompanying cut and you will see how nicely the bowl of the MAGNET is held in its place, giving it steadiness of motion, and preventing its getting out of balance. It also makes it very easy to turn; in fact, so easy that a child of four years can operate it. See page 18 in the catalogue.

This double support of the bowl is protected by patent, and can be found only on the MAGNET.

Note also the one-piece skimmer. It is easy to clean and takes all the cream out of the milk.

Write for catalogue.

THE PETRIE MFG. CO., LIMITED,
Head Office, Hamilton, Ont.,
or Winnipeg (Man.), Carstairs (Alta.), St. John (N. B.)

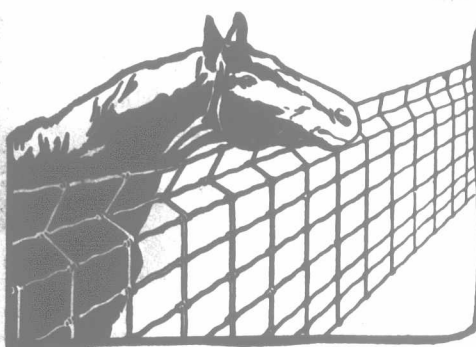
ESTABLISHED 1856.

Simmer's' Seeds

IF YOU have never planted them, try them this year. They never disappoint; they grow; they yield. You are always sure of freshness, purity and reliability. For this reason thousands of farmers, gardeners and planters in Canada plant **Simmer's' Seeds** exclusively.

Our **1907 Catalogue** contains many suggestions and directions, the result of over fifty years' experience in the seed business. Write for it to-day. It is **Free**.

J. A. SIMMERS,
Seeds, Bulbs, Plants. TORONTO, ONT.



On common fences the continuous wire stays are sure to bend and the locks to lose their grip under continual pressure of your horses or cattle. And once they do, the top wire, soon followed by those below, will sag and destroy the efficiency of your fence.

Nothing like that can happen to our **Dillon Hinge-Stay Fence**. The short, stiff hard steel wire in our hinge-stays cannot bend when the lateral wires are weighted down, owing to their being so short and jointed at each strand wire.

Pressure of a horse on the top wire brings the "hinges" in the stays into action and prevents them from bending, and when pressure is relieved the fence springs back into place again.

The lateral wires are High-Carbon Hard Steel and coiled to provide for expansion and contraction by heat and cold, and are also crimped at the intersection of the stays and strands to prevent the stays from slipping sideways—therefore no locks are needed.

Buy the **Dillon Hinge-Stay Fence**. It's "twice as strong." Twice as good an investment. Catalogue free.

The Owen Sound Wire Fence Co., Limited, Owen Sound, Ont.

DILLON HINGE-STAY FENCE

When Writing Advertisers Please Mention this Paper.

GOSSIP.

BURNBRAE SHORTHORNS.

Burnbrae is the Scotch name of the farm home of Mr. Robert Miller, of Stouffville, Ont., without doubt the most widely-known man in Canada in connection with the importing and exporting of Shorthorn cattle, Clydesdale horses, Shropshire and Cotswold sheep. No man of his age in Canada has imported more high-class animals than Robert Miller. Year after year, his annual importation of sheep at Toronto Exhibition invariably wins a good share of the red, white and blue ribbons of the classes in which they are shown, and in following years, in other hands, repeat the record principally at the leading shows of the United States and Mexico, where the bulk of them go. His Shorthorn importations are of equally as high a class. In fact, in looking over the half-dozen or more bulls he imported last year, we can safely say that they are certainly the best we have seen, and a gilt-edged lot. Below is the list, and as imported bulls are at a premium now, those wanting one should lose no time, as they will soon go at the very reasonable prices asked for bulls of their superior breeding and individuality: Ardlethen Fortune, by the Princess Royal bull, Spion Kop, a son of the \$6,000 bull, Bapton Favorite, dam Flower Girl 9th, by the Sittyton Victoria bull, Scottish Victor, is a roan, eleven months old, a big, thick, sappy youngster. Uppermill Omega is a roan, twenty months old, the last calf bred at Uppermill before the dispersion sale, consequently the last chance of getting a young bull of W. S. Marr's breeding, sired by the Sittyton Crocus bull, Bapton Favorite, dam Maude 37th, by the Cruickshank Clipper bull, High Commissioner, who is also a grandson of Champion of England, grandam by William of Orange. This is one of the richest-bred bulls alive, and a show bull of a high order. Benholm Butterfly, as his name implies, is a Cruickshank Butterfly, sired by Bonnie Scotland, dam Duchess, by Orange Duke, grandam by Prince Rupert. He is a roan, eleven months old, a grand, nice, thick, even young bull. Diamond Cross is a roan yearling, by the Marr-Clara bull, Imp. Cronje 2nd, dam Imp. Rosie Dorothy, a Lady Dorothy, and a first-prize winner in Scotland, by the Augustabred bull, Justice. This is an extra good young bull, built on show-ring lines. Ardlethen Goldsmith (imp.) is a roan, eleven months old, a Brawith Bud, by the Princess Royal bull, Spion Kop, dam Golden Wreath 7th, by Touchstone. He also carries the blood of the great Champion of England, another grand, thick, even, mossy young bull. Royal Fancy (imp.) is a roan, eleven months old, bred by Mr. Duthie, sired by the Marr-Goldie bull, Scottish Fancy, dam Sensation 7th, by the Primrose bull, Prince of Fashion. This young bull cannot fail to be a grand sire, as his breeding and type are the very best. Another is White (imp. in dam), nine months old, sired by Diamond King, dam Rosewood 84th, by Mountain Archer. Still another, and one of the best in the lot, and a show calf all over, is a red nine-months-old, imported, sired by Roving Robin, dam Mountain Maid 22nd, by the Nonpareil bull, Squire Nonpareil. Last, but by no means least, is a Canadian-bred Miss Ramsden bull, a red eighteen-months-old, by Imp. Golden Beau, dam Imp. Princess Ramsden, by Bapton Fancy. He is a big, growthy, well-put-up bull, one calculated to do good in any herd. The females belong to the Marr Missie, Martha, Undine, Lovelace, Buckingham, Mina, Rosetta, Rosemary, Rosewood, and Miss Ramsden strains. Nearly all are imported, and are an essentially high-class lot, among them being a number of one-, two- and three-year-old heifers, the whole making the Burnbrae herd one of the very best in the country, and headquarters for anyone wanting a high-class herd-header, or a few, or a car lot of high-class females. Just new on hand are about 200 Shropshire and Cotswold sheep, as choice a lot as the breeds produce.



WM. RENNIE, SR.
PIONEER OF CLEAN FARMING

Among the thousands who are now using Rennie's Seeds, in this and other lands, I see with pleasure that many are still on the list who were customers thirty-seven years ago.

Wm Rennie

Farmers and Gardeners of acknowledged standing—men of intelligent discrimination—have used

RENNIE'S SEEDS

every year for thirty-seven years, each year's results proving convincingly the wisdom of their selection.

Dependable quality—certain germination—and expert selection, have thus gained for Rennie's Seeds the confidence of Canada's premier agriculturists.

Remember this when deciding on seed supplies for 1907.

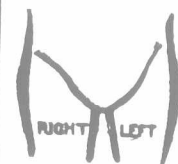
In the meantime, write our nearest address for a free copy of the Rennie Seed Annual.

Wm. Rennie Co. Limited
TORONTO

and
190 McGill Street . . . Montreal
278 Main Street . . . Winnipeg
66 Hastings St. West, Vancouver

FREE to the RUPTURED

A QUICK NEW CURE



I have made new and important discoveries in the cure of Rupture, and for the next thirty days will give every ruptured person who follows these directions a chance to try this remarkable home cure. **FREE.** Mark on the picture the location of your Rupture, answer the questions, and mail this to DR. W. S. RICE, 95 CHURCH ST., BLOCK 306, TORONTO, ONT.

Age..... Time Ruptured.....
Does Rupture pain?.....
Do you wear a Truss?.....
Name.....
Address.....

When Writing Mention this Paper.

Ideal Fence is Made to Last

Any farmer who knows fence knows Ideal is his kind as soon as he sees it. He sees the big, strong wires and how they are put together and that pretty nearly settles it.

When he wants particulars, he gets them straight. He finds Ideal wires are all No. 9 wires, the heaviest that are used for fencing in Canada. ALL No. 9, mind you; not big at top and bottom with some flimsy light ones in between.

He finds they are all of hard steel. Just about twice the strength that you get in soft wire fences. He sees that the upright stays are substantial (they are No. 9, too) and he knows they help do the work of the posts. When he examines into the way the big, strong horizontals and uprights are locked together at every crossing, he knows that when he puts up Ideal fence it's there to stay.

Take a look at the lock shown below.

There's no getting away from it, it's the best thing of the kind used on any fence—grips the wires at five bearing points. It makes every part, strengthen every other part. There are no weak places. The fence is one complete whole. Extremes of heat and cold don't make it sag. Climbing nor anything else won't loosen it.

Don't you want that kind of a fence? It is the Standard railroad fence of Canada. More of it sold for farm use than any other. Just write and let us mail you our book on fencing, giving particulars.

**THE MCGREGOR
BANWELL FENCE CO., Ltd.**
Dept. B. Walkerville, Ont.
THE IDEAL FENCE CO. Ltd.
Dept. B. Winnipeg, Manitoba.



WHY NOT

Be a telegraph operator and **earn from \$45 to \$125 monthly** P. Send to-day for Free Booklet "X," which tells you how.

CANADIAN SCHOOL OF TELEGRAPHY,
Cor. Yonge and Queen St., TORONTO.
Oldest Telegraph School in Canada.

Clydesdales and Percherons

I have two Clyde stallions, by Prince Thomas and Baron's Pride, 3 and 5 years of age, a big flashy quality pair, and seven Percherons, 2 and 3 years of age. Nothing better ever imported in the country. Will be sold on a small profit. Come and see them.

T. D. ELLIOT, Belton P.O. and Station, C.P.R.

DR. MCGAHEY'S HEAVE CURE
for Broken-winded Horses.
The only medicine in the world that will stop heaves in three days, but for a permanent cure it requires from one-half to one bottle used according to directions. Price, \$1.50 per bottle. The Dr. McGahey Medicine Co., Kempsville, Ontario.

Clydesdale Stallions for Sale—Two imported, five and seven years old; first-class animals; also two Canadian-bred, registered, rising three years old. For further particulars apply to **JAMES PATON,** Flesherton Sta., C.P.R. **Swinton Park.**

We Will Import Welsh Ponies and Shropshire Sheep.

Write for terms and prices.
Lloyd-Jones Bros., Burford, Ont.

When Writing Please Mention this Paper

QUESTIONS AND ANSWERS. Miscellaneous.

STUNTED CALF.

I have a calf, about ten months old, weaned, a very poor one. I feed it chop and hay, but cannot get it to eat the chop or oats. Could you advise me what I could do with it? G. H.

Ans.—If you can get it to drink a small quantity of skim milk daily, this will bring it around more speedily than anything else. In any case, withhold oats and bran for a time, then offer the calf, in very small quantities at first, a mixture of two parts bran, one part chopped oats, and one part oil-cake meal. If it will not eat meal, try it with a handful of whole oats, a few slices of roots, and bright clover hay will help to tempt its appetite. If you can get it, picking up a little grass will do much to bring it on, but a stunted calf seldom amounts to much.

PROMISSORY NOTES.

1. I gave B, who is agent for a company, my note for the balance due on a binder machine. The company, after a little while, sent one of their men from the firm to collect all the notes outstanding from the agent. The collector for the firm, after receiving the notes from the agent, is, through bad habits, I am told, taken insane, and is removed to the asylum. In the meantime, the company does not receive the notes, and they are presumed by the agent to be lost. I admit the liability, but am I legally bound to pay the note, if I cannot receive it back when it becomes due?

2. Can I renew a note due, at the bank, without consulting the person to whom it is drawn? A. M. A. Ontario.

Ans.—1. Yes, upon being properly indemnified.

2. Not effectively unless the bank are really the holders of the note or have authority from whoever is the holder, to grant the extension of time for payment.

PIG PEN CONSTRUCTION.

1. I am going to build a pigpen, 26 x 36. I wish to put cement floors in this and a cement wall. I want wall one foot high. Foundation will be on flat rock. Would you advise making my wall, then filling in with stones, and then put a cement floor on the stones?

2. If this would be all right, how would I need to mix cement for wall, also for floor?

3. About how much cement will it need to complete the wall and floor in this way?

4. How would you arrange ventilators in a pen of this size, walls being 8 feet high?

5. I am going to have a four-foot passage in center. Would three windows on each side be all right?

6. I am going to put in sleeping berths. How high would you put these from floor?

7. In putting down cement floor, would you advise putting in cement troughs, or would you buy steel troughs, or make plank ones?

8. What kind of feed-cooker would you advise using, one to cook with steam, or one with just a fire under the pan? A. B. E.

Ans.—1. We think the plan you suggest is all right. The loose stones under the floor should be thoroughly pounded together before concrete is spread over them.

2. For wall and first layer (three inches) of floor, mix (dry) one part Portland cement to nine or ten parts gravel, adding water afterwards. The floor should have a half-inch surface coat, applied immediately after each section of under layer is laid, and rammed, of one part cement to two parts sand.

3. About nineteen barrels.

4. You might have two flues over passage, each at least one foot square, extending from the height of your head to slatted ventilators on ridge. Windows can be opened a little, if necessary. Read the many letters on the subject we are publishing.

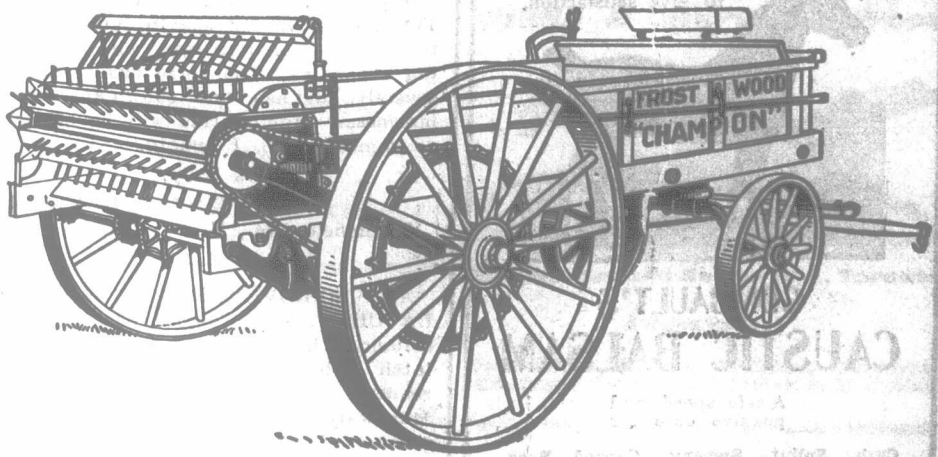
5. Yes, all right.

6. About three feet.

7. Would advise plank troughs, lined with galvanized iron.

8. If we put in a feed-cooker, would choose the simplest kind, but would have none. The best authorities agree that cooking food for pigs adds nothing to its value. T.

IS YOUR LAND SICK?



The "Champion" is the Doctor

¶ If your crops are not coming up to your expectations we think that other things being equal, you can put the blame on the heart of your land. Pitchforking manure in the old-fashioned way—a forkful here and another there—will never keep your land in good heart. Spreading manure is just like anything else—to do it properly you must do it systematically.

¶ When buying a Manure Spreader it is well to look over the different makes on the market. We are glad to have you compare the "Champion" with any other make, because we know its superiority will show itself in any company. Our space here is limited or we could go into the details of the machine. We will show you two good points that are worthy your closest attention.

The Beater Driving Mechanism. The Beater is driven by a heavy steel-pinned chain which connects it with a large sprocket on the main axle. This is a direct drive, and does away with complicated gears and pinions found on other makes of spreaders. The Beater is thrown into gear by sliding it back to engage the pinion with the gear. We claim our driving mechanism gives us the lightest draft of any machine on the market.

The Beater Freasing Device. When the "Champion" is thrown into gear, the beater at the same time, slides back from the lead and has a chance to get into motion before the moving bottom carries the manure against it. Ask about this point particularly.

¶ Send for our catalog "F"—it's useful.

**THE
Frost & Wood Company
LIMITED**

Head Office and Works: Smith's Falls, Ont.

IMPROVED FARMS

A few special chances to locate some good farmers on first-class improved farms in one of the best farming districts in **SASKATCHEWAN**. Main line C.P.R., good town, six elevators, good schools, fertility of soil unequalled. Terms easy. Write at once for particulars, stating how much land wanted, whether you want all prairie or partly wooded, all for wheat or mixed farming, and the amount you can pay down. Information and experience of 24 years' residence in the country is at your disposal for the asking.


B. P. RICHARDSON, Grenfell, Sask.

A Bargain.

For Sale in Saskatchewan—320 acres of good land, adapted for mixed farming, 90 acres ready for crop. House plastered, with a stone cellar and poultry-house and workshop; good water and fuel; situated within one mile of G. T. P. town site, and in a good locality. Stock and implements may be had on premises. Owner wishes to move to Southern States. For immediate sale, \$16 per acre. Terms arranged. Correspondence solicited. Apply

F. D. Burns, 506 McIntyre Block, Winnipeg.

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.

Largest Stud in the World of American-bred

Percheron Shire and Hackney

STALLIONS AND MARES.

Have won more gold medals and championships than any other exhibitor. Stallions two to four years old, and mares in foal three to six years old.

Stallions \$700 to \$1,000; on easy terms.
Mares \$300 to \$600 for choice.

LEW. W. COCHRAN,
Crawfordsville, Ind.

For Sale: A Registered Clydesdale Stallion First-class, coming 3 yrs. s. Color, rich brown; small stripe and little white on two feet. Sired by Imp. Pioneer [11181] (3874), of Darnley breeding. Dam out of the imp. prizewinner, Culmain Lass (1913), and grand daughter of old Prince of Wales (673), sired by imp. Queen's Own (7176) (1708), winner of several gold medals in Canada. A promising colt, of the very choicest combination of breeding, with near ancestors leading winners in best competitions. Price very moderate for quick sale. JOHN CAMPBELL, L. Fairview Farm, Woodville, 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 Wagg Clarendon P.O. & Sta

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, Fox glove, 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.

Imported Clydesdales



Two 4-year-old and two 2-year-old stallions; one 2-year-old and two 1-year-old fillies; positively the best bunch I ever imported, richly bred, full of quality, abundance of size, and nice, true actors. Will sell them right. Terms to suit.

Telephone con. Geo. G. Stewart, Howick, Que.

TRADE TOPICS.

Dr. S. A. Tuttle, Boston, Mass.:

Dear Sir,—I treated a horse with Tuttle's Elixir for spavin, and found it to make a complete cure, without removing the hair. The horse has been tested severely and has not shown any sign of lameness. Hoping this will be of benefit to someone else, I remain,

Yours truly,

E. ROY RAYMOND.
Bloomfield Sta., N. B., Canada.

AN IMPROVEMENT ON BARN-DOOR LATCHES. — Through our advertising columns in this issue a new barn-door latch is brought to the attention of our readers. It is made by the Albany Hardware Specialty Mfg Co., and has a number of features to which attention is invited. The handles are of convenient shape for opening the door from either side, and can be adjusted without special fitting to any door of reasonable thickness. It automatically catches and holds the door either closed or open. It is attractive in design, material and finish, and seems to be amply strong for all purposes. One of the most essential features of a good latch, and one which is usually found wanting, is that it shall have no projecting points that will either catch in the harness or injure the animal itself when passing through the door. It is claimed that this new latch eliminates this disagreeable feature entirely. It is in use on the experimental farms of 42 agricultural colleges, a fact which argues well for it. The company is making a very interesting proposition to those who have not tried this new device. For particulars, refer to the advertisement elsewhere in this paper.

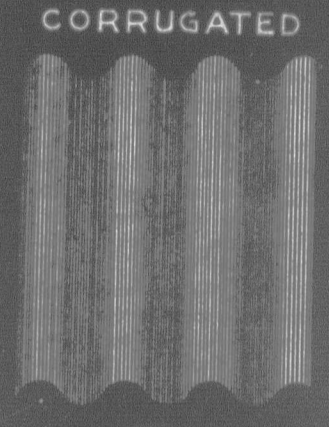
THE HOOVER POTATO-DIGGER.—The manufacturer who would furnish to potato-growers the best digger, must build it upon the actual experience of a potato man. It can be said of the famous Hoover digger that it grows directly out of the experience of Mr. I. W. Hoover, President of the Hoover-Prout Company. He was a large potato-grower in Northern Ohio, and had been for twenty years, before he perfected his digger. He invented it originally for his own use. Today it is in use by potato-growers all over the country. There have been great improvements in the Hoover digger, in later years. In 1905, the 22-inch elevator, with its large separating surface, was brought out. This improvement, together with its lighter draft, placed the Hoover in the very front rank of diggers. The manufacturers have made it a strong, durable machine—one that growers do not hesitate to put to work in any kind of soil. It can be depended upon to get all the potatoes, and a point that everybody appreciates is that it delivers them in fine shape, clean and uncut, in straight rows on top of the ground, where they are easy to pick up. If you are in need of a digger, don't place your order until you have written to the Hoover-Prout Company, Avery, Ohio, for their catalogue, and learned the merits of the Hoover digger.

GOSSIP.

An important English auction sale of 6,450 pure-bred Southdown sheep, including consignments of ewes and rams from nearly all the leading flocks, is advertised in this paper to take place on August 7th, at Chichester, Sussex, England. Parties interested should write the auctioneers, Messrs. Stride & Son, to the above address, for further information.

THE
METALLIC ROOFING
COMPANY LIMITED

CORRUGATED



IRON

TORONTO

Good Reasons WHY OUR Corrugated Iron

Is Preferred by Those Who Know

We use only best Apollo or English sheets.

The corrugations are pressed one at a time—not rolled—fitting perfectly, both at ends and sides without waste.

No scale, pin holes or other defects are ever found in our goods.

The galvanized sheets are coated on both sides with all the galvanizing material that can adhere to them.

The painted sheets are coated on both sides with best quality paint.

We furnish any size or gauge required—either curved or straight.

If you desire durable quality and certain economical satisfaction, send us your specifications or write for further information.

NO CHEAP TRASH

Get Ready for Spring

THIS IS

CARNEFAC SEASON

It pays immensely to use CARNEFAC for all Farm Stock and Poultry. The cost is but a trifle. It brings the stock out in excellent shape, and prevents untold losses at the critical time, when colts, calves, pigs and lambs arrive.

Try it for this season, the results will convince you.

Use Magic Healer for scratches, wire cuts and all sores.

The Carnefac Stock Food Co.,
Toronto.

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.

ADVERTISE IN THE ADVOCATE.



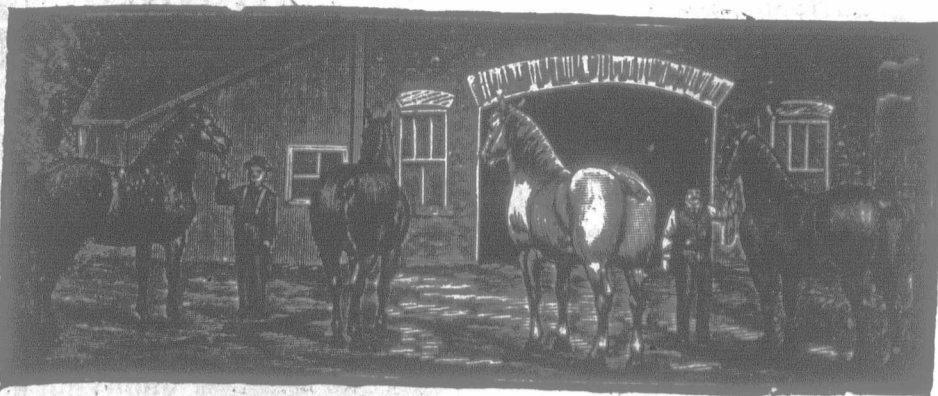
Cure that Logy Look

If your horse is in poor condition, if his appetite is not good, if he is nervous and fretful, troubled with cough or cold, with inflammation of the lungs or bowels, or if he has swollen glands of the throat, don't be uneasy, just give him a few doses of AMERICAN HORSE TONIC and you will soon have a well horse again. It cures all these ailments and keeps horses in the best possible condition. Work horses do more work, driving horses have more spirit and better life when HORSE TONIC is used. It cures that logy look and increases the value of every horse in your stable. Sold by dealers; if yours doesn't have it, order from us direct. Write for FREE "HORSE COMFORT" booklet; if you keep cows, ask for the book, "THE COST OF A LOST COW." Send for the books today.

Dairy Association Co.,
Mira., Lyndonville, Vt.

American Horse Tonic





30 PERCHERONS

Also Shires, Hackneys and Clydes and 12 Percheron Mares (2, 3 and 1 year old) have just arrived with our new importation from Scotland, England and France, of high-class stallions and mares. Many of them prizewinners in their native lands. Bred by the best breeders. Percherons, blacks and grays, weighing 1,600 to 2,000 pounds. Shires at two years old weighing 1,700 pounds. Clydes, bays and blacks, 4 and 5 years old, weighing 1,800 to 2,000 pounds, bred by the best in Scotland. Our Hackneys are bays and chestnuts, combining size, quality and breeding that cannot be beaten. These horses can be seen at Toronto and London fairs, and all for sale at reasonable prices.

HAMILTON & HAWTHORNE, Simcoe, Ont.

83 miles south-west of Toronto on the G. T. R.



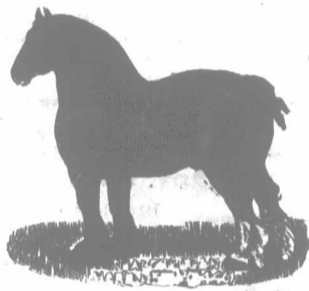
Tudhope Carriages

The longer a man rides in Tudhope Carriages, the better he is satisfied. The way Tudhope Carriages stand up against rough roads, bad weather and hard driving, makes you glad your money is invested in a carriage with 55 years reputation behind it.

TUDHOPE No. 64

Pneumatic tire buggy. Trimmed in hand-buffed leather, green wool cloth or whip cord. Plain black finish unless otherwise ordered. Wire wheels, 36 inch front and rear, with 1 1/2 inch detachable pneumatic tires. Rubber step pads. Supplied with air pump. Write for our illustrated catalogue—free.

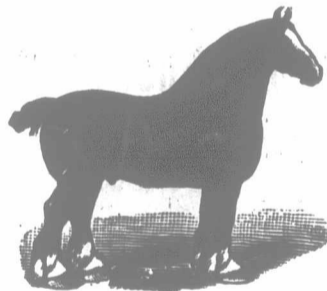
THE TUDHOPE CARRIAGE CO., Ltd. ORILLIA, Ont.



IMP. CLYDESDALES & HACKNEYS

Stallions and fillies of both breeds, representing the best blood of England and Scotland, combining size and quality and faultless action. If in want of something exceptionally choice, come and see me. You will not be disappointed. Prices right.

DUGALD ROSS, Streetsville, Ont.
Write for catalogue.



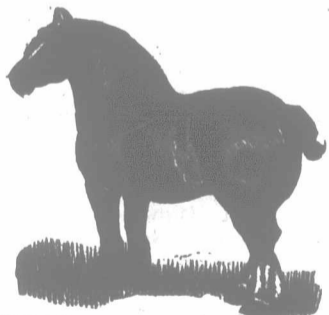
GRAHAM BROS.

"Calmbrogle," CLAREMONT,

IMPORTERS OF

HACKNEYS and CLYDESDALES

Established 80 years, and winners at all large shows in Canada and United States. Best of stock always on hand for sale. New importation of Royal winners just arrived.



T. H. HASSARD

Millbrook, Ont.

Has on hand 40 head of Clydesdale, Percheron and Hackney stallions, and 25 Clydesdale fillies, representing Scotland, France and England's richest prizewinning blood and most noted sires. An essentially high-class lot. Will be sold on terms to suit purchaser.

MILLBROOK P.O. AND STATION
Long-distance 'Phone.

DUNROBIN STOCK FARM

BREEDERS OF

CLYDESDALES, SHORTHORNS and YORKSHIRES

Besides our high-class Clydesdale fillies, we are offering some well-bred SHORTHORN HEIFERS at reasonable money for a quick turnover.

DONALD GUNN & SON, BEAVERTON P.O. & STN.
Farm Three-quarters of a Mile from Station.

SMITH & RICHARDSON,
COLUMBUS, ONT.,

have now on hand a choice selection of Clydesdale Stallions, combining size and quality with straight, true action. Breeding unsurpassed. Individually unexcelled. Scotland prizewinners. Also a few Canadian-bred stallions, and imp. and Canadian-bred fillies.

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

QUESTIONS AND ANSWERS.
Miscellaneous.

PIGS BITING EACH OTHER.

Re pigs worrying each other, I would say that I do not know the cause, but I have found ringing them, when they start fighting, to be a good cure. It gives them something else to think of.

G. A. S.

WOOD ASHES FOR GRAPE-VINES.

I intend to use wood ashes around grapevines, and would like to know what quantity per vine would be safe to use; how far it should be kept away from the vine, and what time of the year is the best time to put it on.

D. M.

Ans.—With regard to using wood ashes around grapevines, I may say that there is not much danger of using too much, although it would be wasteful to apply more than were really necessary, which, of course, depends upon the nature of the soil. You could safely apply a peck of wood ashes around each vine. The ashes should be spread evenly over the ground as far out as the roots extend, at least five or six feet in all directions. There is no danger of having some of it come near the trunk, although it would be of most use farther out, where the rains could wash the potash down to where the roots could make use of it. Ashes may be applied any time of the year, but probably the best time is in the spring, when the soluble plant food they contain will be washed out by rains and carried down to where it may be made use of by roots.

O. A. C., Guelph.

FEEDING COCKERELS.

I have five Wyandotte roosters in a box about 6 feet by 3 feet by 3 feet high. I am feeding them on cake made of equal parts bran and corn meal, and a handful of oil cake, and I give them all the corn they want, but they do not seem to be doing well. Could you make some improvements on this?

C. C.

Ans.—I am not just sure, from the statement of the case, whether the correspondent wants to fatten these cockerels, or to develop them. If he wanted to fatten them, his ration would not give very good results. If he would change his ration to equal parts of ground oats, with the bulk of the hull sifted out, corn meal and shorts, or better, oats, buckwheat and corn meal, and mix this with skim milk, and then give just what the chickens will eat readily, he would get them to grow fairly well, providing they were healthy to begin with. To get them to grow as they now are, I think it will be necessary to turn them out, or put in larger pen, where they can run about, and let them take exercise by digging in straw or other litter for their feed. You will have to get them into a healthy condition before you can do much with them.

Chickens that are in so small a space, in my experience, should not be fed whole grain, and in addition to this you can only keep them thriving for a limited time; with an ordinary person, three weeks is the limit, and with a careful person, never over-feeding, etc., you can probably keep them in good condition for about 4 or 5 weeks, possibly 6 weeks at the outside. After this they would begin to get dull and listless, and probably show signs of becoming unthrifty. If you want to develop these cockerels (not fatten them), it would be wise to feed them some vegetables, also wheat, oats, barley and corn in equal proportions in preference to corn alone. I would be inclined to take out the oil cake. Oil cake is not very palatable for fowls. One teaspoonful each day to the five birds would be plenty. I would prefer using some middlings, with bran and corn meal, also some meat food.

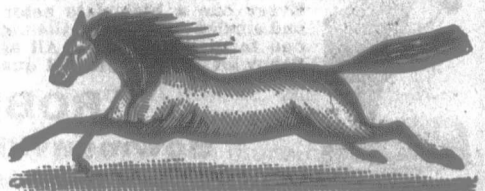
You do not mention giving any grit to the chickens. This would be essential. They should have both grit and lime, or, if you can get grit which contains lime, so much the better. The ordinary commercial grit, commonly known as mica spar, contains no lime, and, probably, as a grit is not as good in some respects as the small, sharp gravel that comes from a gravel pit or from limestone quarries. Mica spar, when fed with oyster shells, gives satisfactory results. Coal cinders also work moderately satisfactorily.

W. R. GRAHAM.

O. A. C., Guelph.

The Repository

BURNS & SHEPPARD, Props.



Cor. Simcoe and Nelson Sts., Toronto

Auction Sales of

Horses, Carriages, Saddles, Harness, etc., every Tuesday and Friday, at 11 o'clock.

Special Sales of Thoroughbred Stock conducted

Consignment solicited. Correspondence will receive prompt attention.

This is the best market in Canada for either buyer or seller. Nearly two hundred horses sold each week.

Bawden & McDonnell

EXETER, ONT.,

Have arrived home from Scotland with another importation of

12 Clydes and 2 Hackneys

selected from the best breeders in Scotland, and sired by Baron Frise, Montrose Mac and other noted horses. We have in all about 20 stallions in the barn—Clydes, Shires and Hackneys. Intending purchasers will do well to inspect, as these horses are all high class, and cannot be best for true breeding quality and size.

ANNANDALE
FINE STOCK FARM

TILLSONBURG, ONT.

Premier sire, Prince Posch Calamity, whose dam and sire's dam average in official test 86 lbs. milk in 1 day and 26 lbs. butter in 7 days.

No stock for sale at present.

GEO. RICE, Tillsonburg, Ont.

For Sale—Choice registered Holstein bull calves at \$15 each, sired by Prince Greyfriar De Kol, whose dam made over 18 lbs. of butter in seven days at three years old; also one yearling and one two-year old bull at a bargain.

W. A. BRYANT, Cairngorm, Ont.

Don't Buy Herefords

Until you know our prices. The stock that Marchon and is producing is worth your inspection. Write at once for full description and prices.

A. S. Hunter, Durham, Ont. Grey Co.

Sunnyside Herefords

Present offering: 19 bulls, serviceable ages. Cows—safe in calf or calves at foot or open heifers. Younger stock carrying the blood of the great Marchon and Protector. Prices within reach of all.

ARTHUR F. O'NEIL, Maple Grove, Ont.

Broxwood Herefords

Cows, heifers, and calves

For Sale.

R. J. PENHALL, Naber, Ont.

FOREST VIEW FARM HEREFORDS

Four bulls from 8 to 18 months old; prizewinners and from prizewinning stock. Several heifers bred on the same lines; choice individuals for sale.

JOHN A. GOVENLOCK, Forest Stn. and P.O.

HEREFORDS—We are now offering a few thick, smooth young bulls and a number of females—a low-down, even, beefy lot. If in want of something extra good, correspond with us. We can please you.

Y. R. LOYRING, Coldwater P.O. and Sta.

Angus Cattle

The kind that get market top price. We have for sale 7 young bulls from 9 to 16 months old; also females all ages. All eligible for the American Herdbook. From good families and good individual merit. J. W. BURT, Aberdeen Farm, Coningsby P.O. 3 1/2 miles from Erin Ont., C.P.R.

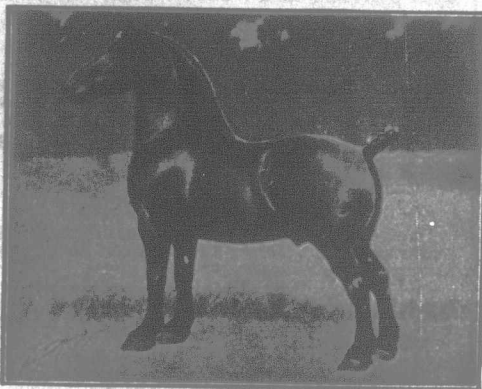
40 WAVERLY HACKNEYS 40

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 dashy lot, full of style and quality.

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



THE LA FAYETTE STOCK FARM

J. Crouch & Sons, Props., La Fayette, Ind.
Largest importers in America of German Coach, Percheron and Belgian stallions. Over 200 head on hand at all times. All have the best of bone, style and action, and on which we will put a gilt-edged guarantee they must be satisfactory, sure breeders. Won more prizes in the American show-ring in 1906 than all other importers combined. Our guarantee is the best. Terms to suit buyers. Importations arriving every few weeks insure prospective buyers a large selection from which to make a purchase.
J. CROUCH & SON, La Fayette, Ind.
La Fayette is but six hours' ride from Detroit via Wabash Railroad.

Imported Clydesdale Stallions and Fillies

My new importation comprises 3 stallions, two 3 years old and one 1 year old, by *Braveheart*, *Baron Beehive* and *Ascot*, and 5 fillies, from 1 to 4 years old, by *Baron's Pride*, *Blair*, *Favorite's Hair* and *Ascot*. They are a high-class lot, as good as ever crossed the water. Come and see them. All are for sale at living prices.

A. ATTORISON, Guelph P.O. and Sta.

SCOTCH Shorthorns FOR SALE

Two imported yearling bulls. Two imported bull calves. One home-bred yearling bull. All good individuals, rightly bred. Also imported cows with calves at foot and heifers, different ages, of good quality. Write or call on

H. J. Davis,
WOODSTOCK, ONT.,
Importer and Breeder of Shorthorns and Yorkshires.

The "STAY THERE"
Aluminum Ear Markers
are the best. Being made of aluminum they are lighter, stiffer, stronger and more durable than any other. Fit any part of the ear. Nothing to catch on feed trough or other obstacle. Your name, address and any series of numbers on each tag. Sample tag, catalogue and prices mailed free. Ask for them. Address
WILCOX & HARVEY MFG. CO.,
104 Lake St., Chicago, Ill.

SUNNYSIDE STOCK FARM

For sale: A number of young SHORTHORN BULLS, red and roan, from imported sire and dams; good enough to head pure-bred herds. Apply:
JAMES GIBB,
Brooksdale, Ont.

Wm. Grainger & Son

Hawthorn herd of deep-milking Shorthorns. Aberdeen Hero (imp.) at head of herd. Eight grand young bulls, also females, all ages. Prices reasonable.
Londesboro Station and P. O.

SHORTHORNS & OXFORD DOWNS

Herds headed by Protector, Imp., Vol. 53 E For sale: Bulls from six to twenty months—three from imported dams and imported sires. Also females in calf. Also eleven registered Oxford Down ewe lambs. All at reasonable prices. *John McFarlane & W. H. Ford*, Dutton, Ont., *Egin Co. M. C. B. and P. M. Railways*. Long-distance 'phone.

DURHAM BULLS FOR SALE

I have three good bull calves for sale, one red and two roans. *Clementina*, *Nonpareil* and *Brookhocks* pedigrees, and sired by such bulls as (imp.) *Spicy Count* and (imp.) *Old Lancaster*. All fit for service. Box 556

HUGH THOMSON, St. Mary's, Ont.

ABERDEEN - ANGUS

Erica and Blackbird families Young bulls and females. All ages. Write:
JOHN UNDERWOOD, GRAFTON, ONT.

John Gardhouse & Sons,
Importers and breeders of Scotch Shorthorn cattle, Shire and Clydesdale horses and Lincoln sheep. Just now we are offering a few extra choice heifers—show stuff among them; also three rare good young bulls, bred from imp. sire and dam. *Highfield P. O., Weston station 3 1/2 miles.* Telephone.

Pleasant Valley Shorthorns

We are offering 7 high-class young bulls, by (imp.) *Old Lancaster*—50068— and out of imp. and Canadian-bred cows, of good Scotch breeding; also several young cows and heifers. Correspondence solicited.

GEO. AMOS & SON, Moffat, Ontario.
Farm 11 miles east of Guelph, on C.P.R. one-half mile from station.

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 Stn. & P. O. Addington Co.

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 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 Roseberry*.

R. MITCHELL & SONS, Nelson P.O. Ont.; Burlington Juno. Sta.

Spring Valley Shorthorns

Offer some nice young heifers and cows in calf and with calves at foot; also two nine months' bull calves, both very choice, sired by Imp. *Bapton Chance*. Prices reasonable. Write, or come and see them.

KYLE BROS., Ayr, Ontario.

Maple Hill Stock Farm Scotch Shorthorns—A special offering of a red bull calf of *Missie* family, sired by *Rustic Chief* (imp.) = 40419—; also some choice females by *Wanderer's Star* = 48585— and *Lucerne* (imp.) = 50083— **WM. R. ELLIOTT & SONS, Guelph, Ont.**

Shorthorns *Stamford's English Ladies, Mildreds, Marthas, Nonpareils.* 3 choice bulls 14 months old. 3 heifers 3 cows. Breeding unsurpassed. Canadian and American registration. **F. W. EWING, Salem P. O., Elora Station.**

Shorthorns for Sale—Herd bull, *Prince of Banff* (imp.) = 45212—, and three 12 months old; also a few heifers with calves at foot. Prices reasonable. Correspondence solicited.
D. MILL, Staffa P.O., Ont.

Shorthorns *Prince of Stars* 49804— bull and cow with roan Shorthorn herd down to 12 months old. The low-down, high-class, up-to-date breeding. Look up this lot.
H. M. ... P. Calneville, Ont.

QUESTIONS AND ANSWERS. Veterinary.

ECZEMA.

Colt has a scruff on its back. Little lumps appear, and then little scabs form, and, if these be picked off, a little matter is seen.
J. M. K.

Ans.—Give a thorough washing with strong hot soft soap suds, applied with a scrubbing brush. Exclude drafts, and rub with cloths until dry. This will remove the scabs. Then dress with a solution of corrosive sublimate, 3G grains to a quart of water. Dress every third day, but wash only once. If your stable is warm, you will find treatment easier if you clip the affected parts.
V.

Miscellaneous.

FEEDING EGG SHELLS—SPACE FOR CATTLE.

1. Is it a good thing to feed laying hens ground eggshells? Would it start them eating their eggs?
2. About how many square feet should be allowed to each animal, in feeding cattle loose—cattle weighing 1,200 apiece?
G. J. B.

Ans.—1. Good for the hens certainly, but it would be well to have them so ground or mixed with other food that the hens would not suspect what they were getting.

2. We should prefer to have sixty square feet to each animal, though some have but forty.
T.

DRIED BEET PULP.

Could you tell me in an early issue as to the feeding values of sugar-beet meal, as advertised in your paper by the Wallaceburg Sugar Co., for poultry? Would it equal bran pound for pound? Would it equal short-cut clover or clover meal?
J. R. H.

Ans.—Sugar-beet meal will more than equal bran, short-cut clover, or clover meal, pound for pound. It has the good qualities of these feeds, and when moistened becomes a green feed, exactly similar in effect as what poultry gets during the summer. It is claimed for it, that for this reason it will largely increase the number of eggs produced, and that this fact can be established by a few days' trial. It should be fed in combination with something like rolled oats, cracked grain, wheat or wheat bran, in the proportion of about 1 pound for 50 chickens, and should, by all means, be fed wet.

WALLACEBURG SUGAR CO.

[NOTE.—We would like to hear from those who have had experience in feeding beet pulp or meal.—Editor.]

QUARANTINE AND INSPECTION

1. Will hogs, imported from Michigan, have to go through inspection where they are raised, or will they have to go under inspection at the line?
2. Will they have to go under a quarantine for any length of time, and, if so, what length of time?
3. Can you give me details of cost for transportation, duty, inspection, and general expenses connected therewith per head?
4. Give me full particulars how to go about it to have these hogs shipped to Ontario.
J. S.

Ans.—1. The Canadian customs regulations require that all swine imported from the United States must be accompanied by a certificate, signed by a veterinarian of the U. S. Bureau of Animal Industry, stating that no swine plague nor hog cholera has existed within a radius of five miles of the premises on which they have been kept for a period of six months immediately preceding the date of shipment.

2. Such swine shall, nevertheless, be inspected, and shall be subjected to a quarantine of thirty days before being allowed to come in contact with Canadian animals. This inspection, we understand, is made in the Canadian quarantine at port of entry.

3 and 4. We cannot give information as to cost of transportation, which will depend on the weight and distance, rates for which may be obtained from the railway or express agent at your station. Particulars as to cost of quarantine may be had by writing Dr. J. G. Rutherford, Department of Agriculture, Ottawa.

ABSORBINE
will reduce inflamed, swollen Joints, Bruises, Soft Bunchea, Cure Boils, Fistula, or any unhealthy sore quickly; pleasant to use; does not blister under bandage or remove the hair, and you can work the horse. \$2.00 per bottle, express prepaid. Book 7-C free.
ABSORBINE, JR., for mankinds, \$1.00 per bottle. Cures Varicose Veins, Varicocele, Hydrocele, Strains, Bruises, stops Pain and Inflammation.
W. F. Young, P. D. F., 73 Monmouth St., Springfield, Mass.
Canadian Agents: **Lyman, Sons & Co., Montreal.**

SHORTHORNS
Just closed out the season's crop of bulls of breeding age, but have a few very nice youngsters coming up. Anyons 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 556, Owen Sound, Ontario.

A. EDWARD MEYER

Box 378, Guelph, Ont.

Offers for sale, at prices you can stand, young SHORTHORN BULLS
Four of them from imported sire and dams Several cows with heifer calves at foot by imp. *Scottish Hero*, and a few yearling heifers. All are of the choicest Scotch breeding. Write, or better come and look them over.
Long-distance 'phone in house.

SHORTHORNS & BERKSHIRES

For Sale: Six extra fine young bulls, some belong to grand milking strains. Also a fine lot of young sows, bred to farrow in March and April, and a grand lot of young sows and boars from three to five months old.

S. J. PEARSON, SON & CO., MEADOWVALE, ONT.
Stations: Streetsville and Meadowvale, C.P.R.

KENWOOD STOCK FARM. SHORTHORNS.

Headed by (imp.) *Jilt Victor*—45157—, Offerings are two bull calves, an 11-months *Miss Ramden*, from imp. sire and dam; a 13-months *Missie*, by *Elythosome Euler*, and other bulls; also heifers of choice breeding. A few choice Berkshire pigs just off the sow.

HAINING BROS., Highgate, Ont. Kent Co.

T. DOUGLAS & SONS STRATHROY, ONT.

Breeders of Shorthorns and Clydesdales. 15 bulls, 60 cows and heifers, 1 imp. stallion, imp and home-bred fillies. Write us what you want or come and see our stock. Farm 1 miles north of town.

Huntlywood Shorthorns.

Young bulls for sale. The best lot we ever had, by imported *Geely's Pride* (7859), out of imported dams. *Broadhooks, Lavenders, Lancasters*, etc. Prices reasonable.

W. H. Gibson, Manager, Huntlywood Farm, Beaconsfield, Que.

Volume 24 of the Hackney Studbook of Great Britain and Ireland has been received at this office; thanks to the courtesy of the Secretary and Editor, *Frank F. Euren*, 12 Hanover Square, London, W. It is a substantial volume of 552 pages, containing pedigrees of stallions numbering from 9,576 to 9,992, and mares numbering from 17,878 to 18,787, a list of transfers and of prize-winners at leading shows in 1906, a register or owners, and much other useful information.

DODD'S KIDNEY PILLS
FOR ALL KIDNEY DISEASES
CURES RHEUMATISM, BRIGHT'S DISEASE, DIABETES, BACKACHE
Do not discontinue the use of these pills until you are cured. The public may rely on the name of Dr. J. C. Dodd, Montreal, Quebec, Canada.

Belmar Parc Shorthorns

WE think we have as great a lot of young show animals as has ever been on one farm in Canada. Our herd is large, the individuals are choice and of the richest Scotch breeding, and our prices are moderate. 15 young bulls, 25 heifers under three years. A splendid group of breeding and show matrons. Mostly in calf to the champion Marigold Sailor = 53258 = and the prizewinning Nonpareil Archer (imp.) = 45202 =. Pembroke is on the main line of the C. P. R. and the Canada Atlantic Division of the G. T. R. You can leave Toronto 11 a. m., arrive Pembroke 12.05 p. m., see the herd, and arrive Toronto next morning at 7.30. We prefer you to see the cattle, but if you can't spare the time we take special pride in filling mail orders satisfactorily.

John Douglas, Manager.

PETER WHITE, Pembroke, Ont.

R. A. & J. A. WATT

Offer special inducements to buyers of
SHORTHORN BULLS

For the next few weeks. They also price females of rare quality.
Elora Station, G.T.R. & C.P.R. **SALEM, ONTARIO.**
Visitors always welcome.

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-tried 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.

Special Offering of Scotch SHORTHORN BULLS
2 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, Cargill, Ont. Manager.

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.

Queenston Heights SHORTHORNS

Special offer now: Several choice Scotch bulls, two of which are show bulls, a roan yearling and a red two-year-old by Derby (imp.) = 89059 =. Their dam is Bessie's Maid = 47779 =, by the great sire Royal Prince = 26062 =. There is no better breeding. Also some young cows and heifers at low prices for prompt sale.
HUDSON USHER, Queenston, Ont.

GEORGE D. FLETCHER, Breeder of Scotch Shorthorn Cattle and Yorkshire Pigs.

Our herd of the most noted Scotch families is headed by the \$3,000 Duthie-bred bull, Joy of Morning (imp.) = 2970 =, winner of 1st prize at Dominion Exhibition, Toronto. A few very choice young bulls from 4 to 9 months old, also females for sale. In Yorkshires are a choice lot of either sex, 7 months old, from imp. sire and dam. Sows bred to imp. hog if desired.
BINKHAM P. O., ONT. ERIN STATION AND TEL.

JOHN LEE & SONS, Highgate, Ont. SHORTHORNS & LINCOLNS

The champion herd of Elgin, Kent and Essex counties.
For Sale: 6 choice young bulls, 3 reds and 3 roans, of grand type and quality; also good selection of young cows and heifers. Visitors welcome.

T. E. ROBSON, Live-stock Auctioneer

2 BECHER ST., LONDON, ONT.

HOLLYMOUNT SHORTHORNS

Pure Scotch, imported, and the get of imp. stock.
25 HEAD
Anything for sale. 1 young bull. Breeding gilt-edged and unsurpassed. A few heifers. Prices right.
W. J. Thompson, Mitchell P. O. & Stn Six Red Shorthorn Bulls

19 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. Shorthorns and Clydesdales

I am now offering 6 young bulls from 8 to 20 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., G.P.R.; Pickering, G.T.R.

STRUAN SHORTHORNS

For sale: Choice young bulls from four to ten months old, sired by Scottish Beau (imp.) (38099); also cows and heifers of different ages. Write for prices, or come and see my herd.
N. S. ROBERTSON, Ontario Arnprior. 12 SHORTHORN BULLS FOR SALE from 10 months to two years old. Several of their dams or grandams winners in Toronto. Prices very moderate. J. & W. RUSSELL, Richmond Hill Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

HORSE AND VETERINARY WORKS.

1. Could you inform me through your valuable paper, where I could get Capt. Hayes' work, "The Points of the Horse," and the cost of same? Is there some other works on the horse that you think is better?
2. What veterinary works would you consider best for a farmer?
J. D. G.
Ans.—1. Capt. Hayes' "Points of the Horse" is a magnificent work; \$10. Capt. Hayes' "Veterinary Notes for Horse Owners"; \$4.20.
2. "The Farmers' Veterinary Adviser," by Dr. Jas. Law, \$3; and "Veterinary Elements," by Dr. A. G. Hopkins, \$1, are both useful works, the former going more into detail. Any of these you can order through this office.

BROODER CHICKS DYING.

Little chicks are dying at the age of from one to two weeks. They are kept in a brooder about three feet square, which gives them ample room; the heat ranging, first week, 95 degrees, and gradually lessening. Can find no lice, and chicks seem to be healthy in the morning, but at noon one or two are dead. They are fed as follows: Prepared chick feed, scattered in chaff for scratching; grit; clean water; beef scraps, and dry mash always before them. Had some of another hatch that went weak on the legs, but seem to be getting all right now.
G. F. R.

Ans.—It is difficult to say exactly what is wrong with these chickens. I gather from the tone of the letter that they are not affected with diarrhoea nor indigestion. A few chickens at this season of the year are likely to die from a lack of vitality. It may be that your correspondent is not using heat enough in his brooder. Ninety-five degrees in a brooder would be ample temperature for some makes of brooders, and insufficient for others. One should use sufficient heat so that the chickens will sit at night with their heads sticking under the cover. I do not think the chickens are lousy.
In raising chickens in the winter time, one of the chief difficulties is to keep them on their feet. In order to do this, one has to give them plenty of exercise, and as much fresh air as possible without chilling the chickens. You also require to feed them considerable green food or vegetables. We use some sprouted oats or barley, mangels, and the tender shoots from various roots, which develop in an ordinary root cellar, refuse lettuce, or anything of this nature. Sometimes we grate the mangels, and mix dry chop with it.
I would like to know whether or not your correspondent examined the chickens that died. It would be interesting to know whether the yolk was entirely absorbed, or whether it had begun to harden. Raising chickens in winter time requires the use of one's best common sense, and you have to watch them daily. I might add that it would be advisable to feed these chickens some ordinary dry bone, also some charcoal. I cannot say that I would advise beef scrap being left before them constantly. It might not do any harm, but our experience is that hopper feeding is a good thing in the summer-time, but very bad in the winter. With winter chickens, we have been unable to keep them on their feet at all satisfactorily when hopper feeding has been used.
O. A. C. W. R. GRAHAM.

Ring-Bone
There is no cure so old or bad that we will not guarantee Fleming's Spavin and Ringbone Paste to remove the lameness and make the horse go sound. Money returned if it ever fails. Easy to use and one to three applications cure. Works just as well on distichs and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of Fleming's Vest-Pocket Veterinary Adviser. Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durable, bound, indexed and illustrated. Make a right beginning by sending for this book.
FLEMING BROS., Chemists, 45 Church Street, Toronto, Ontario.

Pure Scotch Shorthorns

WE ARE OFFERING FOR SALE IMP. SCOTTISH PRIDE - 26108 -.

3 bulls just two years old. 6 bulls one year old. 7 bull calves from 8 to 12 months. (19 of these bulls are from imp. cows.) Choice females of all ages; 100 to choose from. 3 imp. Yorkshire sows due to farrow in March. 10 young sows 5 months old. Write for catalogue and prices. Our farms are only one-half and one and one-half miles from Burlington Junction, G. T. R. Long-distance telephone in residence.

W. G. Pettit & Sons, Freeman, Ont.

SHORTHORNS

Imp. Keith Baron 26000. Six young bulls from 10 to 12 months old. A lot of 2-year-old heifers in calf and a few young cows. A bunch of heifer calves, cheap.

CLYDESDALES
Just now: One pair of matched geldings 6 and 7 years old; show team.
JAS. McARTHUR, Coble's, Ont.

Clover 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.

E. Jeffs & Son, BOND HEAD of Shorthorns, Leicesters, Yorkshires, and Buff Orpington Fowl. Eggs per setting (15), \$1.00. Choice young stock for sale. Write for prices or come and see.

DON JERSEY HERD

Our Jerseys rank second to none in Canada. Present offering: Choice young bulls and heifers, bred from prizewinners and great producers. Write for what you want. Visitors welcome.
D. DUNCAN, Don, Ont. Duncan Sta., on Canadian Northern Railroad, near Toronto.

Pine Ridge Jerseys For sale

some choice young bulls, bred in the purple, of ideal type; also a few heifers and heifer calves, and some Cotswold shearing rams and ram lambs. **Wm. Willis & Son, Newmarket P. O. & Sta.**

HIGH GROVE JERSEYS AND YORKSHIRES. For sale cheap, several choice young bulls and a few heifers, some of them prizewinners at Toronto this fall; bred from the best. Twenty young sows just ready to breed. Prices, extended pedigrees, and all information for the asking. **ROBT. TUFTS & SON, Tweed P.O. & Sta.**

Brampton Jersey Herd For sale: 10 bulls, from 6 to 18 months old, descended from St. Lambert or imported stock; also females of all ages. For full particulars address: **B. H. BULL & SON, Brampton, Ont. Phone 68.**



TO FARMERS AND DAIRYMEN

It will pay every farmer or every farmer's wife to sit right down and write for Sharples "Business Dairying." This valuable book contains information that can be found in no other book, and will help any dairyman to make his business more profitable.



THE SHARPLES TUBULAR CREAM SEPARATOR

It is not only guaranteed to more than pay for itself annually, but the ease with which you can skim, the low can, the self-oiling bearings, the simple Tubular bowl with only one little part inside to wash, the moderate price, are all points you should know about.

Mrs. J. Renken, Trenton, Ia., says "We cleared \$100.00 in six months off seven cows."

THE SHARPLES SEPARATOR CO., Toronto, Can. WEST CHESTER, PA. Chicago, Ill.



Burnside Ayrshires

Imported and Canadian-bred. Prizewinners at all the leading shows. I hold the award of merit given by the Bd. of Dir. of World's Fair, St. Louis, to the breeder of largest number of prizewinning Ayrshires at said Exposition.

R. R. NESS, JR., HOWICK, QUE., P.O. AND STATION.

MY SHROPSHIRE WONS THE FLOCK PRIZE AT TORONTO

And I have imported and home-bred RAMS and EWES for sale that are of the same stamp. All kinds of good GOTSWOLDS and SHORTHORNS as well. Price always reasonable.

Ayrshires 3 prizewinning bulls fit for service at reasonable prices, also younger ones for quick buyers.

Canadian Agents for the Original McDougall's Sheep Dip & Cattle Dressing

SOUTHDOWN SHEEP

Unequaled for fine quality of both mutton and wool, hardness 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 Ram and Ram Lambs.

Including consignments from nearly all the leading registered flocks in England.

Stride & Son, Chichester, Sussex, England.

W. W. CHAPMAN, Secretary of the National Sheep Breeders' Association.

Secretary of the Kent or Romney Marsh Sheep Breeders' Association

and late Secretary of the Southdown Sheep Society.

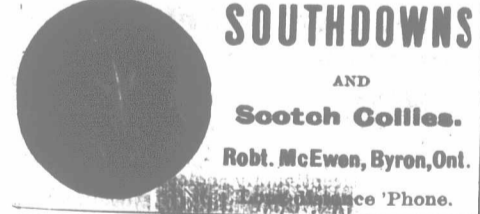
Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered.

Address: MOWBRAY HOUSE, Norfolk St LONDON, W. C., ENGLAND.

Cables—Sheepcote, London.

Sheep and Cattle Labels. You will need them soon. See about them now. Write to-day for circular and sample.

F. G. JAMES, Bowmanville, Ont



HAMPSHIRE SHEEP

"Reserve" for Champion in the Short-wool Classes, Smithfield, London, 1904, 1905 and 1906.

SPL'NDID 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 unsurpassed, and for crossing purposes with any other breed unequalled. Full information of

JAMES E. RAWLENCE, Secretary Hampshire Down Sheep Breeders' Association.

Salisbury, England.

GOSSIP.

LAST CALL FOR HAY BROS.' SALE.

As announced last week, the estate of the late Wm. Hay, of Tara, Ont., on Owen Sound branch of G.T.R., will sell, on March 12th, the entire herd of 20 head of Shorthorns, the imported Clydesdale stallion, Kelvinside, by Baron's Pride, two registered Canadian-bred Clydesdale mares and two drivers. The Shorthorns include the stock bull, Scottish Knight 53248, described last week, and five young bulls, from nine to thirteen months of age, all sired by the stock bull—a thick, straight-lined, useful lot. The females represent both the thick-fleshed beefy type, and the dual-purpose heavy-milking type, all in good condition, and ready to go on and do well for their fortunate buyers.

D. BROWN'S SHORTHORNS.

Probably no strain or family of Shorthorns in this country are heavier or more persistent milkers, as a rule, than that old English strain tracing to Imp. Beauty, by Snowball, and when a herd traces to that remarkably prolific cow, it goes pretty nearly without argument that no better dairy or dual-purpose Shorthorn strain exists, for, besides being exceptionally profitable at the pail, descendants of this good cow have at different times won the highest honors at the leading exhibitions in Canada. Such is the herd of Mr. Douglas Brown, of Ayr, Ont. The foundation cow was Eglitha 29th =89427=, by Duncan Stanley =16364=. This cow, besides being a grand dairy cow, is built on modern type lines. She, and another bred the same way, are the dams of the balance of the herd, all of which are sired by Imp. Christopher, Imp. Beauchamp, and the present stock bull, Blenheim Stamp =42464=, by Imp. Kinellar Stamp; dam Rosebud of Blenheim, by Imp. Oxford. This cow, as will be seen by looking over her pedigree, traces to Beauty of Snowball. All the young stuff two years and under are sired by this bull, thus giving them a double cross of that great milking strain, among them being several one and two year old heifers, that for nice straight lines and even, well-quartered form, will compare favorably with most in that respect, and beat them all to pieces at the pail. In bulls, bred the same, is one red two-year-old, out of Eglitha 37th, and sired by Blenheim Stamp. He is a big, growthy bull, with grand lines, heavy steak, and good shoulders, and bred as he is, any one wanting a dairy-bred Shorthorn bull should be suited in him. Another bred the same is a roan, 10 months old, a nice, thick, sappy, good-doing youngster, that cannot fail to develop into a grand good bull. Then there are two others, five and six months old, that are very promising. Anything in the herd is for sale, and can be bought at tempting prices. Owing to his heifers now coming on, the stock bull is for sale, and can be bought very, very reasonably, and a right good sort he is. For a coming stock bull Mr. Brown has lately purchased Nonpareil Victor, by Imp. Nonpareil Duke; dam the Marr Roan-Lady cow, Imp. Orange Blossom 3rd, by the Princess Royal bull, Scottish Prince; grandam by Remus, by Star of Morning. This is one of the gilt-edged kind, exceedingly thick, wonderfully mellow; in fact, a show bull. Write Mr. Brown to Ayr P. O., Ont

Lump Jaw advertisement with image of a dog's head and text describing the cure.

Ship Your HIDES SHEEPSKINS FURS

To E. T. CARTER & CO., TORONTO. Maplehurst Herd of Tamworth Swine, Bronze Turkeys, Toulouse Geese, Pekin Ducks, S.-C. W. Leghorns.

ORCHARD HOME TAMWORTHS Herd headed by Newcastle Warrior. This hog won first prize and silver medal at Toronto 1905, and defeated his sire, Colwill's Choice (1898), who has won these honors three years in succession.

MOUNT PLEASANT TAMWORTHS and HOLSTEINS. For sale: An extra choice lot of pigs of either sex, from one to six months old, and two sows bred to farrow in March.

LARGE ENGLISH YORKSHIRES We have a limited number of choice young pigs for sale, bred from our choicest sows, and got by the imported boars, Dalmeny Joe 13077 and Broomhouse Bean 14514.

Cherry Lane Berkshires Are strictly high-class, Toronto-winners. Of all ages. Young stock of both sexes for sale.

CHESTER WHITE HOGS The largest herd of bacon-type Chester White hogs in Canada. Strictly high-class, have won highest awards. Young stock of both sexes always on hand. Satisfaction guaranteed.

Maple Lodge Berkshires—A number of shire sows, bred and ready to breed. Young stock on hand of both sexes. Stock registered and crated f.o.b. Prices reasonable.

IMPROVED LARGE YORKSHIRES. Choice young stock from imported prizewinning stock for sale.

THE Greatest of Tonics
PSYCHINE
(Pronounced Si-KEEN.)
FOR ALL
THROAT AND LUNG
TROUBLES

TWENTY-FIVE YEARS' SUCCESSFUL RECORD

MONEY can buy advertising space, but it can't buy a quarter century's successful record of wonderful and almost miraculous cures of the most difficult and intricate cases of throat, lung and stomach troubles. Such is Psychine's record. Thousands of cases given up by leading doctors as hopeless and incurable have been quickly and permanently cured by Psychine. It is an infallible remedy for coughs, colds, bronchitis, pneumonia, consumption, indigestion, loss of appetite and all wasting diseases.

"My son had a terrible cough and was wasted to a shadow. Doctors said he could not live. He used Psychine, it cured him."—Mrs. J. Mangin, Brookville.

"After taking \$5.00 worth of Psychine my lungs are well and life is

again worth living."—Mrs. I. Richards, Marietta Cove, N.B.

"My lungs are now sound as a bell after using Psychine."—H. Robbins, Bridgeburg, Ont.

"Psychine saved my life."—A. Walden, 7 Cornwall St., Toronto.

Psychine Never Fails Psychine has no Substitute
AT ALL DEALERS, 50c and \$1.00 A BOTTLE

DR. T. A. SLOCUM, Limited, 179 King St. W., Toronto

Woodstock Hord of Large English Berkshires

I have for sale pigs of all ages, both sexes, from prizewinning stock. I am booking orders for spring delivery from my Imp. and home-bred sows. Come and see or write for prices. My herd was in the front rank of prizewinners at the leading exhibitions this fall.

C. P. E. and G. T. R. Stations.

DOUGLAS THOMSON, Box 1, Woodstock, Ont.

Rosebank Berkshires.

—Present offering: Bred for service: Sows ready to breed. Choice young stock ready to wean, sired by Maple Lodge Doctor and Sallie's Sambo (Imp.), a Toronto winner.

Lefroy, G.T.R. JOHN BOYES, JR., Churchill, Ont. Long-distance Phone

HILLCREST BERKSHIRES

Stand unrivalled for individual merit in the herd. Our business for 1906 surpasses former years. The enquiry for choice sows increases from year to year. Some choice sows for sale due to farrow in the spring. Also a few boars on hand. Vine St. G.T.R. near Barrie. John Lahmer, Vine P.O.

BERKSHIRES

50 IMPORTED AND CANADIAN-BRED 50

Motto: "Good as Represented."
Mail orders receive careful attention.

H. M. VANDERLIP, GAINSVILLE, ONT.

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.

SUNNYMOUNT BERKSHIRES.

Sunny Mount 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.

Cedar Lodge Yorkshires

100 head brood sows (imp.) and the product of imp. stock, weighing from 500 to 800 lbs. each. Stock hogs by imp. sires and dams, very large and full of quality. Young stock of both sexes constantly on hand for sale. Pairs not akin. Satisfaction guaranteed.

F. O. COLLINS, Bowesville P.O., Ont. Manotick Sta., C.P.R.

Duroc Jerseys—Imported and home-bred sows and boars ready for service. Pigs fit to wean; also Buff Orpingtons and Buff Leghorn cockerels.

MAC CAMPBELL, Harwich, Ont.



Pat. 1903-04.

We manufacture Steel Cheese Vats, Cream Vats, Curd Sinks, Water Troughs, Hog Troughs, Steel Tanks, Tanks to Water Stock, Feed Cookers, Evaporators for Making Maple Syrup, Grain Boxes, Threshers' Steel Tanks, Smoke Stacks, Steel Whey Tanks.

Ask your implement agent for our free catalogue.

The Steel Trough & Machine Co., Limited,
TWEED, ONTARIO.

OAKDALE BERKSHIRES

Of the largest strains Imported fresh from England. The produce of these and other noted winners for sale reasonable. I will book you order for a pair of sows or a boar.

L. E. MOFFATT, 451 View St. and P. O.

QUESTIONS AND ANSWERS.
Miscellaneous.**PIGS WORRYING EACH OTHER.**

A reader writes: "I noticed a question in 'The Farmer's Advocate' about pigs worrying each other, and would say I have known similar cases, where pigs would fight and kill each other. I think the trouble may be owing to having smoke and steam in the pen, and so condensed as to have a maddening effect on the pigs, and that by removing this, the trouble will end."

FOR QUARRELSOME PIGS.

In answer to E. C. M.'s question, in issue of Feb. 21st, re hogs worrying one in the bunch, J. G. L., Wellington Co., Ont., writes: "I may say I have had the same experience. My cure is—and it always has proved a sure cure—to take a plow line, put a loose loop on one end so that it will tighten when you put the loop in the hog's mouth, and fall loose when you stop pulling the rope; this is to hold the hog while one man, with a pair of wire pinchers, breaks out the front teeth close to the gums, then put a couple of hog-rings in the nose at the same time. I do not know the cause of worrying one hog; some say they want blood or flesh. I would like to know if hogs fed at a slaughter-house attack one of their number."

SELECTING SHORTHORNS.

Would you kindly give instructions in regard to selecting Shorthorn cattle by pedigree? I read about different families, but, to a new beginner, they are all greek. I would like to start a herd on a small scale, and would prefer the milking strain, but don't know how. Would you instruct me, through your paper, how to tell a Cruickshank, a Bates, or a Booth strain? J. E. L.

Ans.—It is only by reading the history and studying the herdbooks, and the different types of the breed that one can get helpful light on this question. While it has always been claimed for the breed, and with good grounds, that it is a dual-purpose breed, the cows, as a rule, being fairly good milkers, and many of them heavy milkers, it must be admitted that in the last thirty years, or more, by the Booths and by Cruickshank and their disciples, much more attention has been paid to developing the early-maturing and beef-producing than the milk-producing propensities of the breed, with the result that, as a rule, the females of those classes or strains that have been in that line are only moderate milkers, although there are yet some cows in most herds of these strains that are excellent milkers. Mr. Bates, one of the early improvers of the breed, gave more attention to the milking proclivities of the breed, and gloried in the dairy production of his cows, as well as their style and symmetry, and, as a rule, in herds that have been bred mainly in the Bates line, the females are better milkers than those of the families that have been bred mainly for beef. For this reason, the females of families of Shorthorns in this country that trace to the early importations, which were principally of Bates strains, more or less nearly related to the fountain-head of that strain, are more generally good milkers, though, of course, that tendency has not been helped by the use of sires of the special beef type, without regard to the milking qualities of their dams and earlier female ancestry. As there are few, if any, families as such now that have special claims to dairy qualities, the safest rule we can recommend for the selection of milking Shorthorns is to select cows having the individual indications of superior milking qualities, such as a large and well-shaped udder, with plenty of loose skin to give capacity that you have seen milked, and that give a fair quantity. Then the conformation of a likely milker should be more nearly like that of the ideal type of dairy cow, namely, a clean-cut head, slim neck, somewhat thin withers, and prominent hook bones, broader behind than in front, and deep ribbed. In selecting a bull to breed for milk, see that his dam is of the type described, and that she is actually a superior milker—test your cows by the scales—and continue to breed from the best producers.

MILBURN'S LAXA-LIVER PILLS

are mild, sure and safe, and are a perfect regulator of the system.

They gently unlock the secretions, clear away all effete and waste matter from the system, and give tone and vitality to the whole intestinal tract, curing Constipation, Sick Headache, Biliousness, Dyspepsia, Coated Tongue, Foul Breath, Jaundice, Heartburn, and Water Brash. Mrs. R. S. Ogden, Woodstock, N.B., writes: "My husband and myself have used Milburn's Laxa-Liver Pills for a number of years. We think we cannot do without them. They are the only pills we ever take."

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

**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. Offers for sale: 18 young boars, 4 months old; a large number of sows, same age; also 80 suckling pigs, both sexes. Also a grand good Shorthorn bull (roan), 10 months old.

David Barr, Jr., Box 3, Renfrew, Ont.

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.

Maple Grove Yorkshires

are among the leading Canadian herds for size, quality and true-bredness 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 young ones of both sexes, the get of Masterpiece and Just the Thing. An exceptionally choice lot.

JOHN S. COWAN, Donegal P. O., Milverton Sta.

MAPLE LEAF BERKSHIRES!

High-class Berkshires of showing quality, bred from imp. stock, for sale. 2 7-months boys by imp. Folgate Doctor; 3 sows by same sire, bred; 10 sows, 3 1/2 months old, by King of the Castle, and young boars. Joshua Lawrence, Oxford Centre P. O. Woodstock Station.

Willowdale Berkshires

Young boars and sows, 3 and 6 months of age, out of imp. sows, and sired by Imp. Folgate Doctor, Royal Masterpiece, a son of the \$2,500 boar, Masterpiece, and some of them imp. in dam. Satisfaction guaranteed.

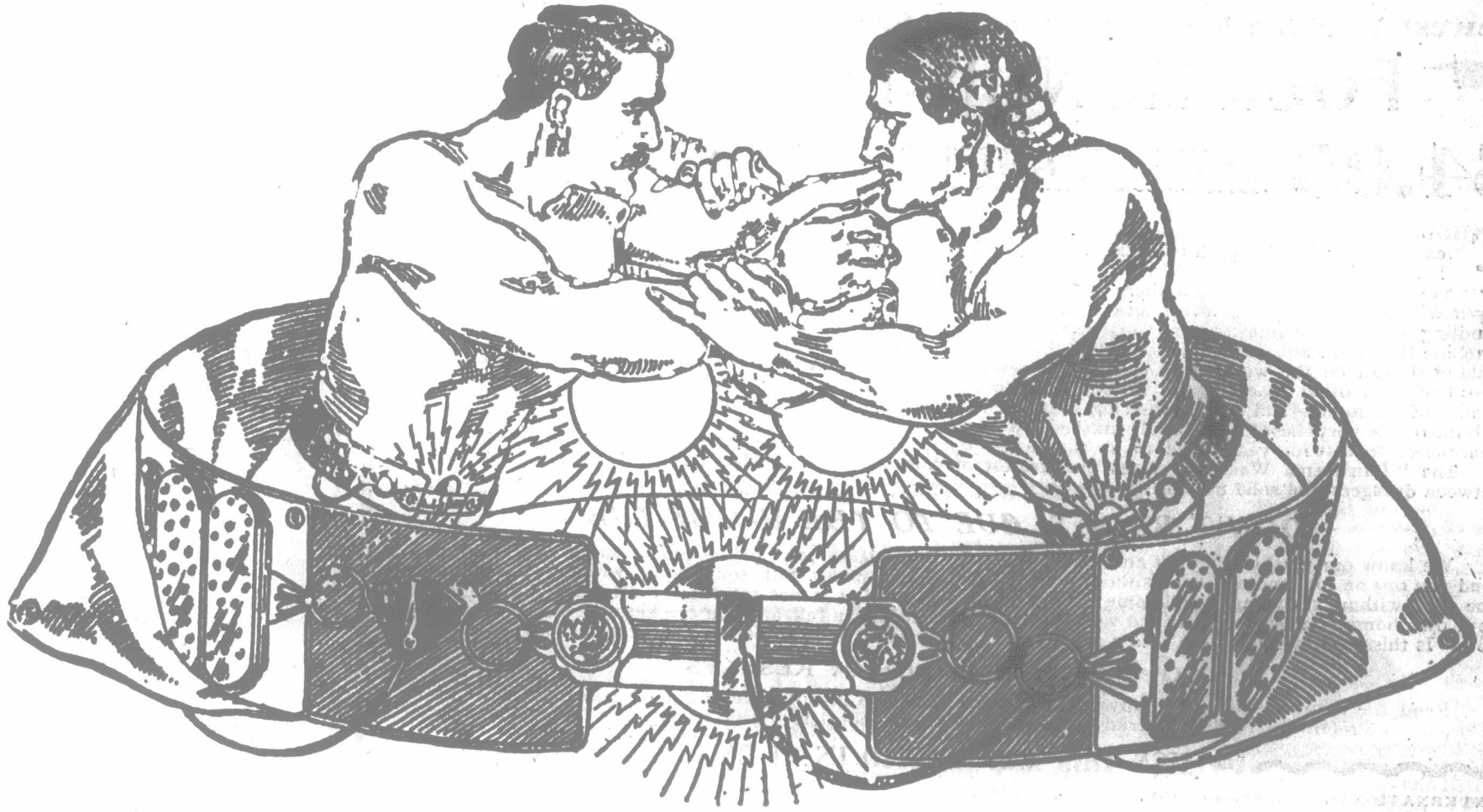
J. J. WILSON, Milton P.O. and Sta.

ELMFIELD YORKSHIRES

Have a few young sows from 4 to 7 months, bred and ready to wean, also some young pigs weaned and ready to wean, from imp. dam and sire. G. R. Hume, Apr. Ont.

Corbett Tells How to Win

Former Champion Pugilist Says You Must Have a Good Stomach or You'll Never Have the "Punch" That Insures Victory.



James J. Corbett, conqueror of John L. Sullivan, and former champion heavyweight pugilist of the world, says: "If you haven't a strong stomach you can't get the punch that wins."

It is a well-known fact that a man's stomach is one of the most important organs of the body. When your stomach is in perfect working order you are happy and contented, but when it is not you are easily discouraged, and soon lose all energy and ambition to push forward. When a man's stomach is all knocked out it is not long before the other vital organs are affected, and he becomes a burden to himself and to everybody else.

The stomach is responsible for most of the chronic ailments from which people suffer. If it does not digest the food properly there will be extra work for the liver; when food remains in the stomach and ferments it makes a gas which extends the stomach and presses on the lungs and heart and causes palpitation; when it passes the undigested food into the intestines constipation ensues, poison gets into the blood, causing rheumatism and a whole lot of other trouble; in fact, it would be easy to trace most of the chronic ailments back to poor digestion.

You know the stomach is the engine of the body. You put food into the furnace, and as it burns it generates power, and that power runs the human machinery. Naturally, if you don't digest your food properly you are going to have very little power with which to run the machinery.

Get out of the habit of taking drugs, and help your stomach and heart in their work by adding to their vitality. Dr. McLaughlin's Electric Belt is a natural invigorant. It pours electric life into them, and

that is what they have lost. Electricity is the only cure for them.

"Why should I use your Belt?" That is, why is it better for me than many other things advertised to cure my ailments? Because it cures by restoring the vitality of the part that is ailing, and the other things do not cure at all, because they do not restore the vitality. This is assuming that our Electric Belt gives electricity, which is the basis of animal life, and that the other things are drugs.

The day of blind following of habit is passing, and men are thinking now. In these days a man does not pull the cork out of a bottle and swallow the dose of the stuff without looking on the label to see what is in it. People are beginning to fear the word "dope," as they have been shown that it means destruction to the nerves and tissues.

With a strong stomach, feeding the nerves and blood of the body with new energy every hour of the day, you are proof against disease, because not only does it create all the vitality the body needs, but it keeps the blood clear of the poisonous matter that causes rheumatism and other troubles.

Here is a man cured of heart, kidney, stomach and nerve troubles.—James Edward Jones, Teulon, Man., says:

"I am pleased to say that one year and eleven months has passed since I stopped wearing your Belt, and I can say that your Belt has cured me permanently of my different ailments, such as nervousness, heart and kidney troubles, indigestion, sick headaches and other ailments. I have not been troubled with any of them since, nor have felt the effects of them since I stopped wearing the

Belt. I always answer all who ask me about the Belt, and there have been several who have written to me. I do this cheerfully, and will continue to do so as long as they send me a stamp for reply."

Here is a man well satisfied, and his sister also cured after treating with different doctors. John W. Thibault, Bruce Mines, Ont., writes:

"I write to let you know that your Belt has cured me, and I am entirely satisfied with your treatment. I then gave it to my sister to wear, and she, too, was entirely cured after being treated by many different doctors, and also being told that she would have to undergo an operation, to which she would not consent. She used your Belt, and was entirely cured."

The majority of cases which have been lately cured by the Dr. McLaughlin Belt are of men broken down by nervous strain, overwork, over-eating, and late hours. In them the old ambition seemed to have gone; self-confidence was lacking, and there was a tendency to premature old age. In such cases, Electricity is most effective, as its effect is to restore life to the nerves and all the vital organs.

Mr. Cliff Huxtable, of Amherst, N. S., writes me as follows:

"I have had your Belt for two months, and am glad to say that I am improving every day. My back was sore from the constant drain; now the pain is all gone and I feel like a new man. I am still using the Belt every night, and I am sure I weigh ten pounds heavier. I am sure that in a short time I will be all right."

"I have used your Belt for a month," says Thomas Copeland, of Lakefield, Que. "I find it is doing me great good. My stomach trouble

is better, and I also feel stronger in every way. I am well pleased with the Belt."

Wm. J. Pearson, of Fleming, Sask., writes:

"I am fully satisfied with my Belt; it is a good cure. I am stronger in every way, and I thank you very much for the Belt; it is well worth the money that I paid for it."

I could fill pages of this paper with letters of praise from those who have been cured by Dr. McLaughlin's Electric Belt, but those given above are certainly enough to suggest to the reader that he also may find relief from his ailments by using electricity.

If I don't cure you, it costs you nothing. All I ask is reasonable security, and you can pay when cured.

If you are suffering from Nervousness, Backache, Rheumatism, Stomach Trouble, Constipation, or any ailment which drugs fail to cure, call to-day for Free Book. This book should be read by every man. It tells facts that are of interest to every man who wants to remain young in vitality at any age. Call if you can; if you can't, send coupon for our beautifully-illustrated 84-page Free Book.

Dr. M. S. McLaughlin,
112 Yonge St., Toronto, Can.

Please send me your book, free.

Name

Address

Office Hours—9 a.m. to 6 p.m. Wednesday and Saturday until 8.45 p.m.

THE WILKINSON PLOUGH CO., Limited, Toronto, Canada:
GENTLEMEN,—Please send me (free) the book, "Practical Experience with Barn-yard Manures."

Name P.O.

Province

Have you a Manure Spreader? Answer

FARM FOR SALE

118 acres of choice land, 3 miles from City of Brantford. This is one of the best farms in the county. Buildings and fences are all nearly new. First-class two-story brick house, 10 rooms; cattle barn, 60 x 64, with cement floors and mangers, with water besides to each stall; horse barn, 80 x 38, modern plan; pigsty 38 x 50; implement shed, 54 x 38; never-failing well with new windmill that drives water to both house and barn; large orchard. Price, \$10,500.

For further particulars apply to
T. A. COX, Box 71, Brantford, Ont.

Greatest Invention of Modern Times

Does away with Wash Day Slavery

The Dan Patch Washer

FASTEST WASHER IN THE WORLD. GREATEST CLOTHING SAVER IN THE WORLD.
EASIEST WASHER IN THE WORLD.

Never tears the most delicate Fabrics and never pulls off the Buttons

Newest Washing Machine Invention—Sold on the Most Liberal Terms

FOUR MONTHS FREE TRIAL

\$4.05 WORTH OF GROCERY SPECIALTIES FREE

THOUSANDS of women ruin their health every year by trying to do the family washing. In a majority of cases she is handicapped for lack of help, and in not having a correctly built washing machine to save her health and strength. When we first considered the manufacture of this line we knew what we would have to contend with. We knew there were many cheap, worthless machines on the market, with lids loaded down with balance wheels, levers, gears, cog wheels, that add so much weight to the lid as to make the handling of the machine as hard work as doing the washing. Therefore we waited till we had a washing machine that did away with these objectionable features. The Dan Patch Washer is so easily operated that a child of six can do the washing as easily as a person of mature years. It is constructed on entirely different lines from any other machine now known. The mechanism is concealed beneath the bottom, so there is no chance of it catching and tearing the clothes in the wash or the clothes of the operator. The Dan Patch Washer is built of the very best of material, finished by expert workmen, and being made on scientific principles, is guaranteed to last for years, and to be the easiest operated machine on earth.

The "Dan Patch Washer" solves the greatest of domestic labor problems, and breaks down the barrier between drudgery and solid comfort.

DON'T BE A SLAVE TO THE WASH TUB

We know our machine is right and that it will more than please you, and to prove our statements we will send you one on four months trial without your depositing the money with some bank, without your investing one cent, without requiring troublesome weekly payments, and if it is not satisfactory after a thorough test in your own home you can return it and we will credit your account in full, and you can keep the free goods we give you. Is this not an easy way to obtain the highest class, simplest and fastest washing machine on the market?

YOU ARE SOLE JUDGE OF RESULTS

Read the following offer carefully and when you decide to accept it cut out and mail to us. As to our reliability we refer you to the Imperial Bank of Canada. Do not delay, write to-day.

SIGN THIS AND MAIL TO US AT ONCE

INTERNATIONAL STOCK FOOD CO., Toronto, Canada.
E. B. Savage, Manager.

Dear Sirs:—Please ship me the following specified articles on your Special Four Months Terms from date of shipment with the privilege of returning said Machine if not satisfactory after doing four family washings within six weeks from date and receiving credit in full for entire amount. I am to have the \$4.05 worth of goods free whether I pay for the machine or not.

ONE DAN PATCH WASHER (Regular Retail Price) @ \$14.00

YOU ARE TO SHIP ME ABSOLUTELY FREE—

The Grocery Specialties given with this offer are sold by your grocer on a cash guarantee of satisfaction. They are absolutely high class and after a test you will never be without them.

I agree to give the "Dan Patch Washer" a fair trial by strictly following directions. If one or two trials should not prove satisfactory I agree to write you and be governed by your special written instructions on my next two trials. This is Guaranteed Satisfactory—Ship at once.

If we were acquainted with you it would not be necessary for us to ask for reference, as we are not we ask you to give us the name of some bank or dealer you do business with. Our reference is the Imperial Bank of Canada.

I GIVE AS REFERENCE:

IF NOT CONVENIENT TO PAY IN FOUR MONTHS WE WILL GIVE YOU AN EXTENSION OF TIME ON REQUEST

Don't Miss This Wonderful Opportunity. WRITE TO-DAY SURE.

3 Packages Reliance Vanilla Extract	\$0.75
3 Packages Reliance Lemon Extract	.75
7 Packages Reliance Breakfast Food	1.05
2 Packages Reliance Baking Powder	.50
4 Packages Quick Cleaner Soap	1.00
TOTAL VALUE FREE GOODS	\$4.05

Sign Here:

Purchaser

Town

Co.

Prov.

Dealer

Bank

Maple-Sugar Evaporators

Not a single feature of the Champion Evaporator could be dispensed with and leave a perfect boiling machine.



Durability, rapidity and high quality of product, with saving of fuel, are its features.

Sap Spouts.

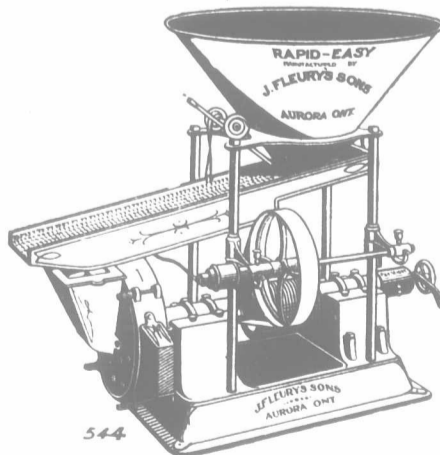


The Grimm Sap Spout will produce one fourth more sap and the Grimm Cover protects it. They more than pay their cost in one season. This is guaranteed or no sale. Write us at once, stating the number of trees you intend to tap next spring, and we will quote you price on an outfit suitable for your requirements. Sample Spout and catalogue free. The Grimm Mfg. Co., 58 Wellington St., Montreal

THIS cut shows one of the latest patterns of "RAPID-EASY" Grinders, built especially for custom work. A very fine quality of work in great quantity. "RAPID-EASY" Grinders do more work with same power than others.

PROVINCIAL AGENTS:
The Fairchild Co., Winnipeg, Regina and Calgary.
J. Clark & Son, Fredericton, N. B.
The Lonsbury Co., Newcastle, N. B.
A. Horne & Co., Charlottetown, P. E. I.
Bligh & Prince, Truro, N. S.
T. J. Trapp & Co., New Westminster, B. C.

Ask for any information you want.
J. FLEURY'S SONS,
Aurora, Ontario, Canada.
Medals and diplomas—World's Fairs: Chicago and Paris.
Cut this advertisement out for reference.



ADVERTISE IN THE ADVOCATE.

QUESTIONS AND ANSWERS Miscellaneous.

PROBABLY POOR PAINT.

I painted my house white; after a short time, it turned a muddy color. Explain.
D. K.

Ans.—We could only guess at the cause, but it was probably a poor quality of paint.

SMOKING MEAT.

1. As regards smoking hams, would you advise the burning of corn-cobs in preference to an ordinary wood fire?

2. I am putting a brick chimney into my house and thought of building a sort of box in it, for the purpose of smoking hams and bacon. Can you advise me how such should be done? Would such a contrivance affect the draft to any marked degree?

3. Does bacon or ham spoil by being frozen after it has been through the pickling process?

4. Can you suggest any practical way for making ice at home, say, in a box 2 feet by 6 feet square, sides bolted together so as to come apart? Would such a device answer?
W. R. W.

Ans.—1. No. If we remember aright, Libby, of Chicago, uses green birch.

2. We would recommend, rather, the building of a small combination ash and smoke-house. Our objections to the plan you propose are that draft might be seriously checked, that danger of fire would be somewhat increased, and that smoke would at times be so warm as to cause meat to drip grease.

3. It will not be good for it, but it will scarcely freeze, except in extreme weather.

4. We think the plan you suggest would be quite practicable. Fill up with water, night after night, as much as would freeze solid, and when box is full, raise and repeat. The process would be tedious, however, and ice would be hard to get out in summer, so that if you can get any to cut within three or four miles, we think you would find it more profitable to do so.

FLAXSEED FOR HORSES—TOMATO CULTURE.

1. I can get good cedar shingles here for \$2.50 per M.; those laid 5 inches to the weather will last 20 years. / Would any of the different kinds of roofing, advertised in "The Farmer's Advocate," last longer and come cheaper (steel shingles not included)?

2. I wish to feed some flaxseed to my horses. It is hard to get here. Would ground oil cake do as well? How much should be fed at once? How is raw oil fed, and how much should be given at once?

3. Would you tell how to organize a joint stock company to build a telephone line?

4. What makes tomatoes rot before they are ripe, beginning at the stem? Please give an outline of tomato culture.
W. C. R.

Ans.—1. You are quite safe in staying with the shingles. Substitutes are more suited for places where shingles are dearer, and they have not yet been tested twenty years.

2. Veterinarians tell us that horses, in winter, should have some kind of oily food, and, therefore, advise the use of flaxseed. It should be ground, and about a handful given with oats twice a day. If seed is not ground, it should be boiled. Oil cake, though a wholesome food, would not take the place of flaxseed, as the oil has been extracted. Raw oil can be given mixed with grain, beginning with small quantity and increasing. Regulate the dose by the effect. Half a cupful a day would be ample.

3. See articles on the subject in recent issues, by Dr. Doan, Harrietsville, Ont.

4. Tomato-growers are warned against growing tomatoes on low, moist ground, manuring heavily with rank, fresh manure, and using poor seed. Your trouble may be due to one or other of these. Clay loam is the most suitable soil. Land should be clean (preferably following another good crop), well drained, fairly rich, and in elevated situation, so as to escape frosts. Plants should be set, four by five feet apart. Plant towards evening, and a little deeper than they had been, with care not to break roots. Begin cultivating at once, and continue at frequent intervals as long as possible.