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THE FARMER'S ADVOCATE & HOME MAGAZINE

THE LEADING AGRICULTURAL JOURNAL PUBLISHED IN THE DOMINION.

The FARMER'S ADVOCATE is published on or about the first of each month. It is impartial and independent of all classes or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical and reliable information for farmers, dairymen, gardeners and stockmen, of any publication in Canada.

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THE FARMER'S ADVOCATE,
360 Richmond Street,
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Our Prize Essays.

We again have a large number of essays. This time on "Farm Fences—the desirability of doing away with them, or lessening their number." We found it extremely difficult to decide between them. All had some good point on which the writer enlarged, each one doubtless viewing the matter from his own position, which was the object lesson we sought to inculcate, in order to get our readers thinking on this important subject.

All are decided upon one point, namely, the heavy burden entailed by keeping up perishable fences, which are not only a bill of expense, but also a constant source of annoyance, one of the unsuccessful essayists in his case valuing the cost as high as \$1.25 per acre, which, including the use of land, computed from a ten-acre-field-crooked-fence standpoint, comes much nearer the truth than many suspect. Several useful ideas have been advanced as to the practical part of fence building, which we trust will be of assistance to our readers. Most of those writing (and we received over twenty on this subject) declaimed loudly against our present herd law, but none appeared to be able to make the provision for marketing cattle, this trade requiring fenced thoroughfares. On this point, as well as lessening the inside fences on the farm, we regret that the subject was not more thoroughly threshed out, and better plans for further relief advanced.

Editorial.

Farmers' Associations.

In this issue will be found articles concerning Dominion Grange, the Patrons of Industry, and the history of the Farmers' Alliance. We advise all our readers to carefully study all these articles. Co-operation and unity of action is a necessity for the farmers of the Dominion. The great trade and labor unions are controlling or harrassing the world to-day. If it were not for these unions, capitalists and mighty combines would soon reduce the common people to a state of serfdom. Throughout the United States the condition of the farmers is deplorable. There are a few who are doing fairly, but none who are receiving in return for their labor and capital invested a just return.

This state of things ought not to exist. No country can advance as it ought while things continue as they are. What is the immediate cause of the depression, and how can we as a nation rise above our present difficulties? As set forth in the article on the Farmers' Alliance, cheap money is a present necessity. The agricultural class throughout the Dominion are carrying a load of mortgages and other indebtednesses. Few indeed are relieving themselves of their burdens, but thousands are yearly increasing them. Unless help is given these struggling masses in some way or other, times will grow worse and worse each year. The party politicians assert that Canadian farmers are yearly growing richer, and that they are a prosperous class. The farmers themselves know that this is not the case. The time has come when Canadian farmers must forsake all party politics, and join in one mighty national organization and discuss fully the situation and determine the course to take. In this they must work together, as do the Knights of Labor. Only by thus uniting can they ever hope to obtain their rights. Divided as farmers are now as a class, honest politicians who wish to serve them either do not know what they really require, or receive so little support from the farmers themselves that they are rendered helpless. We were recently told by a leading politician that cheap money for the farmers is out of the question. Yet Canadian farmers should remember that upwards of \$20,000,000 was obtained for the C. P. R. by the Dominion Government, and that this same government now has upwards of \$50,000,000 in the post-office savings banks, for which they pay 3½ per cent. If the farmers of the Dominion could obtain money at 4½ or even 5 per cent. for the next twenty years the Dominion would prosper as it has never prospered. Though wise and well-meaning politicians

may render valuable assistance by opening up foreign markets, yet the salvation of our people is to be obtained by thorough organization. We wish correspondence on all the subjects referred to in this article, and also concerning the questions discussed by the articles previously referred to. We will be pleased to receive reports from the Grange meetings, from the Farmers' Alliance, the Patrons of Industry, or any other farmers' associations. Tell us how you prosper and what you think, and we will tell 20,000 farmers each month.

Cheering Prospects for Cheese.

Cheesemen have been unusually hopeful over this season's business. The market was practically bare of cheese to begin with. Mr. John Geary, Vice-President of the Western Ontario Dairymen's Association, states that in nine years experience he has never known the prospects to be so bright. He looked for a keen demand and high prices, all of which, on behalf of the patrons, it is hoped will be verified.

The Canadian Cattle Trade.

Copies of a Blue Book containing the evidence taken during the enquiry ordered by the Canadian Government into the export cattle trade have been forwarded to the Imperial Board of Trade. It is to be hoped that in the next session of the Dominion Parliament legislation will be introduced authorizing the government to frame rules and regulations for governing the cattle export industry, and ordering the appointment of an inspector to examine vessels with regard to their seaworthiness, to see that they are properly equipped and ventilated and provided with fittings of a permanent character, to ensure a sufficient number of men being carried to properly attend the animals, and to take care that the animals are plentifully supplied with food and water and have ample space. It is thought that these proposals will meet the views of the most ardent humanitarian.

Summer Foods for Cows.

The profits of a season's dairying may be very largely reduced or entirely lost in consequence of a long drought in summer. Once the milk flow falls off in consequence of the lack of succulent foods it is most difficult to revive. We counsel our readers not to trust wholly to pastures. Plan a succession of green crops. Something in that direction may yet be done. Oats, peas, corn, hungarian grass, and millet may be used in this way with great profit, to tide the cows over a dry time. If possible sow where convenient for feeding, otherwise it may be neglected in press of summer work.

Maritime Correspondence.

The winter in southern New Brunswick and in most of Nova Scotia, though very cold in December, was favorable for getting the work done. The snowfall was light, and the sleighing was excellent for about three months. In northern New Brunswick and on Prince Edward Island the snow was very deep; high winds and drifting snow made it very unpleasant for out-door work. The farmers in the three provinces are feeling very seriously the pressure from the failure of the last year's crop. All kinds of feed for cattle are scarce; especially is this true in P. E. Island where they are not able to draw supplies from the mainland. Seed grain is very scarce, and it will be very difficult for some of the farmers to secure the required amount.

The Provincial Farmers' Association, of New Brunswick, met at Fredericton last month. There was a good attendance of farmers, and a fairly successful session. The Dairy Commissioner, Professor Robertson, of Ottawa, was present and added very much to the success of the meeting. There can be no doubt that the Professor understands what he is talking about. A resolution was passed expressing appreciation of the policy of the Minister of Agriculture in establishing a butter factory in New Brunswick and another in Nova Scotia. In the discussion on sheep the fact was brought out that nearly all the farmers who spoke on the question had been driven out of the business by the dogs killing their sheep. The dairymen's convention in Nova Scotia and the Fruit Growers' Association in the same province had the benefit of Professor Robertson's knowledge.

The Experimental Farm at Nappan, under the management of Col. Blair, has been very successful in fattening and selling a number of cattle this winter and spring.

The Nova Scotia butter factory will probably be located at Nappan, near the farm. The farmers are to put up the building, furnish the engine, and supply the milk, the government put in the balance of the plant and manufacture the milk into butter at a certain rate per pound. The spring at present promises to be late and cold. The large quantity of ice still in the Northumberland Straits tend to keep the temperature low.

Death of Mr. Francis Bach, of Onibury, Shropshire, England.

Mr. Bach, who has been prominent as a breeder of Shropshire sheep for many years, died at his residence at Onibury last autumn. He began breeding Shropshires as early as 1856, inheriting the work of his father, the late Mr. Philip Bach, whose flock was established in 1812, and as these were purchased in the very heart of the Shropshire breeding country, the flock lays claim to be one of the oldest in England, and has won numberless prizes at local shows, as well as at the Royal of England, and champion prize at the Smithfield Club Shows. The late Mr. Bach was not only an old and reliable sheep breeder, but also took an active part in public life, and shortly before his death received a tangible acknowledgment for services performed in the shape of a handsome souvenir, showing the appreciation of the people with whom he had been intimately connected. The flock will be carried on by his sons.

Get a high order of individual excellence with your fashionable pedigrees, and you will never strike a dull market.

Stock.**Another Breeder's Grievance.**

BY R. GIBSON, DELAWARE.

Recognizing the *ADVOCATE* as the *one* paper that will, in season and out of season, truly represent the farmers' interest, thoroughly independent, asking favors from no party, accepting none from combines or strong corporations, I appeal to you, sir, to use your interest on behalf of the stock breeder. We have now another grievance, which is that stock forwarded by rail must be accompanied by a man in charge. We have long and patiently paid railway rates in excess of any other industry, and now we are saddled with another burden sufficient to swamp any business.

I sold a bull calf, eight months old, to go to Indiana; I am now informed that a man must accompany him. This calf will be rated at from 600 to 1,500 pounds, and should he live to be four months older he will be rated at from 4,000 to 3,000 pounds, according to the railroad you patronize.

Now, why is it that a merchant can send a bill of goods by rail and pay for the number of pounds shipped, but a farmer has to pay for a fictitious amount? The railways will not take actual weight but one assumed by them. I should like to see the 4,000 pound animal, but they belong to another age. We don't have them, as the boys say. Not only is the weight far in excess of the actual one, but the rate per 100 pounds is first class, coming under the highest classification. These rules and regulations alter and change so often that it is hard to keep track, but you may depend when the change is made it is seldom in the interest of the shipper. Some official sitting in his office by a stroke of his pen can and does issue such a circular that paralyzes trade in a certain branch.

Now, sir, I would submit to you: (1) Can a railway company, as common carriers, make such arbitrary by-laws as to rate an animal at more than the actual weight? (2) Again, can they compel an attendant to go in charge of one animal? (3) If you answer yes to my second question, Can they compel a shipper, if the animal is crated, to pay more than the animal and crate combined weight, at the usual rate per 100 pounds, and if so crated can they refuse to carry unless accompanied by an attendant?

Now, if this attendant business were of any benefit to either consignee or consignor, all right, but he is a perfectly useless factor. Ninety-nine times out of a hundred he will never see the animal from the time of shipment until it reaches his destination.

I am surprised at this last edict. As common carriers the railway companies should recognize this fact, that Canada is an agricultural country, and that the agricultural interest is their interest—of the greatest value to them—and that could they in any way assist that industry they would in the end receive a great portion of the benefit themselves. Now how suicidal for a railway company to adopt such by-laws. Let them reflect that they are siffling industry and enterprise. I have lost a customer, the company a profitable occupancy of an empty car returning west, and my customer will probably retire in disgust and confine himself to using a scrub bull. He was intending to buy some Shorthorn cows should the bull suit. Now he will reason that if

he has to send a man with every calf sold he will go into no such business. Can you blame him? What would the merchant say if every bale of goods he sent out from his warehouse had to have an attendant? The English railway companies are more liberal and wideawake to their interests. They carry mares and cows, when shipped for breeding purposes, at ordinary rates, but they return them at nominal rates, so much do they appreciate the breeding interest. Now, Mr. Editor, can you wonder that there are Farmers' Alliances, or Patrons of Industry in the land.

[NOTE.—It appears the above rule applies to single animals being shipped into the United States, and no change has been made effecting animals shipped through Canada.—ED.]

The Registration of Swine.

BY HENRY WADE.

Read before the Swine Breeders' Association.

I have been requested to prepare a paper on the registration of swine, and in response would say that the Agriculture and Arts Association have been recording Berkshires ever since December, 1876, and now have over 3,600 pedigrees on hand; enough to print a large volume. A Suffolk record was also started about three years ago, but as yet only 50 pedigrees have been recorded. In May, 1889, an Improved Yorkshire record was begun, and we have now over 500 pedigrees, and they are increasing rapidly. I might also say of the Berkshires, that during the last two years fully one half of the 3,600 have been recorded, showing the demand there is at present for swine with pedigrees.

We are quite ready to commence records for Poland China, Chester White, or any good breeds of pigs; our fees are very low, 50c. each, we providing a certificate and sending blank forms for description of animals free, just one-half of what they charge for registrations in the United States. It is quite time that all swine exhibited at the larger shows should be recorded, and if all the breeds were recorded in this country there would be no difficulty in getting the exhibition associations to adopt the rules.

The Agriculture and Arts Association will be pleased to enter into an agreement with your Association whereby we can work jointly in the interests of swine breeders. I can as Secretary in a very short time double your membership by raising our fee to non-members to 75c. for each certificate instead of 50c. as at present. Our proposition is this: That for the registration fee of 50c. we will issue a certificate and print a book ready to be sold, the same as we are doing for the other associations.

If your annual fee was large enough you could present a volume free to each of your members and still have some money left for other purposes. Now to get at this. In my opinion there are two ways in which to proceed, one is to increase your membership fees to \$2 a year and have a swine record printed with all the breeds in it, and give one to each member yearly. The other plan would be for Berkshire breeders, the Yorkshire breeders and other breeders to pay an extra \$1 and have the books printed separately, the other \$1 being due when each volume is ready, thus having a Berkshire, or other breed, branch of the Swine Breeders' Association, but still acting with the Swine Breeders' Association as a whole. In any case we intend to publish the Berkshire book this summer and a Yorkshire one also if requested, and I now ask that a Committee be appointed from these associations to revise the pedigrees already on record before we print them.

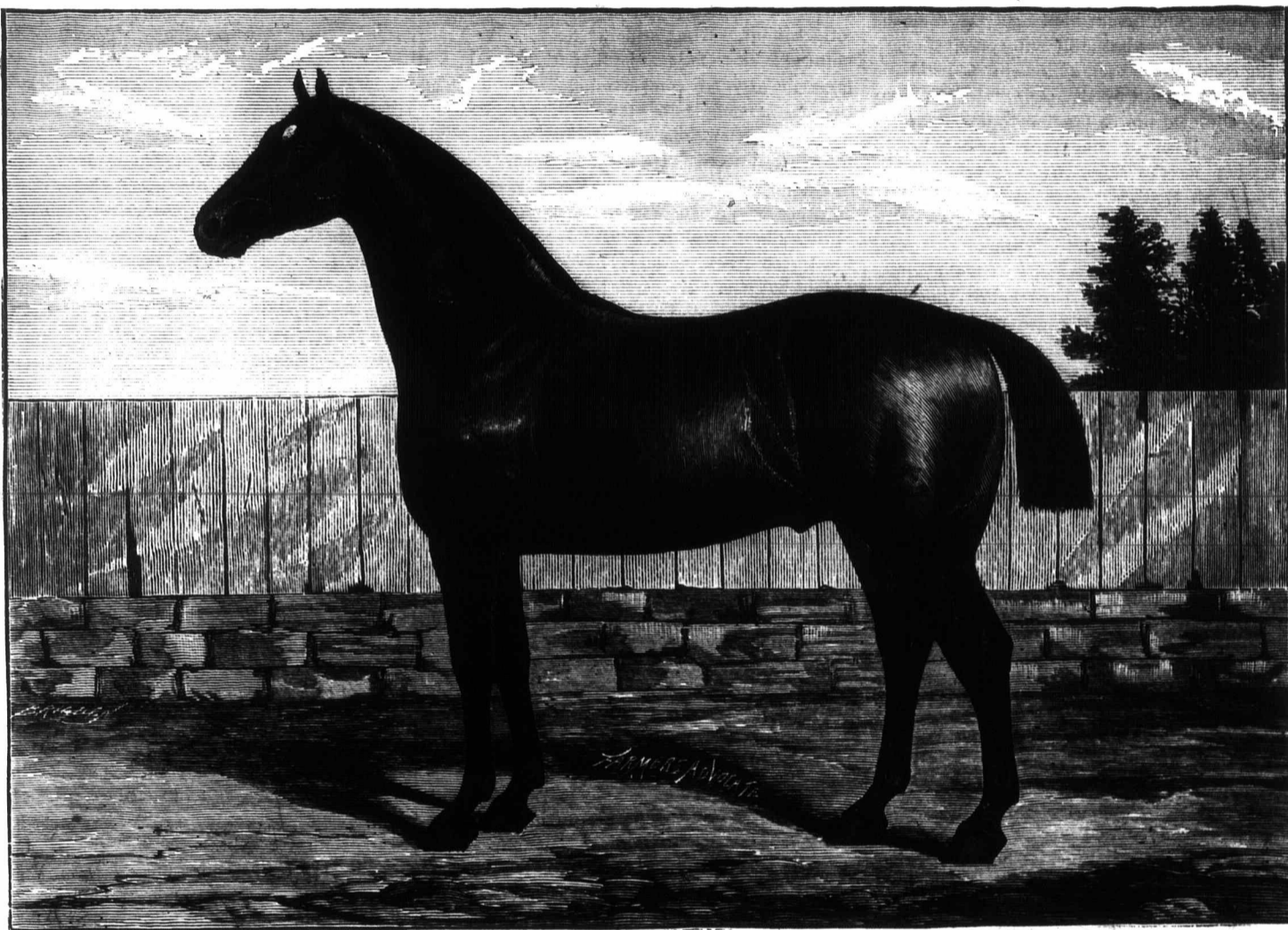
Gold Fox.

Our illustration for this issue represents what is conceded on all hands to be the highest production of the breeder's art—a specimen of the Thoroughbred horse, having sprung from the highly-prized Eastern blood, of which writers on the horse have spoken in such glowing terms, being noted alike for beauty of form as well as fleetness of foot. In England the highest nobles of the land, as well as the cleverest talent, have spent their time and wealth in bringing to the greatest perfection the English Thoroughbred. His flights of speed, and equally wonderful performances at long distances have made him much sought after by horsemen from all countries.

strong, wide hocks. He is built after the right pattern from the ground up. His top piece is equally well finished, being well coupled; strong back, stylish put on neck and head; he has good depth of rib, good in the middle and at both ends. Gold Fox is a rich chestnut, and rising four-year-old—is not a broken down race-horse, but is sound and right. He should prove particularly valuable in getting high-class carriage horses, weight carrying hunters, as well as the highest-priced saddle horses of all classes. An analysis of his blood lines will convince a judge of pedigree that the stoutest racing blood in the stud books courses in his veins. With these characteristics Gold Fox has the essentials

Chatty Stock Letter from the States.

Late notable sales included 26 Angus cows, 1,200 lbs., at \$5.25; 42 Hereford steers, 1,112 lbs., \$5.90; 17 Shorthorn steers, 1,282 lbs., \$6.10; 16 Shorthorns, 1,527 lbs., \$6.40; 15 export stags, 1,752 lbs., \$5.35; export bulls, 1,600 to 1,800 lbs., \$3.75 to \$4.50; slop-fed bulls, 1,612 to 1,760 lbs., \$4.25 to \$4.35; slop-fed steers, 1,100 to 1,400 lbs., \$5.50 to \$5.75; yearling steers, 600 to 1,000 lbs., \$4.75 to \$5.12½; corn-fed western sheep, 90 to 125 lbs., \$5.50 to \$6.00; shorn westerns, \$4.70 to \$4.90; lambs, \$5.75 to \$6.85. Texas sheep very scarce. Sales, \$4.75 to \$5.50. Western sheep feeders have not



GOLD FOX, THE PROPERTY OF J. D. O'NEIL, V. S., LONDON, ONT.

This is not alone for his racing powers, but also for his well-known prepotency in impressing upon his offspring what is known as quality, and which has made the Thoroughbred cross so popular. In England the value of this breeding has always been held in great estimation. Being pre-eminently a horse-loving people, with time and wealth at their disposal, horse exercise has always been in high repute, and, therefore, the best class of horses for saddle and harness has been in demand for generations, each class of the so called light-legged horses being improved by a dash of this blood, to give them bottom and style.

Gold Fox, the subject of the illustration before us, is a beautiful horse; he is large, standing 16 1½ on the best of feet, particularly well set ankles, and standing squarely on all his legs, with good heavy bone below the knee, capital,

for a prime favorite, particularly among the farmers and horse breeding public in the vicinity of London, and we predict a successful career if he only receives sufficient patronage, which he decidedly deserves. He is owned by J. D. O'Neil, V. S., of this city, and the illustration, which is an admirable likeness, is from an oil painting by Mr. J. P. Hunt, of London, Ont.

A mongrel stallion is more damaging to a neighborhood than a Northwest blizzard, and the baneful influence of such a visitor lasts for years. When a man comes peddling such a nuisance into your barnyard, set the dogs on him.

Farmer's Review, Chicago, says:—"Canadian land agents are endeavoring to induce the settlers of the districts in Dakota where there was a failure of crops last year to emigrate to Canada and take lands along the line of the Canadian Pacific. They are meeting with great success in many cases."

done quite so well as they expected, but they have made money. Cattle lately sold the highest in over three years, with the exception of one sale last holiday time. Late prices for beef cattle were from \$1.00 to \$1.50 per 100 lbs. higher than a year ago. Prices for hogs are 30 cents higher for poor kinds, and \$1.10 per 100 lbs. higher for good kinds, than a year ago. The extremely heavy hogs, averaging 400 to 500 lbs., have been comparatively neglected. A good many 100 to 150-lb. pigs have lately sold at \$3.75 to \$5.00. A good many heavy sows have been marketed, and farmers are not keeping half as many breeders as last year. Cattle dealers and handlers are generally unanimous in the opinion that cattle are bound to sell higher than a year ago for some time to come. The writer recently saw some finely bred Shorthorn cattle sold at little if any more than beef prices—\$62 for cows and \$76 for bulls. Such prices would indicate that now is the time to improve the herds.

Our Scottish Letter—Clydesdales.

For some time past, all around our planet, so to speak, the welkin has been ringing with statements and theories regarding the Clydesdale and his alleged want of pith and weight, as compared with his great southern rival—the Shire. In the course of a lecture which has recently been delivered before a meeting of farmers and breeders of horses in Cupar Fife, Scotland, the following statements were made on the authority of the owners of the various horses named, and our readers will be able to judge for themselves after reading them whether the lecturer overstated or underestimated the claims of the Clydesdale to be regarded as the best draught horse in the world:—

Taking three different horses got by different sires, and of somewhat different types, the following results have been obtained: Cairnbrogie Stamp 4274, owned by Mr. John Marr, Cairnbrogie, Oldmeldrum, is familiar to many breeders as the winner of first prize three years in succession at the Highland Society's Shows. His height is 17.0½ in.; girth, in low condition, 7 ft. 6½ in.; measurement round the upper muscles of the forearm, 32 in.; round the forearm, with the lower edge square with the upper edge of the horn, 18 in.; bone below the knee at smallest part, 11½ in.; length from elbow to knee, 16 in., and from knee to fetlock joint, 11½ in.

Sirdar 4714, a successful prize horse, and now the property of the Fortmashire Clydesdale Horse Company (limited), is of somewhat different build and breeding. His height is 17.1½ in.; girth, lean, 7 ft. 10 in.; weight (at present), 19½ cwt., or 2,184 lbs.; measurement round upper muscle of forearm, 23 in.; round forearm above horn, 16½ in.; bone below knee at smallest part, 10½ in., and bone below hock, 12½ in.; length from elbow to knee, 18½ in.; from knee to fetlock joint, 12½ in.; from stifle to hock, 22 in.; from front of hock to fetlock, 13 in., and from point of hock to fetlock, 15½ in.

Sir Everard 5353, owned by Mr. William Taylor, Park Mains, Paisley, has three years in succession been awarded the Glasgow district premium at the Spring Stallion Show. His height is fully 17.1 in.; girth, in lean condition, 8 ft.; weight (in June, 1890), 20¾ cwt., or 2,324 lbs.; measurement round upper muscle of forearm, 26 in.; round knee, 17 in.; bone below the knee, smallest part, 11 in.; below the hock, 12 in.; length from centre of knee to centre of fetlock joint, 11½ in.; from stifle to bend of hock, 21½ in.; from point of hock to fetlock, 18½ in.; from top of shoulder to top of foreleg, 3 ft. 4 in., and from elbow to stifle, 3 ft. 2 in. All of these measurements were taken in the second week of March, 1891, except the weight of Sir Everard as specified above.

If we look now at the measurements of one or two well-known Shire horses, we get the following results:—

Mr. Forshaw's Bar None 2388, a much older horse than either of the three Clydesdales specified, having been foaled in 1877, is a well-known and popular sire in England. Some measurements connected with him were recently published, and from these it appears that his height is 17.1 in.; girth, 8 ft. 9 in., and measurement of bone two inches below the knee, 11½ in. From these three items it appears that he has no advantage over the Clydesdales except in

girth, and the question of condition would require to be considered before that could fairly be compared. He measures 19 in. round the knee, whereas Sir Everard, who is eight years younger, measures 17 in. at the same part.

Captain Heaton, the respected manager of the Earl of Ellesmere's stud, furnishes these measurements of Vulcan 4145, the London champion of 1889 and 1891. This horse is eight years old, and, therefore, three years older than Prince of Albion; two years older than Sir Everard; one year older than Cairnbrogie Stamp and Sirdar, and the same age as Flashwood. Vulcan's height is 17 hands; girth, 8 ft. 7 in.; weight, 20 cwt.; measurement round forearm, 20 ft. 7 in.; bone below the knee, 12 in.; length from elbow to knee, 1 ft. 7 in.; knee to centre of fetlock joint, 13 in.; stifle to hock, 1 ft. 9 in.; point of hock to fetlock joint, 1 ft. 7 in. It is a pre-eminently fair comparison to bring some of the measurements of the Clydesdale, Flashwood 3604, alongside of these figures regarding the Shire, Vulcan. He was first at the Glasgow Spring Stallion Show in the same years and months as Vulcan was first at the London Spring Show, and both are of the same age. Flashwood then stands 17 hands high and weighs 20 cwt. His girth is 8 ft.; he measures above the knee and round the forearm, level with the upper edge of the "horn," 20 in.; below the knee, 11 in.; above the hock, 21½ in.; and below the hock, 12½ in. It will thus be seen that he and Sir Everard measure 7 in. less in girth than Vulcan and 1 in. less in bone below the knee, but Sir Everard in the middle of his season last year weighed ¾ cwt. heavier than Vulcan did four weeks after his London triumph, and Flashwood weighed equal to Vulcan under almost similar conditions. Deduct the Shire horse's 7 inches greater girth, making allowance for the part that plays in increasing his weight, and it is obvious that the two Clydesdales weigh heavier in bone, muscle and sinew than he, although in these they are less bulky.

My object in bringing forward these comparisons will not, I hope, be misunderstood. It is not to furnish data whereby Clydesdale men may attack the Shires, but to enable those who are partial to the Clydesdale, but have their ears ringing with declamations as to his deficiency in size and weight to judge for themselves how much truth there is in such declamation. It is admitted that Shires are as big as the heaviest kind of draught labor calls for a horse being. It is admitted that Bar None and Vulcan are typical Shires of the heaviest class. It is proved by these figures that while these two horses surpass several of our heaviest Clydesdale horses in weight and size of body, they do not surpass them in gross weight, so that the conclusion is forced on us that in that which constitutes the true strength and power of a draught horse—bone, muscle and sinew—the Clydesdale is not inferior to any other breed, but is superior, while the absence of an overweighted carcass renders him the most active of all draught horses. But I intend to go further. I maintain that the Clydesdale of most quality, the Clydesdale that is most popular in the show ring, that is sometimes, even by those who do not admit the truth of the charge of lack of substance and weight as brought against the breed as a whole, admitted to be somewhat on the small side, may be and sometimes is possessed of more of the

material that constitutes real strength and power in draught, than horses that to the eye appear to be bigger. To illustrate this position Mr. Gilmour's Prince of Albion (6178) was taken. It has been publicly asserted, not in England, but in Scotland, as a sort of universally acknowledged truism that Prince of Albion is undersized. Here are his measurements. The reader can compare them even with Vulcan's, the London champion of the Shires (the best Shire horse I have ever seen, and one of the best draught stallions that ever entered a show ring), and judge for himself. Prince of Albion on plates—not wearing shoes—stands 16.3 in.; girth, 7 ft. 4 in.; round forearm, tape touching horn, 1 ft. 6 in.; round upper muscle of forearm, 1 ft. 11½ in.; below knee, 11½ in.; below hock, 12½ in.; length from elbow to middle of knee joint, 1 ft. 7½ in.; from knee joint to middle of fetlock joint, 11½ in.; from stifle to hock, 1 ft. 9½ in.; and from hock to fetlock, 1 ft. 2½ in. These are the measurements; how do they compare with those that have gone before? Always bear in mind what has been said about the ages of the various horses. Prince of Albion is one inch less in height than Flashwood and Vulcan, 1½ in. less than Cairnbrogie Stamp, 2 in. less than Sir Everard and Bar None, and 2½ in. less than Sirdar. In girth he is 1 ft. 5 in. less than Bar None, 1 ft. 3 in. less than Vulcan, 8 in. less than Sir Everard and Flashwood, 6 in. less than Sirdar, and 2½ in. less than Cairnbrogie Stamp. Round the upper muscle of forearm he measures 8½ in. less than Cairnbrogie Stamp, 7½ in. less than Vulcan, 2½ in. less than Sir Everard, and ½ in. more than Sirdar. In bone below the knee he measures ½ in. less than Vulcan, the same as Cairnbrogie Stamp and the aged Shire horse Bar None, ½ in. more than Flashwood and Sir Everard, and ¾ in. more than Sirdar. Below the hock he is ¼ in. better than Sirdar, ½ in. better than Sir Everard, and the same as Flashwood.

It will be seen from these figures that Prince of Albion has absolutely the greatest width of bone of all the horses with which he is compared except Vulcan, and age being considered, he surpasses him also, and that in respect of his height and other measurements, he has the best proportion of bone, muscle and sinew. Cairnbrogie Stamp has more muscle than Vulcan, and almost as much compass of bone. The other measurements may be compared at leisure. What has been said is sufficient to establish the position that has been taken up, and to prove that even on the score of size and weight, which are not the only tests of the merit and value of the draught horse, the Clydesdale can do more than hold his own against other breeds. The last position that is established by these figures from the measurements of Prince Albion ought to suggest caution in making strong statements regarding well-balanced horses. The question in regard to draught horses, as well as in regard to racing horses, is not first which horse is the biggest, but which horse is made of the best stuff; which horse will stand the strain longest. These thoroughbreds are not the biggest looking, nor are they often the biggest in reality, and the best Clydesdale is not the horse that looks biggest at home, where there is more that he may be compared with, but the horse that is seen to best advantage when compared with the best that can be brought against him. Round, porous bone to the eye appears heavier than clean, flinty, flat bone, but we have seen that the horses with the latter turn the scales to best advantage.

SCOTLAND YET.

Canadian Studs, Herds and Flocks.

MR. H. J. DAVIS' HERDS.

Mr. H. J. Davis, whose name has become familiar with those interested in Shorthorns, is farming about four miles northeast of Woodstock. He began his breeding operations in the spring of 1886, by purchasing of Mr. Arthur Johnston, Greenwood, Ont., the imported Campbell Nonpareil bull Roan Prince, and at the same time two cows, both with heifer calves at foot, one of them being Violet Arundel, by Imported Lewis Arundel; dam Violet of Greenwood; descended from the cow Lavinia, by son of Scipio. Also the cow Verbena, by 2nd Duke of Pickering; descended from Imported Verbena, by Bolton. From this beginning the present herd has been founded. The heifers sired by Roan Prince are straight and neat, and show considerable uniformity in shape, and are mostly red in color. Quite a number of good grades are also kept. The whole have comfortable quarters, and are kept in good growing condition. The proprietor is now shaping things for breeding more extensively, or making sales as occasions offer. The bull at present at head of the herd is Imported Invincible, bred at Kinnellar. He is by the Sittyton bull Vermont, and is of Mr. Campbell's Jessamine tribe. This is a large, useful bull, and we understand he has been quite a successful sire in the herds in which he has been used. Mr. Davis is a strong believer in Berkshire swine, and always has a goodly number on hand. In a recent sale to the Ottawa Experimental Farm they obtained from him a superior imported sow, which had been quite a prize-winner.

AYRSHIRES AT MEADOWSIDE.

One of the oldest and largest Ayrshire herds in Ontario is that owned by Mr. Jos. Yuill, Carleton Place, Ont. For thorough, practical management every detail is quite in keeping with the modern requirements of a first-class dairy herd. Situated in a part of the country that has all the requisites in the shape of pasture and water, and where abundance of hay, roots and corn fodder can be cheaply produced for winter feed, with buildings up to the times for convenience and comfort, it is not surprising to find that a high degree of excellence has been attained.

The barns, of which there are two, are large, with ample room for storage, and with stone basements underneath. The principal stock barn has windmill shafting and necessary attachments for cutting feed and grinding grain, also for pumping water.

The herd was commenced as early as 1868 by the purchase of a bull and heifer, both of which were bred from the importations of Mr. Jas. Logan, Montreal, at an early date. The first heifer, Morning Star, proving a wonderfully successful breeder, the birth of seven heifers in the herd being placed to her credit; these with four bulls she produced for her owner shows more than a usual prolificacy. From time to time fresh blood has been selected until at present the herd numbers something over sixty head, the uniformity of type showing that their proprietor has taken a model of high order and followed it closely, particular attention having been paid to good heads, the wedge-shaped body, large udders and shapely teats, all of which are indispensable, the proprietor attesting that the herd has steadily improved in

milk and butter production through the careful selection that he has practised.

The system followed in the herd is to give attention first to breeding and rearing the calves, and secondly to butter-making, thus the bull calves are allowed a liberal supply of whole milk, in order to obtain early development for sale, the heifer calves being gradually restricted until all skimmed milk is fed. In both cases the whole milk is fed with the pail fresh from the cow, the stripping or last half of the milk being reserved for the dairy. The deep-setting plan having been in use for a length of time, the skim-milk is always sweet and palatable, and as Mrs. Yuill has obtained a happy notoriety for a first-class article of butter, which sells at the highest price, the herd has thus proved a most lucrative investment. Several young bulls of good quality are still on hand.

MR. S. COXWORTH'S BERKSHIRES.

Close to the village of Claremont, and but a short distance from the station of the same name on the C. P. R., is the farm of Mr. S. Coxworth, the well-known Berkshire breeder. At the time of our visit Mr. Coxworth was himself absent from home, but we spent an hour or two very pleasantly looking over his herd of black beauties, under the guidance of his herdsman, to whom great credit is due for the capital condition in which the stock has come through the winter. The two stock boars now in use are Prince Albion and Royal Standard. The first of these, Prince Albion, bred by Mr. Alex. Cameron, Ashburn, Ont., is a very large, heavy-boned pig, with a capital coat of hair, and showing every indication of a strong, vigorous constitution. The second, Royal Standard, was imported by Mr. J. C. Snell, from whom Mr. Coxworth bought him a short time since, farrowed in September; he is now six months old, and is one of the most promising pigs of his age we have ever seen. Indeed, should he continue to do as well as he has done so far, he should give a good account of himself next fall in the show ring, and Mr. Coxworth is to be congratulated on securing so choice a boar to head his herd. Among the older sows we were very favorably impressed with the imported sow Lady Shaftesbury 3rd, purchased last fall from Mr. G. Green, of Fairview, who paid no less than \$125.00 for her dam. Another very useful looking sow was Lady Bright, bred by Messrs. J. G. Snell & Bro. This is a very large, strong-boned sow, weighing when in show shape 650 lbs. At the time of our visit she was suckling a very promising looking litter, two weeks old, among them being a really beautiful boar. A nicely marked, smooth, even sow is Lady Moulford, a well-known prize-winner at local shows, while, to our mind, perhaps the choicest female in the herd is Model Duchess, a grand yearling sow, bred by Mr. Geo. Green from imported sire and dam. This sow, we understand, Mr. Coxworth intends exhibiting next fall, and we venture to predict that she will be heard of more than once again. Among the young things were three very nice sows out of imported Lady Shaftesbury 3rd, one of these being an extra good one—very lengthy, with good hams, nice, level back and well sprung rib.

Besides his Berkshires, Mr. Coxworth has laid the foundation of a flock of Cotswolds by the purchase of four pure-bred ewes, two very choice ones being from the flock of Mr. Jos. Ward, Marsh Hill, Ont., and two more from Messrs. Douglas & Son, of Columbus, Ont. Mr. Coxworth's advertisement will be found in our columns, and we can recommend him to parties needing good registered stock at reasonable figures.

The Most Economical and Healthful System of Feeding Farm Horses.

BY THOS. M'MILLAN, CONSTANCE.

In view of the fact that this province has become noted for the high standard of its draught horses, and knowing that our climate is well adapted to the raising of such animals, it is our duty to enquire, and endeavor to find out the most economical system of feeding, always bearing in mind that no system can be ranked as economical which does not ensure the health, and build up and maintain that hardiness of constitution required for the purpose of enduring constant work, for which horses are used. We must bear in mind that in order to gain the best results our course of feeding and management must be such as to secure a steady and continuous growth until the animal reaches maturity. In order to do this we must know that our duty begins at the time of conception, and that any irrational treatment of the dam will be injurious to her young, because in following out a system of feeding brood mares successfully and economically it cannot be dissociated with the general management which they otherwise ought to receive. Although horses are kept for their muscle and to work, brood mares should not be overstrained, and should be fed regularly and liberally upon such food as will best provide that nourishment required for the proper growth of the colt. During the summer and fall there is no better treatment for brood mares than to turn them on a good grass field with plenty of shade and pure water. In the winter season they must have plenty of exercise, and be fed on laxative food. Now, when the time has come that there is not sufficient work on the farm in winter to keep mares in constant exercise, a good mode of feeding and treatment is as follows:—Water three times a day, and always before feeding; in the morning give 3 lbs. bruised oats mixed with 2 lbs. cut hay and straw, also 4 lbs. long hay in manger; noon, 3 lbs. bruised oats, 2 lbs. cut straw and hay, with 3 or 4 lbs. turnips, and 3 lbs. long hay; night, 3 lbs. oats (boiled) mixed with 1 lb. bran and 2 lbs. cut straw and hay, and 7 lbs. long hay in manger, or a total weight of 32 lbs. per day, costing me, at market price, about 18 cents. Along with this system of feeding, mares should be turned out in yards for exercise during part of the day, and have the freedom of a loose box at night. During the spring mares should be worked constantly up to the time of foaling, but with great care, to prevent tiring too much or overheating them. During the suckling period they should never be worked, and directly after foaling care should be taken in feeding for the first ten days, if the dam is a good milker, that the foal does not get too much milk. After the foal has become used to the mother's milk, the latter should be well fed in order to give sufficient milk to produce a strong growth in the foal, which should be suckled from four to five months. Turn her into good pasture with plenty of living water, and feed a ration of bruised oats and bran, perhaps twice a day, as scant nourishment of the foal during this period is often fatal to full development afterwards. The whole system of the young animal is plastic in the hands of the skilful feeder. Full rations of appropriate food will give it the habit of strong and rapid growth, which is easily continued after weaning; but, on the other hand, deficient nourishment will not only contract its present

growth, but also contract its powers of digestion so as to make it unable to use sufficient food to give full growth after weaning.

When the rapid growth of grass in spring is past the mares and foals should be fed in the stable morning and night, a grain and bran ration, mixed with cut hay or cut oat sheaf, and a little green corn, which should be grown for the purpose. Tie the foals in the stall along with their dams, and place food before them. They soon become quiet and docile, will readily learn to feed, and thus there is no loss of flesh in weaning, and no difficulty and annoyance in their after training.

During the first winter colts should be fed as follows:—Daily ration, 5 lbs. oats (3 being bruised and fed morning and noon, and 2 boiled and fed at night); 1 lb. bran, 4 lbs. cut straw and hay, 5 lbs. long hay, with a few roots fed at noon, making about 18 lbs. per day with the roots, and costing at market price here about 9½ cents. Keep them in loose boxes, and, except in very stormy weather, have them out in yards the most of the day, as they require lots of exercise. A good and cheap food can also be given by substituting skim-milk, warmed with hot water, in place of some cold water. When spring comes they should be turned to grass, and fed a grain ration twice a day for the first season. They should also be well fed during the following winter, as yearling horses require much nourishment to supply the wants of their growing system, always bearing in mind that they need most of the day for exercise during winter. In the rearing of young horses it will be found that if they are well fed till they are two years of age they will get fat upon good grass the third summer.

Working animals, which are constantly employed during the day, should be confined to the stable at night. Of course, with these as with all other animals, judgment must always be used, and the amount of concentrated food should depend upon the nature of the animal and the manner in which they are worked, but bruised oats, mixed with cut hay and straw fed dry, with a few roots and long hay, with an occasional bran mash should be the principal food during the winter. When the grass has become sufficiently long in spring it should supply the place of hay, as it will add greatly to the health and appetite of the animals. After the grass has become dry, green corn should, on account of its health and cheapness, constitute a valuable food during late summer and autumn. The principal grain food in the rearing of horses should be oats and wheat bran, as they contain as great a proportion of muscle-forming material as any grains, and from their nature are easily digested, not being so liable to clog in the stomach, and thus preventing the gastric juice from passing freely through it and acting on every part at once. In a state of nature the horse is nourished upon the grasses, and it must have a proportion of its food (at least one-half in bulk) of a fibrous nature. These are the reasons why grain should not be fed alone, as the cut hay and straw are thoroughly mixed among it, and thus prevent clogging, and render the ration as near as possible the bulk and proportion of nature's allowance. The food should be given dry, in order to undergo thorough mastication before entering the stomach, experience having proved that animals fed constantly upon damp food frequently form

the habit of bolting it before chewing sufficiently, which cannot be done unless the food is damped to a certain extent. Barley and peas should never be fed to young and growing horses, nor to any horses, excepting when at very hard work, and then only in small quantities, as, owing to their mealy and heating nature, there is always a tendency to induce colic complaints and throw the system out of condition, through the swelling of limbs, clogging of veins, and similar ailments to which the horse is subject, thus rendering him valueless out of the hands of the owner, which is altogether too much risk considering the slight difference of increase a full oat ration might cost.

In the system of feeding horses, as in the feeding of all animals, it must always be borne in mind that although a liberal system may do a great deal, yet much depends upon the disposition of the caretaker, and the treatment which the animal receives at his hands. The colt should be handled almost daily. Care should be taken to avoid frightening it. It should be taught to regard man as its greatest friend from whom it may always expect a pleasant caress or something palatable to eat. This is not only important with reference to its future temper and usefulness, but vastly important to its rapid growth. We often hear of different results from the same food upon animals of the same age and class, but experience has proven that this is caused as often through the feeder as the animal. If, then, the colt raiser and horse feeder desires to produce the best results from the least food, he must accompany the food with kindness.

The Progress of Holstein Cattle in America.

BY R. S. STEVENSON, ANCASTER.

The remote origin of the Holstein race of cattle affords a theme for unlimited speculation. According to the best authorities all that seems to be certainly known is that for an indefinite period, before the records of history, there existed in North Holland and Friesland a superior race of cattle. There were a few of this breed imported to America as far back as 1625; but as they were not kept pure they soon became extinct by crossing them with the common cattle of this country. In 1861 an importation of five head, consisting of one bull and four cows, was made. This was the foundation of the breed in this country. They made very slow progress for the first twenty years after their first introduction; but as their merits became known the demand for them increased. In 1881 there were 2,782 registered Holsteins in America, and up to the present time there have been registered 41,034, viz., 24,241 cows and 16,793 bulls, a wonderful growth in ten years. They are scattered over this continent from ocean to ocean, and are giving the best satisfaction wherever they have been introduced. Without disparaging other breeds, it must be admitted that the Holstein has won its way to popular favor in a remarkably short period of time. It has done this in the face of stronger prejudice, and more severe criticism than any other breed ever had to contend with. It would not have been possible for it to have done this without possessing peculiar qualities answering to a wide demand.

I will now endeavor to place before you some of the reasons why this breed has become so

prominent during the last ten years. Foremost among those is its adaptation to more than one purpose. Although theorists may condemn the general purpose cow, the fact remains just the same—that the great mass of farmers of this country to-day are demanding just such an animal. It does not pay ordinary farmers to raise cattle for beef alone, nor does it pay to raise them for milk and butter alone. They want milk, butter and beef in one animal. The Holstein-Friesian is just such a breed; it is the dairy and beef breed, the dairy qualities leading. The enormous amount of testimony that is available to prove the unrivalled excellence of the Holstein for general dairy purposes is almost overwhelming. I shall refer you to the pages of the Advanced Registry, where you will find the well-authenticated milk and butter records of 908 cows. I will also make special mention of the astonishing butter record of 963 lbs. in 9 months made by Pauline Paul, and 223 lbs. in 60 days, and 320 lbs. in 90 days, made by Clothilde II. I would also call your attention to the 83 cows in the Lakeside herd that have averaged 20 lbs. of butter in 7 days, and 27 head in the smaller herd of Mr. Thos. B. Wales that have averaged over 20 lbs. in seven days. This, I think, shows that it is not only individual cows that are capable of producing large quantities of butter, but large numbers of cows in single herds. I will also remind you that for the last four or five years nearly every premium offered for public competition in milk and butter tests has been won by Holstein-Friesian cows. Another characteristic that has brought these cattle into prominence is their heredity, for, as the Hollander has been persistently breeding these cattle for centuries for general dairy purposes, so behind every well-bred Holstein there is a long line of deep-milking ancestors; and so prepotent is the breed that when the bulls are crossed with other cattle the offspring is nearly always black and white, and the grade heifers from well-bred bulls are practically as good dairy animals as the pure-breds. The constitutional vigor of this breed has had much to do with its success. Dairy men require vigorous cattle, as they can be fattened with comparative ease should anything occur to impair their usefulness in the dairy. It is not surprising, in the face of these well-known characteristics of this breed, that the general farmer has taken kindly to it. Their size and docility commend them to every man who is any judge of stock. Farmers, without exception, like that which has size. There is something tangible in cows weighing from 1,200 lbs. up to 1,800, and even more, that will give a pail of good rich milk twice a day and produce a calf modelled after herself every year. There is something forthcoming in that kind of an animal; in other words, there is money in them. Without attempting to prove that they stand equal to the special beef breeds as beef producers, I do claim that on account of their size and the way they will take on flesh when dry they are of greater value for the butcher than any other dairy breed; and, as they are surpassed by no other breed in general points of usefulness, I honestly think they are the most profitable for the general farmers of this country.

The Australian high-jumping horse record is now six feet six and one-half inches, Spoudulix having jumped that height at the Royal Agricultural Show in Melbourne.

A Holstein-Friesian Herd Book for Canada.

At a meeting of Holstein-Friesian breeders held in Stratford, February 18th, 1891, the advisability of starting a Canadian Herd Book was fully discussed, and the meeting was almost unanimous in favor of establishing a Herd Book. At a subsequent meeting at Guelph, it was decided to establish it, and steps were taken to make all arrangements complete and put it on a firm and substantial basis.

Some of the reasons for establishing a Canadian Herd Book were that of paying exorbitant fees for registration to the Americans, with the prospect of paying still higher in the near future, and never receiving anything in return, except the certificates of registry and transfers.

In order that all Canadian breeders might join our Association the entrance fee was fixed at a low rate of \$5, and an annual fee of \$1 afterwards. Most of the largest, most successful and most influential breeders have already joined, and there are more than sixty names already on our books, and within a few months we expect to have the number reach up into the hundreds, so that there is no doubt it can be conducted successfully. As an Association we would, therefore, ask all persons interested in the success of this breed to join at once, and help us place these noble cattle in the front ranks. The Secretary is now ready to register, transfer, or reregister all animals. The cost of reregistering animals that have been registered in the American Herd Book is only twenty-five cents each, and in order to do so it is necessary to have the American certificate of registry sent to the Secretary, and then he will return with it the Canadian certificate of registry to the owner of the cattle.

RULES FOR MEMBERSHIP.

Any person of good character interested in the breeding of Holstein-Friesian cattle, and the owner of such, may apply for membership in this Association by filing an application in such form as the Executive Committee may prescribe with the Secretary, with the membership fee.

Every application for membership shall be submitted to the Executive Committee, and if in their judgment the applicant is eligible for membership, and ought to be admitted as a member of the Association, and a two-thirds majority vote of the Executive Committee present to that effect is passed, his name shall be entered on the records as a member, and the Secretary shall issue a certificate of membership.

HERD BOOK.

Sec. 1.—This Association shall publish the Holstein-Friesian Herd Book at intervals of not less than one year.

Sec. 2.—Each volume of the H. F. Herd Book shall contain the Constitution and By-laws, and a list of members of the Association, and any other matters of general interest.

Sec. 4.—Thoroughbred Holstein-Friesian shall be held to mean and refer only to those large, improved black and white cattle already registered in the Holstein Dutch-Friesian or Holstein-Friesian Herd Books, and such as are descended from them in direct line, both as to sire and dam and such ported animals as are registered in the Netherland, Friesian, or North Holland Herd Books.

Sec. 5.—American bred animals shall only be registered in the Herd Book upon application made upon or following the form furnished by the Association and the payment of a fee of 75 cents by members of the Association and \$1.50 by persons not members, for the registry of each animal, which must accompany the application.

Sec. 8.—Animals imported from the United States shall be charged \$5 each for females and \$15 for males, and be subject to inspection by the Inspector.

Sec. 10.—A register or transfer of ownership of any animal registered in the Herd Book will be made on application of the owner and payment of 50 cents. A certificate of such transfer shall be made by the Secretary and sent to the owner of the animal.

Sec. 11.—No application for registry or transfer will receive attention unless accompanied with the required fee.

All animals born after January 1st, 1890, are now eligible for registration and will be until July 1st, 1891, and will be charged the regular fee for under one year old. After that those over twelve months old will be charged according as the constitution directs.

Officers for the current year:—A. C. Hallman, President; H. Bollert, 1st Vice-President; R. S. Stevenson, 2nd Vice-President; M. Felan, 3rd Vice-President; A. Kennedy, 4th Vice-President; Di-

rectors, McCaugherty, Breckon, Wm. Subring and Wm. Shunk; Secretary-Treasurer, D. E. Smith; Auditors, W. B. Smith and Wm. Shunk.

Fees—Charge for registration to members, 75c. for each animal. To non-members, \$1.50 for each animal. Transfers, 50c. for each animal.

Membership fee—\$5 for entrance, and \$1 each year after.

Reregistration, that is all animals that have been registered in the American Herd Book, will receive a Canadian Certificate of Registry for 25c. each animal, and will be recorded in the Holstein-Friesian Herd Book of Canada.

All communications should be addressed to

D. E. SMITH,
Recording and Corresponding Sec'y.,
Churchville (Peel Co.),
Ontario.

The General Purpose Cow.

BY D. E. SMITH.

In your last issue appears a letter by Mr. S. Nicholson, who makes some remarks about Holstein cattle, that calls for correction. He begins by championing the rights of the "submerged farmer", as he calls him, but soon reveals the true object of his letter by the animus he displays in speaking of Holstein cattle. We believe the Shorthorns are a good breed of cattle, and have never had to build up a reputation for the Holsteins by either putting down other breeds or making false statements about them; all we ask is fair play and an open field. Let us compare the sales of these breeds, and this may aid us to find where the shoe so severely pinches Mr. N. In the Dominion Shorthorn Breeders' report for 1890 we find 3,166 registrations, and 350 changes of ownership. In the American Holstein Breeders' report for 1890 we find 7,293 registrations, and 6,027 changes of ownership. Most Canadian cattle of these two breeds are registered in these herd books, and we make the comparison wishing your readers to consider that this is in favor of the Holstein, and make due allowance for it. The registrations were a little over two to one in favor of the Holstein, and the changes of ownership or sales over seventeen to one. Now, we claim that these sales of seventeen to one in favor of the Holsteins is the open sore that pains Mr. N. and inflames his mind. Mr. N. makes some pretty strong assertions, but is very weak in giving proofs, in fact his object seems to have been to tar the Holsteins with false assertions and insinuations.

The first objection he raises is that they are no good for beef, and then his wisdom tells us how he finds it out: 1. they were not at our fat stock shows. 2. "I have lately been in three or four barnyards where for two or three years Holstein bulls have been used." We do not think your many intelligent readers will condemn a breed on such meagre evidence. Yet on these he condemns the breed. For sake of argument we will discuss the question. In 1887 the Holstein cow Zaneta (8355 H. H. B.) took first prize in the New York State Fair, as the best fat cow over three years of age, large competition and open to all breeds. At the Michigan Agricultural College steers of the different breeds were fed, to find out which was the most profitable, and in their bulletin we find that the Holstein steer required 7.17 lbs. of grain and hay to gain a pound, whereas the Shorthorns required 10.15 lbs. of same feed to gain a pound. This simply proves that in an actual test by unprejudiced persons the Holstein gained 100 pounds on 717 lbs. of grain and hay, and the Shorthorn required 1,015, that is, the Holstein saved 298 lbs. of food in gaining 100 lbs. This test also showed that of all the breeds the Holstein was the most economical feeder.

The Holstein calf, Ohio Champion, weighed 1,070 lbs. at a few days over 9 months; Spot weighed 1,450 lbs. at 22½ months, and another heifer weighed 850 at 8½ months of age. This was their weight at the Chicago Fat Stock Show. This means early maturity. Mr. Waddell, after thirty-five years experience with all breeds, said that the Ohio Champion was the best feeder he ever owned. Of the twenty-seven head slaughtered in 1888 at the Chicago Fat Stock Show only three had hindquarters heavier than the fore ones, and two of these were Holsteins, and only two Holsteins were slaughtered that year. Thus for beef they show quality, quantity, economy of feed, early maturity, and well-developed hindquarters.

They are good for milk, Mr. N. to the contrary notwithstanding. Holland, the home of the Holsteins, is the greatest dairy country in world for its size. In 1884 she sent 28½ million dollars worth of dairy products to England, the home of the Shorthorns, thus sending there the most of any country in the world. Holland is only one-fourth the size of Ontario. In 1883 Holsteins laid the corner stone of their popularity in America, when Mercedes took the Breeders' Gazette challenge shield valued at \$500, open to all breeds and the world. In this public test the Holstein cow, Mercedes, made 99 lbs. 6½ oz. of butter in thirty days. Since that the wall has gone on beautifully. We will give your readers one layer of solid stone—1889. In 1889 Holsteins took the following butter prizes, open to all breeds:—Buffalo International, 1st and 2nd prizes; Minnesota State Fair, 1st; South Dakota Fair, 1st; Chicago Fat Stock and Dairy Show, 1st and 2nd; Mississippi, 1st; Nebraska State Fair, 1st, 2nd and 3rd; Detroit Exposition, 1st, 2nd and 3rd; Michigan State Fair, 1st; Kansas State Fair, 1st; Ohio State Fair, 1st; Alabama State Fair, 1st; Georgia State Fair, 1st. We have descendants in our herd from the cows that took 1st in Buffalo International, Detroit Exposition, Ohio and Michigan State Fairs, and our own herd produced from 6,000 lbs. of milk (two-year-olds) to 14,184½ lbs. of milk in ten months, and from 13½ to 19 lbs of butter in a week. We weigh the milk of every cow and heifer in our herd, and know the amount given. Our two-year-olds give from 6,000 to 7,000 lbs. of milk in a year, three-year-olds from 7,000 to 9,000 lbs., and cows from 8,000 to 14,184½ lbs. in ten months. We might add that the greatest butter record yet made was by Pauline Paul, a Holstein cow, who made 1,153 lbs. 15½ oz. of marketable butter in a year. Mr. N. next asserts: "The hand writing is already on the wall." It does not require much observation to see that the wish is father of the thought. Some such men as Mr. N. saw in 1872 the increasing popularity of the Holsteins, and raised the "hue and cry" in order to crush out this breed. There were then only 128 registered Holsteins on the continent, but after eighteen years of crying there are 59,678. It doesn't look very much as if they had been weighed in the balance and found wanting. Go on scolding, gentlemen, but you will find it difficult to butt against the solid facts concerning this breed. Then, to sum up, we would say that this breed are large cows, weighing from 1,200 to 1,600 lbs., have strong constitutions, good economical digestive systems, adapt themselves well to the varied climate of America, are a contented breed, are large milk and butter producers, have shown themselves good for beef, their calves mature early, and are thrifty and vigorous, so that taking all things into consideration they are the best general purpose cow yet known.

Hog Feeding.

BY J. J. PAYNE.

This subject naturally divides itself into two heads: Feeding for breeding, and for fattening; and as the former is in my estimation of far greater importance, I shall speak of it first.

"Contrary as a hog" has passed into a proverb, and hog raisers, as a rule, acting upon the principle that "like cures like," the hog generally has rough treatment and usage meted out to him. This is a great mistake, for in the care and feeding of brood sows nothing pays better than gentle treatment and kindness, so that in any system of feeding this should be a marked feature. The sows should always be kept separate from the rest of the hogs. In the summer they should have a clover lot, and if this is not convenient, then the clover should be cut and thrown to them, with feeds of bran, wheat middlings, supplemented by small feeds of corn, and as soon as roots are obtainable plenty of them, and at all times plenty of pure, fresh water. In the fall great care should be taken to see that the feeding of new corn should be done very gradually; and in no case feed soft corn to brood sows, as that, or too heavy feeding of hard corn, is very apt to cause a small litter. I prefer that the corn be shelled and soaked at least twelve hours. In the winter they should have warm, clean, comfortable pens, with plenty of yard room for exercise. Cooked food should be given at least twice a day; chopped clover dampened, a plentiful supply of roots, and corn once or twice a day. The advantage of cooked food is that it enables the owner to make use of a great many odds and ends that otherwise would be wasted, to say nothing about the disputed point whether it more readily assimilates or not; but in my opinion it not only more readily assimilates, but furnishes a much larger amount of nutriment. In regard to the temperature of the cooked food, I think that it should be neither too hot nor too cold, say about milk warm.

If you do not want hungry pigs, do not let your sows get hungry, and, therefore, feed regularly and plentifully; and in order not to make them too fat, feed less corn and more roots, bran, middlings, etc. Always provide plenty of charcoal for your hogs, and especially the brood sows, to run to. They will eat it greedily, and will run to it when let out of the pen. Let them have all they want, for they are not like "Pat with the whiskey," they know when they have enough. It is an excellent preventive of disease, and gives strength and stamina to the animal.

As regards fattening hogs it depends much upon the breed. In my opinion the hog for Ontario is the one that will at eight or ten months weigh from two to three hundred pounds. A litter dropped, say in March or April, is ready for the market in October, and can then be marketed before the glut takes place, which annually comes about the holidays. Thus the feeding of these hogs would be in the warm season. Plenty of clover or other grass, early peas, and roots with old corn, saved, because you did not have to feed it out in the previous cold November and December, places your hog on the market before the cold weather sets in, and before the overstocking of it, and the new corn can be more profitably used later on to winter over and spring feed the fall litter,

which can be profitably marketed in the early spring.

Breeding and feeding have become a science. Cause and effect, have been carefully studied. The "hit or miss" plan has given way to the "business" plan, and the farmer who does not keep up with the progress of the times will be left. To the breeder is to be given the credit for the farmer's profit from the hog, and the breeder in return looks to the farmer for a part of his success. No argument should be necessary to induce the farmer to use the best stock he can purchase, and to keep on improving it. Experience has proven that it is practicable and profitable to do so. In a further article I may take occasion to discuss the merits and demerits of the favorite breeds.

The Paris District Breeders' Association.

The above Association has adopted what is a novel system to the horse breeders of the Dominion, but which is very similar to the plan in use in the best breeding districts of England and Scotland. We understand that the Association are indebted to Mr. Arch. Wilson, Paris, for formulating the rules whereby they intend to carry on their operations. Mr. Wilson is well known as a prominent buyer of first-class horses, having pursued the trade in exporting to England high class light harness, saddle horses, and hunters suitable for the English trade, for many years. He has always been considered an authority on horse breeding in all its departments, and he states that the worst drawbacks to the trade is the difficulty in finding suitable horses; and further adds that this is not caused so much by the lack of suitable brood mares as the difficulty in obtaining the proper stallions to mate with these. With a view to improving on the present system of obtaining the services of the necessary stallions, he prevailed upon a number of prominent horse breeders to form themselves into an Association whereby the best stallions of each breed could be obtained for the season of 1891. They have now got the scheme into proper working shape, with the promise of great success. It would be well that other parts of the country would watch the working of this Association through the season, as it appears that by the old haphazard system so long in use, if a good horse is brought into any locality he is often taken away for want of proper patronage, and that it is only by combined efforts of those interested the services of the best class can be obtained. At the present time, while ordinary horses are hardly saleable, all classes of good horses are bringing good prices. During the stallion show at Toronto draught geldings were being purchased for export to Glasgow, and as high as \$275 was paid. First-class carriage horses were never dearer, and there is likely to be a demand at the best prices for years. Owners of high class stallions have been complaining that through the number of cheap horses holding at low fees it is difficult to secure a living patronage. Joining together, as here stated, will soon drive the scrub horse to the wall.

The Paris Association has secured two of the best horses for the coming season, viz., Wild Harry, sweepstakes coach horse at last Industrial, and winner of both first prizes, being first offered by the Provincial Spring Stallion Show, the other the \$30 offered by the Canadian Coach Horse Society at the same show. The draught horse selected is the beautiful two-year-old Crosby Chief, winner of fourth prize in imported Clydesdale class.

We append the rules which are given on the back of entry form of the Paris District Association:—

MEMBERSHIP RULES.

1. Persons desirous of becoming annual members of the society must pay an entrance fee of 50 cents, and will be supplied with a form on which they will state the number of mares they intend to breed and what horse they intend using; or, if both, state how many for each horse, then sign the form.
2. Members will be held responsible for all mares bred to the Society's horses not in their possession at the time of collecting fees, unless they can give sufficient evidence that they are not in foal.
3. All members who enter their names on the Society's books will be held responsible for their guarantee, unless in the case of death or disablement, when notice must be given to the Secretary of the Society.
4. Members will receive notice from the Secretary two weeks before the time of collecting fees. The owner of the horse to collect all demands unless otherwise ordered by the Secretary.
5. That the Society give a guarantee of not less than eighty, and not to exceed one hundred, mares, for insurance for each horse on terms not to exceed fifteen dollars, and that a meeting of members of the Society be held on the 27th February to sum up the entries and appoint three of their number as a deputation to attend the stallion show at Toronto, or elsewhere, for the purpose of selecting their stallions.
6. It will be the duty of the deputation to select two horses of superior quality and breeding, registered in their respective stud books, and to receive a certificate to that effect signed by the owners of the horses.

STALLION RULES.

1. That the horse "[]" "()" has been selected by the South Dumfries and Paris District Horse Breeders' Association, and to be wholly under their control for the season 1891.
2. That this horse be at the service of the Society not later than the 17th of April till the 17th of July, or till such time as he has duly fulfilled his contract with the Society.
3. That this horse travel on the route laid out by the directors, and be within reach of all the members at least once a week.
4. That the groom be supplied with a list of members and all the necessary information as to his route, and the meeting of members outside his route.
5. That the owner of the horse pay all travelling expenses, and, when the horse has secured a regular night stand with any member of the Society, one mare to be served free, which will be included in the guarantee.
6. That the directors have power to withhold any part of the fees for any default of the groom in charge, who must act according to the orders of the directors.
7. If this horse becomes disabled through any unnecessary cause or mismanagement of the groom the owner must replace another horse of equal merit or forfeit any terms that he may have served for.
8. The groom must not on any account accept mares from non-members without the permission of the Board of Directors, as the horse is strictly held for the use of the Society.
9. In a case of extra demand for the horse it must be arranged to serve one mare for each member, and extra mares according to the number of brood mares they possess.
10. That the owner of the horse collect all fees due to him on the date he may specify, but he must at least give two weeks notice, and the directors do not hold themselves responsible for any outstanding fees.
11. Should the owner of the horse make any incorrect statement to the deputation as to pedigree, stud book, or number therein; or, if the horse should be suffering from any contagious disease, to the owner's knowledge, the directors will have power to cause the horse to discontinue his route, and the owner shall forfeit any claim he may have on the Society.
12. That the directors have all the power of settling disputes.

The first question asked, from a subscriber to the *ADVOCATE*, Toronto, was:—"Is the White Plymouth Rock equal to the barred variety, and what do the breeders claim for it?" Not having bred them myself, I went to the trouble of interviewing some of the leading breeders of that useful variety of fowls. They claim all the good points of the barred variety and earlier maturity in the white; better layers if anything; in fact, a decided improvement all round. Another question I have been often asked, "Should the ring (white) on a Rouen drake's neck go completely round the neck?" The American Standard of Excellence says the neck should be long, slender and neatly curved, and in color rich, lustrous green, with a distinct white ring on the lower part, not quite meeting at the back; the breast broad and deep; beautiful claret color, extending as far as possible towards the legs; bill long, broad, and greenish-yellow in color, without any other shade except the black bean at the tip.

Leicester Sheep.

The British Islands, that have given to the present civilized world so many different breeds of meat producing animals, have through centuries past developed the different races suited to the localities in which they were bred. Before the era of quicker locomotion very few men ever left home for a day and a night, and when we remember that it was not until the middle of last century that road-making was first enquired into, and not much more over a century ago that the first turnpike roads were built in England and Scotland, and the first decade of the present century was past before the coachsystem of travelling was inaugurated, therefore the introduction of any new breed of farm animals must of necessity have been slow. At that time there was very little interchange of thought or knowledge of what was going on in the world beyond a certain district. It is, therefore, not surprising that an animal such as the sheep, that is comparatively difficult to transport for any distance, should partake of the character suitable to the soil and surroundings of the country in which they have been bred for so many generations. To Bakewell the flockmasters of the British breeds are indebted, not only to the improvement that has been made on Leicesters, but in the system of ram letting, which has become general in all breeds of British sheep. The marked advantage a master breeder such as Bakewell gained through letting instead of selling, after he had established his own flock, is easily seen, for by this means a ram that turned out a superior breeder was not lost to the flock in which he was produced, his breeder having control of him, and thus obtaining his services when afterwards required. The difficulty which this plan first met is illustrated in the fact that the first Dishley ram was let in 1760 for sixteen shillings for the season, while thirty years later three hundred guineas were received for one ram, and six thousand two hundred guineas for the ram lettings of that year.

The improvement which has been made upon the Leicesters very soon had an effect on the other breeds, and doubtless several of the other sorts have been improved by an admixture of this breeding.

Although the old Dishley Leicester was first to feel the improvement that had gone through all lines of farm yard stock, breeders of late have not been breeding them after their former character, and have branched off on other lines perhaps more suitable for the requirements of the present age. The improved Leicester still occupies a large extent of the most fertile districts of England, and it is also bred in Scotland with equal care and success. It is, of course, in both countries principally confined to the Lowlands or land of pretty good quality. The following account of the modes of management in Roxburghshire on the Teviot and Tweed, may be taken as a fair sample of the system adopted in the several districts in either country, and a good sample, as regards long-woolled sheep in less improved localities:—

“On nearly all farms of any considerable extent what is called a breeding stock of these sheep is kept, and the system pursued is generally the following: From the ewes three successive crops of lambs are taken, the dams being sold off at the close of their third breeding season, or when four and a-half years old. In

general, the whole produce of these ewes is retained upon the farm on which they are bred, a proportion of the ewe lambs when gimmers (or shearlings as we call them in Canada) coming in to take the place of the old ewes sold each year, the wether lambs again are disposed of as fat, many of them immediately after being shorn the first time, and the remainder after being fed on turnips, in the winter or spring of the second year. Not unfrequently, however, upon farms where not as large proportion of turnips can be raised, the whole of the wether lambs, and sometimes part of the ewe lambs, are disposed of at weaning time, and those ewe lambs kept beyond the number required to maintain the complement of the year, are sold when shearlings, generally at about eighteen months old.”

The system here detailed prevails with little difference throughout the midland districts of England, modified, of course, by the fact as to whether pasture or arable land is most abundant on a particular farm. The fault that has been found with the English Leicester is that they are not as prolific as some of the other improved breeds, this quality no doubt being overlooked by Bakewell and his followers of that date. From this or other faults they have not been as freely imported of late, while an offshoot known as the Border Leicester is now being more frequently met in Canada, and it is with this kind we are best acquainted. It is claimed that the Border Leicester originated with a cross of the English Bakewell or Dishley sheep, with the Cheviot, and from the appearance and character of these sheep, it is quite probable that such is the case. Others claim that Lincoln blood was infused. However that may be, the Border Leicester is now a distinct sort, having special characteristics of its own, and has been growing much in favor in Canada, and certain votaries of this sort can claim that this breed do not degenerate after a sojourn on this side of the Atlantic. We question if any sort of improved farm stock can stand up with and keep their place any better than this breed of sheep without having recourse to frequent importation of fresh blood. The special points of the breed are: Head well set on, long; broad between eyes, but not up on the crown; not too heavy behind the ears; muzzle open and black; hair on face and legs white and hard, but not so wiry as in the Cheviot, extending well back behind the ears; ears not too large nor drooping; white inside and out; black spots appear sometimes with age; the belly comparatively light, said to carry little offal, giving a leggy appearance when without wool; the wool soft and long, and in little locks; not too open coated. In Canada they have been bred in moderately small flocks, and by the most careful and intelligent class of breeders, and in their hands they have been brought to such perfection that for many years it would be extremely difficult for imported Border Leicesters to obtain a prize at any of our leading shows, when the best Ontario flocks were properly represented. This is partly to be accounted for by the high condition that they are brought out in, and the great care displayed in fitting them for show. Border Leicester rams are used for crossing for getting lambs for the summer trade, there being a great demand for lambs at this time of the year for the eastern markets. This cross also greatly improves the feeding qualities of the ordinary flocks, and is quite popular for this purpose in Canada.

The Yorkshire Longwool, that were at one time the most extensively imported and bred, are to be found in different sections of the country; and although they were crossed with both Lincolns and Cotswolds by a good many Canadian breeders, in order to obtain a heavier fleece, still they are to be found of much the same character that they were twenty-five years ago. Several small but select flocks of them are to be found in the county of Kent, where they have been bred for twenty-five years without having any new infusion of foreign blood, and they still retain plenty of size and vigor.

Queen vs. William D. Richardson.

To H. Wade Secretary of the Clydesdale Association of Canada, Toronto:—

DEAR SIR,—We beg to return you herewith the form of pedigree signed by William D. Richardson, and to advise you that in accordance with your instructions we caused information to be laid against William D. Richardson, of Vandorf, in this county, before Justice Wingfield, for the breach of the Agriculture and Arts Act of the Revised Statutes of Ontario, Chapter 39, Section 85, which provides that “any person who wilfully signs any false pedigree intended for registration in any Herd, Flock or Stud Book, or who presents to the Secretary or other officer having charge of the register, for the purpose of having the same entered therein, any false or spurious pedigree, knowing the same to be false or spurious, shall, upon summary conviction thereof before any Justice of the Peace, be liable to a penalty of not more than \$100, and not less than \$25 for each pedigree so signed or presented by him.” The defendant was duly summoned and appeared for trial before Justice Wingfield on the 15th ult. The defendant gave evidence on his own behalf, setting out that this was the first pedigree he had ever given; that a man called F. M. Tuckett applied to him on purchasing the mare Gip to sign this paper; that he (Richardson) explained to Mr. Tuckett that he was not the breeder of the animal, as he understood it, but that Tuckett said it would make no difference; that the names of the second, third and fourth sires were not in the form of the pedigree when the same was signed by him, and that the second sire was named therein as Glenochie. The whole drift of the evidence of the defendant went to show that Tuckett had changed the name of the second sire from Glenochie to Gleniffer, and had inserted the names of the third and fourth sires, Victor II. and Bay Wallace, after the defendant, Richardson, had signed the pedigree.

With reference to the statement that he was the breeder, the defendant had more difficulty in explaining; but he said that he had signed this statement upon the representation of Tuckett that it was all right. The defendant also swore that he did not know for what purpose this pedigree signed by him was to be used, and that he understood from Tuckett that it was to be used by Tuckett either in the United States on selling the animal, or possibly for registration of animal with two crosses.

After argument of counsel for the prosecutor and defendant, the Justice gave judgment finding the defendant guilty, but suspended sentence meanwhile, but required the defendant to pay costs forthwith.

The Justice was evidently impressed, as we certainly were, with the view that Tuckett was the man chiefly blameable, and the defendant, being somewhat of an innocent character, had been induced to sign this paper which has occasioned all the trouble.

Yours truly,

(Signed) C. HOLMAN & Co., Barristers.

[It has not been in our province to chronicle the evil doings of our stockmen, but this is just as imperative as the history of the great benefit they are conferring on the country at large.—ED.]

Want of success in farming generally comes through careless treatment of live stock. Neglect of stock and neglect to shun partizanship in politics have ruined thousands of farmers.

How Shorthorns Were Mated.

BY WILLIAM LINTON, AURORA, ONT.

[Read before the Shorthorn Breeders' Association.]

It is said that the elder Maynard, of Eryholme, the father of Messrs. J. C. and A. L. Maynard, with the Collings, and a few cotemporary breeders, gathered together the materials of a superior breed found at their doors, and combined them with a definite object of improvement. Before their time Shorthorns as a distinct breed could scarcely be said to exist. That colors and markings indicated, to say the least, great breadth of taste and freedom of practice we learn conclusively both from general descriptions of the breed and from the notes preserved of the peculiarities of single animals. For instance, Jacob Smith's bull (608) was yellow-red, with white face, white back, and white legs to the knees. Dalton Duke (188) was brindled, indicating black blood; Mr. Hill's red bull (31C), by Dalton Duke's brother, was the sire of Mr. Richard Barker's bull (52) which had a black nose; Mr. Richard Barker's bull was the sire of Mr. Charles Colling's dark-faced Foljambe (263), the sire of both parents of Favorite (252). Favorite himself had dark bronze horns. Thus we learn what all our Shorthorns of the present day trace to, for it is admitted by all that there are no Shorthorns living that do not trace to Favorite (252), and yet there are a number of breeders of Shorthorns at the present day who pretend to despise Favorite and the blood coming through him. Mr. Warfield says it is a mighty fine thing to trace to the favorite cow of a Colling, a Booth, or a Townley, but it is a very hollow mockery if the line runs through a slab-sided, raw-boned, hollow-chested dam and grand-dam. I would rather have a little more personal merit and a little less tradition in my family. Give me a calf with the six animals of the two preceding generations all of high class, and I will take her before I would one with a mean dam and grand-dam and fourteen crosses of Favorite in her pedigree. The early breeders seem to have had no fear of any disease in any shape whatever, for they interbred their cattle generation after generation, and much the same practice is carried on yet in line breeding. Is there any wonder that tuberculosis is becoming prevalent in many herds. Would that our breeders of the present day had the genius and knowledge of a Colling, a Booth, or a Bates—a perfect knowledge of how to breed the sires and dams without a loss to the vital forces and harmony of the outward features. Mr. Hedley, an authority on Shorthorns, has told us with regard to the elder Mr. Booth and Mr. Bates' herds, that the success of those two splendid herds may be attributed to three causes: 1st. the wonderful powers for recognizing strength and beauty in animal structures, possessed by the owners; 2nd. The long time these powers were exercised on two herds, and in one direction; and 3rd. Close crossing, which, as far as we can gather, was practiced upon both. To stamp a type, nothing is so potential as a consanguineous cross. It cannot be neutralized or eliminated in a short time, and Messrs. Booth and Bates were the kind of men who knew when to do it, namely, at the period when their herds had attained that perfection of form and vigor of constitution desired. If all the branches of those two noble families of cattle had sprung from two or three roots, distinctive peculiarities of strength and beauty

could not have been long sustained, for although they now come under the designation of two great names, they are derived from various sources, all drawn in and wisely engrafted by the powers that then presided. Nothing is so fatal to a herd as a succession of very close crossing. Nothing is so difficult to manage as wide crossing. Strong males have an affinity for weak females, and *vice versa*. When the animals are running at large the strong males kill the weak ones off, and thus through all time preserve the vigor of the race. In like manner Messrs. Booth and Bates did for a short time for Shorthorns. They studied nature, and as it were adopted one of her laws. These men produced strength and symmetry in their cattle, because they had the organs of individuality, form, and color well developed in their heads. They also had love of animals in their hearts, and many of the faculties which actuated a Potter or a Landseer to place those subjects on canvas. What Sir Edwin did by his brush, Messrs. Booth and Bates did through the living agencies of the animals themselves. Given a beautiful horse or cow, Sir Edwin could place it on canvas in form and color as he saw it. Given a selection of males and females, Messrs. Booth and Bates could put them together so as to produce similar or improved forms in the progeny. This is the faculty required in a first-class breeder of Shorthorns, and, therefore, I cannot too strongly impress upon you the danger of practicing such a difficult art without being possessed of some of the special qualifications for it.

Are the Holstein-Friesians a General Purpose Breed?

BY H. BOLLERT, CASSEL.

This question can be best decided by investigating the desirable points in the make-up of a general purpose animal, and the desirability of such an animal for the general farmer and dairyman. The desirable points are: That she be an early maturer, of good size, that she converts her food to the best advantage for the production of milk and butter, and, when necessary, that she has the capacity of producing beef at a profit. I hold that the breed which combines these points to the highest degree is the most desirable for the general farmer. For illustration take the horse, one of our most useful animals. The thoroughbred and trotter are special purpose animals, they have their desirable points, and have their sphere to fill (which, by the way, is a limited one), but to the great mass of men who require horses for general work they are utterly useless. The draught horse, also a special purpose animal, is of more usefulness, but still is not what is most desirable for the general farmer. The horse which best fills the bill is the one which is heavy enough to draw the cultivator and the plough, and yet is active enough while taking his owner to town, to go from six to seven miles an hour—in other words, the general purpose horse. The same with the cow. The cow which to the highest degree combines the qualities of producing milk, butter and beef is the most profitable. The breeding of superior dairy stock is much more difficult than the breeding of beef cattle; no matter how skilful a breeder is, and how well he has laid his plans and selected his foundation stock, he will yet find that he will occasionally produce animals which are not up to the standard as profitable dairy cows. He will have to feed her three years before he

definitely knows what she is. If she proves a failure for the dairy and is of good size and frame, so that he can profitably feed her for beef, she must be certainly of more profit to him than if she were only a small size and frame, or a special purpose animal which he would have to give away almost for nothing. While the careful breeder experiences these failures, how much oftener must they occur to the less careful breeder, and how much more necessary will he find it to weed out these unprofitable misses. It is through this rigid weeding out system that the careful Hollander has produced the greatest of all dairy and general purpose breeds—the Holstein-Friesian. Yes, the Holstein-Friesian is truly a general purpose cow. She is also a special purpose cow; for as a profitable milk producer she stands unrivalled and alone, and for the dairymen who sell their milk in cities or deliver it to cheese factories, she is simply unequalled. A large book could be filled with records from individual cows and entire herds, ranging from 12,000 to 30,000 lbs. of milk in a year. These figures must seem incredulous to the dairyman who keeps the ordinary cow, which only yields from 3,000 to 4,000 lbs. per year, but they are, nevertheless, true and undeniable facts. Again, for the butter-maker she is a special purpose cow, for the better strains of Holsteins have no superiors, if equals, as butter producers of the finest quality and texture. There are as many, if not more, cows of this breed in America that have made 20 lbs. or more per week than all other breeds taken together. They are the champions of the world, holding the greatest 30, 60 and 90 days, also the greatest yearly records. The great Paulena Paul with her 963 lbs. 15½ oz. in nine months surpasses the greatest yearly record ever made by any cow of any breed by over 18 lbs. As a beef producer of fine quality the Holstein stands well to the front; her large size and early maturing quality adapts her well for the profitable production of beef. Proof of this comes from all over America, wherever they have been tried. Only the other day I was in my neighbor's barn—he is feeding some grade Holstein and grade Shorthorn steers; they were raised together, were of the same age, and had the same care and food to the present day. While there a drover came along and tried to purchase the cattle. He offered \$5 more per head for the Holsteins than the Shorthorns. They were weighed the following day and the Holstein outweighed the Shorthorn by 100 lbs. This same drover secured a three-year-old grade Holstein heifer to feed for the English market. He thinks she will exceed 1,800 lbs., and believes her the best heifer he ever fed. From California we hear that Senator L. Stanford, the great trotting horse breeder, fattened some Holstein steers for the Christmas market. Experts who viewed the animals declared that no such beef cattle were ever seen in that section. They were as fat as they could roll and dressed from 1,200 to 1,500 lbs. As to the quality of Holstein beef a fine test is reported from across the line from the State of Michigan, and from no less a judge than Wm. J. Chittenden, of the Russell House, Detroit. Writing a few weeks ago to Mr. Davenport he gave his opinion on the beef from the Michigan College as follows, the test having been independently made by his partner, Mr. McCreary, by the steward, and by himself: "We made a thorough test of the qualities of

the beef sent us by Mr. Dixon, with the following results:—Devon, first, and by all odds the best flavor; Galloway, Holstein, Hereford and Shorthorn in the order I have written. I will add that all were splendid samples of beef; I have never seen better. The steaks were all numbered and we each noted our own opinions and all agreed." From the foregoing testimony you will see that the Holstein-Friesian combines the quality of profitably producing milk, butter and beef to a greater extent than any other breed known, and is, therefore, a general purpose breed, and the most desirable breed for the general farmer and dairyman.

A Word with Mr. Nicholson.

EDITOR FARMER'S ADVOCATE.—In your April issue Mr. Stephen Nicholson, the well known Shorthorn breeder, in discussing "The General Purpose Cow," says:—

"At the Dominion Holstein meeting last winter Mr. Thompson, of the London Advertiser, told them (Holstein breeders) that if they wanted to make the breed popular they *must* boom it as a general purpose breed," etc.

Evidently friend Nicholson has misinterpreted the address which, on invitation of the Holstein-Friesian breeders, I gave at their meeting, or his memory is at fault, assuming that he read it. Had he attributed to me the words "*must breed*," it would have been nearer the mark, but I certainly did not counsel "booming." Farmers and townsmen have suffered severely from "booms," as many an investor knows to his sorrow, who in days of inflation and fictitious values parted company with his money. Furthermore, I did not proffer unasked-for suggestions as to their methods of selling cattle. I spoke to them as breeders endeavoring, as far as I understood it, to discuss the present condition with past and present tendencies of dairying in our country, and the relation of breeding thereto. Having special regard to the large areas of Ontario in which summer cheese dairying is carried on, together with what seemed to me the prospects for beef production, it appeared, without regard to breeds, that the needed cow of the hour in such districts was one that would (1st) convert her food economically into a generous flow of milk; 2nd, when the cheese factory was not running be good for at least four months profitable service in butter making; 3rd, produce male calves that could be fattened with profit. In view of the development of our beef trade, I could not in fairness, ignore that consideration, and simply asked the question if the production of such cows was a problem beyond their skill as breeders. That opinion differed was evident, for one breeder remarked that in his view steers were out of place on a dairy farm. I referred also to city and town milkmen, and those whose specialty is butter-making pure and simple, all indicating markets more or less important for dairy stock, leaving it to their intelligence to judge along which line they should specially breed. But I did not suggest nor recommend the substitution for proper and well defined methods, the fictitious uncertainties of mere "boom." In concluding the above quoted sentence, Mr. Nicholson makes the singular statement:—

"So that now it is not only the best dairy breed, but the best beefing breed as well."

This credits the Holstein breeders with the absurdity of claiming that the beef and milk producing functions had been abnormally developed in the same cattle at the same time, all of which, with other allegations, are referred to their tender mercies.

WM. THOMPSON.

Individuality.

BY WM. THOMPSON, DERWENT.

[Papers read before the Holstein-Friesian meeting held at Stratford.]

Like produces like is the foundation principle upon which the breeder must build. With the genesis of life went forth the Great Law Giver's command, "Let the earth bring forth the living creature after his kind, cattle and creeping thing and beasts of the earth after his kind; and it was so." That is the Biblical record of the origin of heredity. "Like begets like" is a remarkable law, but it has limitations which check the ambitious efforts of man. The record given in Genesis of the very successful cattle breeding experience of that crafty herdsman, Jacob, who secured for himself such liberal wages in ring-straked, speckled and spotted cattle of good, vigorous constitution, indicates that in some respects, with all our boasted knowledge and progress, we are not able to show any great advance of patriarchal methods. Holstein-Friesian cattle breeders want to invoke spiritual backing, that record is testimony to the antiquity of spotted cattle, though I do not vouch that they were black and white. Heredity is not like an axiom in geometry—invariably and absolutely certain. The breeder experiences this: he finds his efforts thwarted by that mysterious law of reversion or atavism whereby characteristics of ancestors, more or less remote, reappear in individual animals. But the great contrary force against which the breeder has to contend is variation from a particular type as a result of environment—food, treatment, or certain influences arising in the ancestral breeding of a given animal. The natural tendency is to degeneration and disorder. Left to itself the fairest garden becomes a tangled mass of weeds and sickly bloom. The controlling intelligence of man must rule. Herein is an answer to those who protest that the extra care and comfort nowadays proposed for dairy cows tends to make them "artificial" creatures. Well, is not the dairy cow as we know her now at best largely an artificial, highly developed creation of man? How will the breeder overcome these obstacles? By selection. Selection means choice, and there can be no intelligent choice without a study of individuality in order that such breeding animals be chosen as show the characteristics which the breeder wishes to perpetuate. In this step towards success nature aids the breeder by means of prepotency, that wonderful power which is defined by Warfield as "The superior influence of one parent over the other in determining the character of the offspring." The study of individuality lies, therefore, at the basis of intelligent selection, in which work the breeder calls to his aid pedigree, simply as a guarantee that the animal through his ancestry represents certain tendencies which are to be reproduced in order to the subsequent production, say of milk, or beef or both. The founders of "advanced registry" fully recognise the importance of this matter. It follows, therefore, that in the permanent interest of this or any other breed the knife of the veterinary or the butcher should be more unsparingly used. Weakly, ill-formed sires beget those characteristics though the pedigree might run back to the spotted herd of Jacob. The sale of such breeding stock is certain to injure the future fortunes of any breed. Pure-bred scrubs should be mercilessly weeded out. Be not tempted to sell them. To do so is damaging to a breeder's reputation, to the breed he handles, and an injury to the agricultural community.

The study of individuality is also important in mating animals to produce a given type, and in governing the time when young animals, especially heifers, are to be bred. Breeding animals too far short of maturity is fraught with danger. Maternity is a severe tax upon the vitality and

development of the female. Too early breeding tends to produce improperly developed frame, udders and teats, loss of vitality and a weakened constitution with pre-disposition to tuberculosis. Constitution gone, and I think you will agree, the fabric collapses both for breeding purposes and for the practical dairyman, whose only measure of a cow's value is utility. Gain may tempt a breeder to make haste in the production of calves, but I warn him of danger ahead, which will increase with each succeeding generation so bred. It is claimed that early breeding fixes the milking habit as against the beef tendency. What becomes then, I ask, of the boasted prepotency and characteristics of cattle bred specially along dairy lines for hundreds of years? Is that so easily lost? If so the breeder is of all men the victim of misplaced confidence. Individuality should be carefully studied in the handling of dairy cattle, as the nervous young things especially need kind treatment in order to develop an even, placid disposition, so important in securing uniformly good performance; as the herdsman so the herd is. It is in milk and butter production that individuality shines out most conspicuously. Here every tub stands on its own bottom. Let no dairyman suppose that black and white spots necessarily guarantee him wash tubfuls of milk per day, or a fawn colored Channel Islander a gallon of cream.

In a published record by Smith, Powell & Lamb, in 159 cows the range was from 10,000 to 26,000 pounds of milk in one year, and of the entire list only four pairs showed records alike. Weekly butter records in the same herd ranged from 10 to 30 pounds, and the amount of milk required to make one pound of butter from 12.27 to 24.98.

In the Jersey cattle milking trial at the British Dairy Show of 1890 thirteen cows competing, the yield of butter per day ran from 15½ ounces to 2 pounds 3½ ounces; the milk yield from 16.10 pounds per day to 43.14, and the number of pounds of milk required to make a pound of butter from 14.28 to 28.36.

Professor William Saunders, speaking before the Dominion Dairymen's Association last year said:—"There is one point which has particularly impressed me as important, that is the strong individuality which we find in certain cows. There are, at the present time, two Jerseys milking. I suppose it would be difficult for a Jersey advocate to believe that we have one Holstein that has produced a larger proportion of butter-fat in her milk than one of the Jerseys. Again, one Jersey produces about 50 per cent more butter-fat than her sister cow along side, one giving milk containing 6.05 butter-fat, the yield of the other producing 4.35. The Holstein, to which I refer, gives milk yielding 4.61, while another yields 3.76. The Ayrshires will run 3.58, 3.08, 3.83, 3.48 and 3.95, all coming under 4%, showing that as far as one can judge from a single analysis, these two cows of the Holstein breed, which I may say are from among the best butter strains known among the Holsteins, are producing on an average a larger percentage of butter-fat than the Ayrshires, though not up to the average of the Jerseys. I mention these facts, not with a view of drawing any conclusions from them, but merely to impress upon your minds the importance of this particular point; that you may have a dozen cows in your barn, five boarding at your expense and five yielding you a profit, which shows the importance of every farmer endeavoring to ascertain for himself what cows are doing best for him."

From this it follows naturally that the dairy farmer, having individualized his herd by means of suitable tests, should discard the unprofitable cows, and fill their places with stock better suited to attain the end in view, at the same time taking good care of the residue and their progeny.

Reams of testimony might be piled up in support of my contention, that individuality is the all important study of the present for the practical dairyman in the selection of cows of whatever breed, and in the case of the breeder whether of pure bloods or grades, individual excellence and vigor of constitution must go hand in hand with good pedigree, for without the former the latter will prove a delusion and a disappointment.

Contagious Abortion.

As regular as seasons come around, so do complaints of the inroads of that dire epidemic named as above, crop out from some district or country. With the number of experimental stations established in this and other countries one would think means could be found for mitigating the evil, or to some extent staying its terrible infectious character. Heretofore we have heard of no tangible benefit, nor has anything been advanced that would lead us to hope for a specific remedy. Veterinarians have not yet located the cause, they being fond of ascribing the difficulty to ergot, which we are inclined to think very seldom has anything to do with it. Abortion comes on at all seasons, often before ergot is developed, and it still is a question if smut on corn, oats, etc., has much effect on pregnant animals. One of the western experimental stations fed an incredibly large quantity of corn smut to a cow without having any effect, and on which she apparently thrived. If it is caused by an accumulation of ergot in the system, as some contend, the effect would show itself in other ways; cows are almost invariably perfectly healthy, outside this particular attack, and suffer no apparent inconvenience, seldom missing a meal. Ridiculous reasons are given, and equally ridiculous recipes prescribed, but all to no effect. Contagious abortion is a disease that stockmen dread worse than any other, and which, to all appearance, science is powerless to encounter. When it obtains a foothold there is no telling when it will quit; it leaves for a time, and as suddenly breaks out afresh and fills the proprietor and attendant alike with despair.

Many of the most advanced thinkers are of the opinion that it is caused by a bacillus or germ, and recommend injections per vagina, and thereby hope to grapple with it. However, there is room for much investigation. A case came under our own observation which has led us to believe that it is often contracted at the time of copulation. A two-year-old bull was purchased for temporary use in a herd. Part of this herd were dispersed at public sale about five weeks after the bull arrived. Although these cattle went hundreds of miles apart, and many only served a few days previous to the sale, yet wherever they went the worst type of contagious abortion followed them. And still more singular the bull was sold a few months after, before the difficulty was known, and yet proved perfectly satisfactory, and bred well until he was nine years old. One who signs himself Sufferer in the London Live Stock Journal thus describes his experience:—

"I am (or was) the owner of a large and valuable herd of pedigree cattle, which had taken many years and a large outlay of money to get together. Until nearly two years ago I had had no abortions. I then had two in-calf cows from an adjoining farm where several cows had aborted their calves a few months previously. One of these did so after she came to me, and I am inclined to think this was the commencement of the trouble, though it is a singular fact that if, as some believe, that land must have been infected by those cows aborting, yet it then changed hands, and not one cow belonging to the fresh tenant has aborted.

"From that time until now I have had between sixty and ninety cows and heifers abort (or as it is called here) "slip" their calves, notwithstanding that I have adopted various supposed remedies to prevent it. They have done so at various periods of pregnancy, ranging from four and a half to eight months. I have used dozens

of anticasling drenches, which many people say they have used successfully. I have also used an American remedy which a friend sent me with the assurance that it never failed. I have bled, I have isolated them as much as possible, I have now a goat amongst them, I have put some of them upon poor sheep land upon my farm where I have not formerly kept cattle, and used every precaution, but all in vain. My farm is a large one, with three sets of buildings, at which different men attend, but all the same, whether in summer at grass or in winter at one place eating straw and roots, and at others hay, etc., the scourge still goes on. Every theory I have heard my own experience will controvert. One says change the bulls, and yet over forty cows belonging to neighbors sent to mine have each carried their calves full time. Another says they catch it from each other, and yet those I put upon fresh and poor land last summer are as bad as any. These latter were a lot that had aborted, and I wished to try to breed a second time. Many of them were in a stinking condition when turned there, and yet two neighbors' cows adjoining and daily smelling them through the fence did not abort. Again, I put my two-year-old heifers into an orchard quite removed from the other cows, and kept them there with a goat the whole summer after service, but of no avail. No ergot has ever been seen upon my farm that I am aware of, though I am told modern scientific opinion is against the old notion that ergot causes abortion. I have no theory now of my own of the cause, and my unfortunate experience will upset all I have ever heard, but I do think it is not very creditable to modern science that a cause and a remedy cannot be found for a disease (if it is one) which I am convinced is doing far more mischief than is generally supposed. I trust some of your readers may be inclined to offer some remarks of their experience or knowledge which may at any rate throw more light upon the subject."

Toronto Industrial Fair, Sept. 7th to 19th.

Energy and zeal are characteristics of the officers and directors of the Industrial Exhibition Association of Toronto, which are fully manifested by the activity with which they have entered upon the work of preparation for this year's exhibition, to be held from the 7th to the 19th of September next. At the annual meeting of the Association two new directors were elected in place of two retiring, the Hon. John Dryden, M. P., P., Commissioner of Agriculture, taking the place of one, and Ald. R. Score, that of the other. The various committees of the Live Stock Department have met and revised the prize list for the present year, over \$1,000 more being added to the total amount offered last year in this department. Of this amount about \$600 was added to the horse department, providing for two new sections in the roadster class, one additional in the carriage class, two new sections for dog cart horse, increased prizes in the pony class, and prizes for four-in-hand. In the general purpose class the prizes for stallions were struck off and the class left exclusively for mares, fillies and geldings, with increased prizes. The Canadian Clydesdale Association donate a special prize of \$30 for the best Canadian Clydesdale stallion of any age recorded in the Canadian book; the Clydesdale Association's definition of a Canadian bred being a horse that does not trace on the side of its dam to an imported mare. Last year \$500 was added to the cattle department, and this year about \$200 more has been added to the Durham, Ayrshire and Holstein classes. The prizes for Merino and Dorset Horned sheep were increased twenty per cent., and a special prize is donated by the English Shropshire Association.

At the last meeting of the Board of Directors,

Messrs. J. Featherstone, M. P., President of the Dominion Hog Breeders' Association, and Francis Green, jr., were successful in getting a class added to the list of Chester Whites with prizes the same as in the other classes. On the recommendation of the Sheep and Pig Committee, it was decided to admit two representatives each from the Dominion Sheep Breeders' Association and the Dominion Hog Breeders' Association at the next annual meeting as members of the Exhibition Association. Mr. Sanders Spencer, of Holywell Manor, St. Ives, Hunts, England, donates a silver cup for the best Improved Large Yorkshire boar, and the FARMER'S ADVOCATE again offers a silver service for a milking competition, to which are added cash prizes by the Association. A large number of other special prizes are also offered in other classes. The prize list for poultry, grain, roots and horticultural products has also been revised, and the book will be ready for circulation about the end of this month (May). The Toronto City Council are still energetically endeavoring to secure more ground for the Exhibition Park, and with better prospects of success than at any previous period. All entries for this exhibition have to be made by the 15th of August, a requirement which the directors are determined this year to rigidly enforce.

A Prolific Shorthorn.

The Shorthorn cow Isabella Third = 6369 =, bred by Mr. Seth Heacock, Kettleby, Ont., and owned by Mr. H. H. Spencer, Brooklin, Ont., sired by Fidget's Oxford Eighth -- 631 =, dam Isabella Second, by Oxford Mazurka, gr. dam bred at Kinellar, is a good example of productiveness, showing how exceedingly remunerative an investment such a cow turns out, and how quickly a large herd can be produced from one cow with a little more than ordinary heifer producing predilection. The law of heredity follows as faithfully in producing powers as in any other essential point, and in this Isabella Third has come honestly by her prolificness, her dam having bred her first calf at two years old, with a goodly lot of descendants, and her gr. dam proved an exceedingly good breeder, with a long list of calves to her credit.

Isabella Third, calved Nov., 1876, produced one heifer which turned out a good breeder before Mr. Spencer purchased her. Since coming to Mr. Spencer's herd she has produced seven calves, five of which were heifers, the four oldest as follows: Isabella 4th, calved Feb., 1881, produced her first calf, a heifer, Nov., 1883, seven in all up to date, five of which were heifers. Isabella 5th, calved Feb., 1882, has produced six calves one of which was a heifer. Isabella 7th, calved 1884, has produced four calves. Isabella 12th, calved Feb., 1887, has produced one calf. Of Isabella Fourth's first four daughters, Isabella 6th, sold to Mr. A. C. Bell, New Glasgow, N. S., calved Nov., 1883, has produced four calves. Isabella 8th, calved Oct., 1884, has produced two calves. Isabella 10th, calved 1885, has produced four calves. Isabella 11th, calved Oct., 1886, has produced three calves. Isabella 9th, the only heifer from Isabella 5th, also sold to Mr. A. C. Bell, has produced one calf. Then Isabella 13th and 14th have each one calf, making a grand total of 49 cattle to the credit of one cow inside of ten years. Among the lot, a goodly number of bulls have been distributed far and wide over the country. With a few records of produce such as this, who would not invest in a thoroughbred cow?

The Dairy.

Losses of Fat in Buttermilk.

At the Iowa Experiment Station, analysis of four samples of buttermilk from ripened cream which had been churned in an ordinary box churn showed an average of 0.6 per cent. of fat, and sixteen analyses of buttermilk from another source, but also with ripened cream, averaged 0.49 per cent. These analyses indicate a loss of butter fat in churning which in general practice would amount to from 18 to 24 lbs. in the first case, and in the second from 15 to 20 lbs. for every 1000 lbs. of butter made. It would have been much more interesting had the bulletin shown the comparative losses as between churning ripened and sweet cream.

Dairy School at Tavistock.

In addition to the decision of the Western Ontario Dairymen's Association directorate, to appoint four inspectors for the ensuing cheese-making season, they also resolved upon the establishment of a dairy school at Tavistock, to be run something after the style of those in Scotland. It will be under the superintendency of Mr. Adam Bell, an experienced cheesemaker, and for the present be carried on in the factory there. One immediate object is to effect improvement in the early make of cheese, and to that end the institution was opened free of charge to all makers who desired to avail themselves of its advantages. Drilling in the use of the Babcock milk tester is one of the features of the school. Mr. Thos. Ballantyne, M. P. P., who has been chiefly instrumental in pushing this project, writes that if deemed advisable during the season Mr. Bell may visit other central points for the purpose of giving instructions for the benefit of makers in the district. The institution at Tavistock is to be made experimental as well as educational.

Condensed Milk.

The milk is condensed by the evaporation of a portion of the water which it originally contains. There are several processes by which this is done. The more general one is to have the milk first boiled; to it is then added a portion of powdered loaf sugar; it is then introduced into a vacuum, where, by rapid boiling, enough of its water is removed to reduce it to a consistency about as thick as ordinary syrup. It will then be only one-fifth of its original volume. It is afterwards put into tin boxes, which are hermetically sealed and properly labelled.

Milk is sometimes preserved by the application of heat alone, without any evaporation being effected. In that case it is placed in a tin vessel, and after being heated to over boiling point, a small orifice is made in the tin to allow the air to find an exit; then the vessel is hermetically closed.

Various other processes for preserving milk have been proposed and tried, most of them being based on the use of antiseptics. However, they are looked upon by the public generally with disfavor.

It would hardly be practicable for a farmer to carry on the business of condensing milk upon a small scale. The apparatus required might as well be used for a large quantity, and thus the expense for plant per pound of milk that was used would be reduced.

Hints to Patrons.

At the very foundation of successful cheese and butter-making stands the cow and her owner. The character of the raw material with which the maker is supplied largely determines whether the products therefrom shall be good or bad, profitable or unprofitable. Unskilful makers may bungle with and ruin the best of milk or its products, but the most experienced expert is handicapped in manufacturing milk unsuited to his purposes. Three essentials on the part of the patron are honesty, uniformity in care and feeding, and absolute cleanliness. Too much emphasis cannot be laid upon the latter. It is just as applicable to the cheese-maker, for example, as to his patrons. He should

1st. Keep the factory and its utensils scrupulously clean.

2nd. See that the whey tank is thoroughly cleaned at least once a week. (Patrons should insist on this, otherwise the value of the whey will be greatly reduced, and the cleaning of cans made exceedingly difficult).

3rd. See that the surroundings and premises are kept free from bad odors.

A special bulletin from the office of the Dominion Dairy Commissioner contains the following suggestions to patrons:—

1. Milk shall be supplied from only healthy cows, which are fed upon wholesome food, with access to plenty of pure water and salt.

2. The pastures, yards and lanes shall be kept free from carrion and all decaying matter which may cause noxious smells.

3. Each patron shall furnish pure sweet milk, to which nothing has been added and from which no part has been removed or kept back; and if any be reserved, it shall be of the average quality of milk given by the herd of cows.

4. Milk must be drawn from the cow in a cleanly manner; the udders should be brushed or washed, and milking with dry hands is preferable to the practice of dipping the fingers in the pail in order to moisten them.

5. Immediately after the milk is drawn from the cow, it should be strained through a wire or cloth strainer.

6. All pails and other utensils with which the milk is brought into contact must be of tin; the use of wooden pails for milking or holding milk is strictly forbidden; and any contravention of this rule will subject the patron to the liability of being deprived of the privileges of the factory.

7. The milk shall be aerated by dipping, pouring or stirring, or by the use of an aerator: during hot weather after it has been aired, it should be cooled quickly to at least the temperature of the atmosphere; the milk can should never be left in a tub of water over night, unless the milk has been previously cooled to below 60 degrees.

8. The milk must be kept in a place where the atmosphere is free from foul and injurious smells.

9. Milk that is left without the protection of some roof shall be protected from the falling rain, either by turning the lid of the milk can up side down over it, or any other efficacious means; and if on any occasion when rain has fallen, the cheese-maker discovers by the use of the testing instruments that a per cent. of added water is present, he shall deduct from the weight of the milk a number of pounds equal to the quantity of added water that is revealed by the use of the lactometer.

10. The night's and the morning's messes of milk shall be kept in separate vessels until the arrival of the milk wagon.

11. The milk cans shall be kept clean and sweet; and when a cheese-maker shall discover the can of any patron in a state unfit for the carrying of milk without detriment to its quality, he shall notify the patron of that effect, and report the same to the directors. After the first offence the patron may be subjected to a fine of

50 cents for every time that the can shall be sent to the factory in an unclean condition.

12. The directors or any of the patrons may inspect the cans on any of the wagons or milk stands at any time, and report the same to the cheese-maker or other officers of the manufacturer.

13. Each and every milk-can shall be washed with cold or tepid water and scalded with boiling water once a day; they should afterwards be aired.

14. All milk to be conveyed to the factory on the public milk wagons shall be delivered on the side of the public highway (unless otherwise arranged by the directors), upon a milk stand of convenient height, and which will afford shade from the sun and protection against rain.

15. The surroundings of the milk stand shall be kept clean and free from bad smells; and the feeding of swine within 100 feet of the milk stand is strictly forbidden.

16. The milk shall be delivered on the milk stand at a time to suit the convenience of the milk drawer, who shall not leave any milk stand before 5.30 a. m. and who shall reach the factory with his load not later than 9 a. m.

17. The cheesemaker shall reject any milk which he considers to be unfit for use in the manufacture of the finest quality of cheese; and his judgment in the matter shall be final.

Butter-Making.

BY JOHN FERGUSON, CAMLACHIE, ONT.

I am of the opinion that Canadian butter will not take the place in the British market that our cheese does until it is made in creameries, and I would strongly recommend fitting up our cheese factories with the proper appliances for the manufacture of butter, and if the patrons would have their cows come in in the months of November or December, they could have their milk made into butter in winter and cheese in summer. If we have the right breed of cows and feed them properly they will milk well all winter and pretty well all summer too. There are only four points essentially necessary for the manufacture of good butter. Two of these belong to the men and two to the women. The two that belong to the men are (1) the right breed of cattle for the purpose intended, and (2) the feed. The two points that belong to the women are attention and cleanliness. First select the right breed of cattle for the purpose to which you intend to put them. This being done next comes the feed. When I speak of feed, I mean water too. When cows are milking, feed nothing but sweet and wholesome food. Do not allow cows to eat at the stable door. I do not say that horses' bedding is bad for young cattle or those that are dry, but it is not fit for cows that are giving milk. Allow your cows to get nothing but the purest water, and of that as much as they will drink at least twice a day. The milk from our common Canadian cows, when grass fed, contains 87 per cent. water. The cow has no filter in her to purify water, and if the water is impure the impurity goes straight into the milk. If a cow drinks 100 pounds impure water 87 per cent. of the impurities of that water will be found in the milk. Never allow them to drink water you would not drink yourself. We will take it for granted that the man has done his part,—that is, he has the right breed of cattle and has fed and watered them properly. Next comes the women's part. First the milking, which should be done with clean hands. The cow's udder should be either washed or brushed off clean before commencing to milk. Tin pails only should be used. Strain as soon as possible after milking, into cans eight inches in diameter and twenty inches deep.

Heat the milk to 90° Fahr. (do not add hot water to do this), then place it in ice water sufficiently cold to bring it down to 40° Fahr. In summer the cream will all be separated in twelve hours, while in winter it will require twenty-four hours. Put the cream into a crock or tin can, and keep it below 45°, if possible, until you have enough to churn. Twelve hours before you have enough cream to make a churning, take half a gallon of cream, heat to 60° and keep it in a warm place to ripen; warm all the cream you intend to churn to 60°, then add the half gallon of ripened cream, stir thoroughly and put on the cover until it is ripe enough for churning, which should be in twelve hours. Churn, as soon as the cream is slightly acid. Never allow it to rise above 62°. If your cream has been taken off without any milk in it, add one quarter as much water warmed to churning heat, as you have cream before churning. Have one yard of best cheese cloth, run a hem in each end of it, then run a wooden rod through, hang it in the churn and strain the cream through it. If the customers desire the butter without color give it to them so, but if they desire it colored then use coloring. There can be no cast iron rule laid down for the temperature at which to churn; it depends a good deal on the temperature of the room you churn in, and the time of year and the churn you use. In summer we churn at from 58° to 60°, in winter from 62° to 64°. Churning should be done in from forty-five minutes to an hour. When the particles of butter are the size of a grain of wheat, or even smaller, draw off the buttermilk, and let it pass through a fine strainer to catch any particles of butter that would otherwise escape. Then put the plug in, and put two pails of cold water into the churn, then put on the cover and churn for a minute, draw off the water and repeat the water process again, then put in two pails of cold water with a pound of salt, churn a little longer and draw off the pickle. Of salt use one ounce to every pound of butter, put on the cover turn half round two or three times to allow the salt to sift down through the granulated butter, turn the churn round same as churning until the butter is formed into rolls, by which time the butter will be perfectly mixed. Lift the butter into a tub with a wooden ladle and let it remain eight hours. The hand should never be allowed to touch the butter. To prepare the tenant or tub for keeping the butter in fill it with fresh buttermilk, let it stand for twelve hours, empty out the buttermilk and wash with cold water, using a brush. Fill the tenant with boiling pickle, and let it stand twelve hours, scour with coarse salt and rinse with cold water, put in half a tea cup of salt and two tablespoonfuls white sugar and cover with a cloth; it is then ready for the butter. Fill to within a quarter of an inch from the top, cover with two thickness of cloth, press the cloth well down round the edge and cover with the following mixture: 1 lb. salt, 2 oz. white sugar, 1 oz. saltpetre, wet the mixture with boiling water; allow it to cool before you use it, then spread it over your tenant. This will become perfectly hard and air-tight. Have a rough box in your milk room large enough to hold all the butter you make in the season. As soon as a tenant is filled put it in the box and cover with coarse salt to keep it from the air. Although I have described how butter can be kept, I do not recommend keeping it. In conclusion, let me say that women would find it a great deal easier to keep milk dishes clean by using a brush instead of a cloth.

Testing for Butter-Fat.

Without stopping now to consider the question of certain milks creaming more readily than others, we take it as an accepted fact that the quantity of butter-fat contained is the foremost consideration with dairymen who are producing milk for butter-making, or for the sale of cream. Always maintaining richness in fat, he will, of course, aim to produce as great a quantity as possible, but "great floods of thin milk" are to him no object. An adequate proportion of this valuable element must also be present in the manufacture of our standard Cheddar cheese, and most progressive cities and towns require (all should) that their milk supply be not only wholesome from a sanitary standpoint, but contain a liberal percentage of those tiny, golden globules. Dairymen have long been looking for a method or machine that would cheaply, quickly and accurately determine the fat percentage of milk. To Prof. S. M. Babcock, Chief Chemist of the Agricultural Experiment Station of Wisconsin State University, is due the honor of discovering and perfecting precisely what was wanted. Cornish, Curtis & Greene, dairy supply manufacturers of Ft. Atkinson, Wis., represented in Canada by J. S. Pearce & Co., of London, Ont., have devised a test machine applying the Babcock process. Chemists, experts and practical dairymen concede it to be about as near perfection as it is possible to get. The method itself was described in the *ADVOCATE* for March, and need not be repeated. Since then one of the machines has been thoroughly tested in the *ADVOCATE* office, and by Dr. Hutchinson, Medical Health Officer of London, who made one verification of its finding by subjecting to chemical analysis a sample of the same milk. The result attested the accuracy of the Babcock process. He has tried it on numerous samples of city milk and pronounces it simple, speedy and economical. No special skill or chemical knowledge is required to run it. Any one of ordinary intelligence using the printed directions can in a short time manipulate the machine. It is manufactured in sizes from a four-bottle to a fifty-bottle tester.

In this connection it will interest our readers to learn that the Executive of the Western Ontario Dairymen's Association decided at a recent meeting on the employment of four inspectors for this season, and it is understood that each of them will be provided with a Babcock tester, in the use of which they will be thoroughly drilled before starting out. All doubtful samples at least will be subjected to its fat searching scrutiny, to the sorrow of the patron who robs the milk of its cream, or keeps back the "strip-pings." Coloring matter might deceive the lactoscope but it cannot escape exposure in the whirling bottles of the "Babcock."

By the use of a pair of scales to test the weight, and one of these little machines to determine the fat percentage, every farmer could soon decide which individuals in his herd should "go."

It can be used to note the changes wrought by varying in kind or quantity the foods, and so help in bringing the business of feeding down to a certain basis.

With it the dairyman can test the skim milk to see if he gets all the cream, or the buttermilk to decide whether fat is being lost or not in churning.

The *ADVOCATE* would also suggest that numerous vat tests of milk in factories be made by the inspectors, and subsequently samples of whey at different stages of the process, in order to throw light on the waste of fat in cheese-making which is believed, under certain conditions, to be very considerable. In fact some analyses that have been made, and the six and seven inches of fat reported at times to be seen accumulated in the whey tanks, shows that the waste is going on, and butter fat is too valuable a product to be thrown away in that fashion. A series of tests as suggested might aid in determining just where or how in the process these losses occur, and to what extent.

From all these considerations, and others that might be cited, it appears that butter-makers, creamery men, cheese-makers, city milk consumers, and the men who keep the cows are all interested more or less in this question of measuring butter-fat. Whether its percentage is or is not a fair measure of the value of milk for cheese making is just now a vexed question under discussion by various authorities in the dairy world. The machine for measuring the fat has at all events been found.

Dominion Experimental Work.

Prof. Jas. W. Robertson has been in the Maritime Provinces arranging for the establishment of an Experimental Dairy Station in each of the three—New Brunswick, Nova Scotia and Prince Edward Island. He hopes to have them in complete operation this season. They will greatly aid in stimulating summer cheese and winter butter-making, according to the most approved methods in those provinces. Work of a similar character, that is, experimental and educative, is also contemplated by the Dairy Commissioner at several points in Ontario and Quebec. The new experimental dairy at the Central Farm, Ottawa, has been completed and is now running, and important investigations, in order to determine the comparative value of various rations, are being carried on. In due time the results will be laid before our readers.

Establishing Cheese Factories and Creameries.

A special bulletin on the above subject has been issued by Prof. Robertson, Dairy Commissioner, Central Experimental Farm, Ottawa. It is a timely document of about 50 pages illustrated with numerous diagrams and plans, and containing statements in detail of all general requirements and appliances, together with model rules and regulations for factory and creamery management. We would recommend persons contemplating such enterprises to write for copies of this bulletin, which is published both in English and French. (Why not in German also?) Factorymen or creamerymen already established might find in it many profitable hints.

The first step essential in such a movement is to ascertain if the general conditions in the proposed locality be favorable to dairying, and if the milk of a sufficient number of cows is available and within as compact an area as possible, in order to keep down running expenses. A point to avoid is excessive competition on territory of factories or creameries already existing. In getting appliances of all kinds deal with well established, reliable firms, keeping in mind the warning against "creamery sharks" as given on page 134, April issue *FARMER'S ADVOCATE*.

Foods, and the Quality of Butter.

Mr. C. P. Goodrich, boss butter-maker of this part of the world, a gentleman who has milked scrub cows, and all sorts of cows, and now milks Jerseys simply for the weight of fat there is in their milk, said in the "Round Up" Institute, on the 19th ult., that there was not a man on earth who could tell the breed of cows butter was made from, by testing the butter itself made from cows living off the same mixed food. Mr. Goodrich, as a rule, knows what he is talking about, and his opinions about butter are fortified by those of his wife, to whom he ascribes a keener discrimination in such matters than his own. We must confess we were a little surprised to hear Mr. Goodrich, knowing he was so pronounced a Jersey man.—[Hoard's Dairyman.

Co-operative Butter-Making.

The great secret of the success of Canadian cheese abroad, by which a \$9,000,000 per annum export trade has been built up, is its uniform excellence. When it comes to marketing this, *uniformity* is an indispensable requisite, whether in butter or cheese. Large dealers want a supply upon which they can with certainty rely. It should not be intermittent either in quantity or quality. Many of our farmers do turn out butter of superior character. Intelligence and determination in the private dairy will most certainly accomplish that end, but unfortunately in a host of cases those factors are conspicuously absent. Consequently, every conceivable sort of butter, both in its quality and style of package, is thrown upon the market, where the bad injures the good. There is no hope for a profitable export trade by the indiscriminate packing of a hundred different styles of butter from as many different small farm-dairies. The inferior samples will drag the rest of the load down to their own low standard. There must be one general system and uniform method. Along the other line the thing is hopeless, as the Farming World the other day pointed out in commenting on the proposed establishment of a creamery in Dumfries, Scotland. At a meeting there the complaint from the merchants was that they could not get a sufficient quantity of butter and cheese of uniform quality. Another point in favor of the creamery or butter factory is that its output may be in quantity large enough to be kept separate from other samples until it reaches the market where it is assigned to its own class.

Canada is going to push butter-making as well as cheese-making. Whether the cheese districts can develop any considerable winter butter-making industry on the factory plan, without any detriment to the sister branch, remains to be seen, but Prof. Robertson and others are most sanguine on this score. In the meantime the production of butter privately and otherwise is certain to increase, and the Dairy Commissioner and others will do well to put forth every possible effort to develop the export trade, lest presently we find our local markets over stocked, and our ambitious dairymen discouraged by a season of low prices. This safety valve will be needed, in all probability. Scotland is pushing ahead in dairying, and this year Ireland will embark in dairying more extensively than ever before, with condensed milk factories and butter-making as specialties.

One word as to private farm butter-making. The ADVOCATE has nothing to say against the march of improvement in this direction. The

more skill and care the farmer and his family put in the management of their herd, dairy room, and marketing, the more profit is likely to accrue. Better butter will mean increased consumption. Nothing is surer than that. Increased consumption implies a keener demand with firmer prices. For the foreign trade, as we have said, the creamery, or factory plan, will be found essential, and coupled with it the best possible and speediest means of transportation to the great consuming centres of the world.

Salt the Cows.

The importance of salt in animal economy is often overlooked, and nowhere is it of more importance than with the dairy cow. She should have access to salt daily at least, and if it can be within her reach at all times so much the better. Some dairymen make a practice of salting the food for their stock, but it is best to have salt within the reach of the animals, thus allowing them to use only what they desire. Experiments have proved that when dairy cows are deprived of salt for even one to three weeks there is a decrease of from 15 to 20 per cent. in the yield of milk. The milk from unsalted cows also sours much quicker than when they have unrestricted access to salt.

The Water Supply.

In many districts sufficient attention is not given to providing an adequate supply of pure water for cows, especially in summer. Do not rely on shallow pond holes that will turn green and slimy before the summer is half over or go dry altogether. The foulness of such water goes into the milk to reappear as rancid butter and gassy curds, reducing the price both of butter and cheese. This means loss. No dairyman need expect his long suffering cows to maintain a good flow of milk when driven miles on hot, dusty roads for a drink at a "crick." The loss sustained in that way would soon dig a deep well and erect a windmill that would for long years prove a paying investment.

The Successful Agriculturist.

Agriculture includes the preparation of the soil, the planting of seeds, and the raising and harvesting of crops. These may be regarded as easy to accomplish, but, nevertheless, it is impossible for a man to farm successfully without having a knowledge of his work. A man may know how to plough, harrow, etc., and still not be a successful agriculturist. The successful farmer is one who uses his head as well as his hands, that is, he must understand drainage, the kind of soil suitable for the growing of different grains and roots, and also how to restore and retain fertility to the soil by the application of fertilizers. If these facts are known and practiced they are certain to return profit, and being ignorant of them is too often the cause of failure. Education is just as necessary for a farmer as for any other profession, and if this be neglected by farmers' sons they cannot compete with farmers who have been educated, just because they do not know how to raise the quality of any production required, therefore cannot attain the level of the educated farmer. Now, in order to receive as much knowledge of agriculture as possible, it is essential that a person should read and study books or papers treating on that subject, or attend the Ontario Agricultural College, and thus an education would be received that would enable the farmer to stand abreast of the times.

Veterinary.**Diseases of Pigs.**

BY J. Y. ORMSBY, V. S.

PNEUMONIA, OR INFLAMMATION OF THE LUNGS.

This disease, fortunately, is not very commonly met with among hogs, but when it does occur it is generally very fatal, more particularly when the case is neglected at first. Among pigs, just as among men, we usually find pneumonia associated with cold, damp, draughty quarters, it very rarely occurring among pigs that are well housed and attended to, although even where this is the case it may be produced by a sudden chill, such as would result from turning a pig that had been well cared for in a warm pen out of doors in stormy weather, or leaving a pig out of doors exposed to the weather after it had been heated by driving it a distance. The ordinary symptoms of pneumonia are not hard to diagnose. The animal has fits of shivering, its hair has a staring appearance and stands up, there is a difficulty in breathing and a cough, the ears and nose are hot and dry, and the pig shows very little inclination to eat.

The treatment in such cases must be prompt, otherwise it will be almost useless. Place the animal in a nice warm, dry pen, well bedded, if possible, with wheat straw, and give the following dose in a little gruel:—Spts. ether nitros, 2 drams; liq. ammon. acet. (or mindererus spts.), 2 drams; nitrate of potass, half dram. Give all the nourishing food that the pig will take, such as warm skim-milk, with a little shorts and linseed meal stirred through it; and if the animal appears to be very weak a little whiskey will be found useful, added to the feed. The administration of a dose of epsom salts, from one to two tablespoonfuls, is often very useful at the outset of the case. If the breathing is very distressed and the animal appears to be suffering much pain, relief will often be afforded it by bathing its sides with hot water for twenty minutes to half an hour at a time, after which the part should be thoroughly dried and a liniment rubbed on composed of equal parts of ammonia, turpentine, and oil.

RHEUMATISM.

Rheumatism may be said to be almost as common among pigs as pneumonia is uncommon, and here again we find dirty, damp pens and general neglect the commonest factors in producing the disease. Pigs suffering from rheumatism usually show very great indisposition to move about, it being almost impossible sometimes to get them even to come to the trough to feed. When they do move lameness is apparent in the affected parts, and this is usually accompanied by soreness of the muscles and a decided elevation of temperature. In mild cases a warm, dry pen, plenty of good, clean, dry bedding, and the application to the affected parts of liniment composed of equal parts of turpentine and olive oil will be found sufficient, while, if the pig be fat, a dose of epsom salts will be in order. In severe cases it will be necessary to carry the treatment further, and now one to two tablespoonfuls of cod liver oil twice a day will be found very beneficial, while in Prof. Long's "Book of the Pig" we find the feeding of sour milk recommended. In addition to this the administration of bicarbonate of soda, a small teaspoonful daily in the feed, and continued for a few days, has proved of service.

PARALYSIS.

Paralysis is usually found among pigs in the form of paraplegia, or paralysis of the hind parts. In this country we often find it caused by exposure to a very hot sun. In such cases removing the animal to a cool, dark place, and giving a purgative and laxative diet is usually sufficient. In severe cases, where we have reason to suppose that there has been some injury to the spinal column, I would recommend the destruction of the animal as a general thing, as I have found such cases usually very unsatisfactory to treat, although in the case of a valuable breeding animal it might be well to try the effect of hot fomentation to the back and loins, followed by blisters, together with the use of enemas and a laxative. Should there be partial recovery followed by a weakness in the parts, ten grains of powdered nux vomica given twice a day in the feed for a couple of weeks will be found useful.

Domestic Veterinary Treatment of Farm Animals.

BY DR. MOLE, HAMILTON, ONT.

It is almost impossible for anyone unacquainted with the various details of so complex an organization as an animal's structure to treat successfully the many diseases that are to be met with, but there are a great many simple disorders and bodily injuries that almost anyone with a superficial knowledge of the animal's structure, and an intimate acquaintance with its habits, may treat and remedy with a fair amount of success. But there are books innumerable that profess to make every man his own horse or cattle doctor, and lots of treatises that will guide a man if he is not too wedded to his own opinion. The fact is, that, whether recognized by veterinarians or not, domestic medicine, both in application to men and the lower animals, is an institution which cannot be abolished; and as there are many districts that are without the aid of skilled veterinary surgeons, but are within the reach of such a paper as the FARMER'S ADVOCATE, it may be worth while to offer some suggestions with a view of placing it in its proper position, and give some guide to those who have the care of live stock.

It must, however, be clearly understood that by domestic medicine is intended the use of simple remedies that are generally kept on every well ordered farm. All kinds of patent medicine that are largely advertised should be avoided. They are extravagantly high in price and generally contain some deleterious agent that more often does harm than good. In all cases of difficulty and danger, and when the life and well-being of the animal is concerned, it is advisable, and the truest economy, to seek the aid of a skilled veterinary surgeon, and having consulted him, take his instructions and carefully follow his directions, for only by these means can any good result.

Veterinarians' charges are often a tax on a farmer's resources, and I am sure that some method could be devised, more especially by the farmer's institutes and societies, to contract for the periodical attendance of a veterinary surgeon to the members of such societies, the same as is carried out by many sick and benevolent societies. This method would give universal satisfaction and the cost to each individual member would be small. The veterinary surgeon would find it to his interest to keep the animals of the farm in good health by advising as to

their general welfare. It might be left to the farmer's institute to carry out all the details of the scheme, and I believe that under such conditions many men would be found to seek the membership of these excellent institutions for the benefit that they would receive on this account. Again, by this simple process of guaranteeing a veterinary surgeon a certain income it would attract men to settle in various districts not at present represented. There is no doubt it would lessen to a considerable extent the annual losses inflicted on the live stock of the various provinces.

As it is vain to hope that all men will avail themselves of the constant aid of veterinary surgeons, it may not be out of place to offer some advice, as to the proper treatment of farm stock, when assistance is not to be procured, and even should it be within reach there are a number of simple ailments that can be and are attended by farmers themselves; so that a few plain directions for the proper treatment will be given. It must, however, be said that the directions and remedial measures that will be employed shall not be capable of adding to the mischief instead of repairing it.

There is always one serious obstacle that presents itself is advising amateurs what is the proper selection of the various medicines and their doses. Now it must be borne in mind that a cow will take more than a horse, a horse more than a calf, and a calf more than a sheep, so that something must be left to the general intelligence of the farmers in giving medicine to their stock; therefore pay particular attention to the symptoms presented. Any deviation from the normal or regular standard of health constitutes disease and is to be acted upon with decision and promptitude. Before proceeding any further with our subject it will be necessary to take into consideration the general outlines of anatomy, the knowledge of the general plan of the circulation of the blood, the theory and practical explanation of inflammation, and the influence on the digestive organs, for unless we know the grand and masterly manner in which all the various organs are dependent on one another we cannot hope to be successful in our treatment of disease.

In considering the action of the heart on the circulation it must be accepted that the immediate cause of the heart's action is within the heart itself, and is dependent on the due supply of properly oxygenated blood derived from the lungs, and unless the blood is properly prepared from good nutritious food, derived from the digestive organs, the whole of the animal's structure must suffer, for the blood is the life of the animal, and unless it is of good quality and sufficient in quantity, disease must ensue; so that we can see by this very short description that the whole of the complex organization is dependent on a few essential conditions, and in searching for disease the very first principles must be looked for, and are invariably found in food, water or atmosphere.

Practical gardening is taught in all the common schools of France, numbering about 25,000.

A horse beautiful in form and active, and able to travel seven or eight miles an hour for five hours, ought to be prized more than any 2.10 trotter.

The silo has come to stay. But it will not stay long with the slipshod farmer. Not much else will stay with him that can get away, except his bad habits.

The Farm.

The Grange.

BY HY. GLENDINNING, MANILLA.

The first Grange (Patrons of Husbandry) was organized in the city of Washington, D. C., on the fourth day of December, 1867, from whence it spread over the United States to Canada. On the 16th day of August, 1872, the first Grange was organized in this country, and on the 2nd day of June, 1874, the Dominion Grange of Canada was organized in the city of London, there being at that time twenty-four subordinate granges, whose charters had been obtained from the United States. Up to the present time there has been about one thousand charters issued by Dominion Grange to division and subordinate granges. The first few years after its inception the increase in new granges and membership was very great, indeed much too rapid for its permanency. It being the first organization the farmers as a class had that brought them together in their several localities, from there to the county association or Division Grange, thence to the Provincial and Dominion Granges, the effect upon the farmers and their families was very marked from a social, educational, and financial standpoint. Many families who had lived a lifetime within a short distance of each other, with only a slight acquaintance, became close friends. They met in the grange, exchanged opinions upon the various questions relative to their calling. Successes and failures in the growing of crops and stock raising were freely discussed, which added greatly to the knowledge of the members.

Co-operation in the purchasing of supplies was a prominent feature, and in some sections the selling of grain and other products of the farm was carried on to a considerable extent with success. But this success led too many to extremes. Not satisfied with a small measure, they advocated, and in some instances attempted, to run institutions entirely foreign to that of the farm, the result in most cases proving disastrous to those engaged in the enterprise. Then, instead of laying the blame to themselves and those who were engaged with them they laid it at the door of the grange; this led to a large decrease in the membership. This class was followed by the timid and those who joined for financial gain only, as the gold did not roll in as they imagined it should without effort on their part. Another bad result of these wild discussions and attempts to run everything in the country was to set all classes of society (whether they had reason or not), from the village blacksmith to the banker, in opposition, hence the influence of all these parties was arrayed against the grange.

The grange in Canada to-day differs from that of a few years ago in that it has profited by its sixteen-years' experience. Its members recognize that the division of labor with a proper training as necessary for the successful transaction of business; that more is to be gained by the social and educational features than starting wild, imaginary schemes for making money. Of late years the grange has devoted much attention to matters of legislation affecting the farming class with good results. However good the intentions of our lawmakers may be, yet it is a fact that most of the laws put upon the statute book when put to practical use are found to be defective. No better means could be devised for the farmers to have these laws amended and made workable than that now employed. The members bring the matter before their Subordinate Grange and discuss it; the delegate from that grange lays it before Dominion Grange, and the Executive Committee of that body lays it before the governments of our country, which, I am pleased to state, has met with gratifying results. While the grange does not possess as great a membership as it did a few years ago, yet its influence is as great or greater than ever. During the past winter a number of dormant granges have been resuscitated and started out again with new life, which bespeaks for the Order a prosperous future.

FIRST PRIZE ESSAY.**Farm Fencing.**

BY JOS. MOUNTAIN, AVONBANK.

In perusing the article on the fence question, by Mr. Hale, in your issue of April 1st, the interested reader cannot fail to appreciate his remarks in regard to the laws relating to line and road fences, and we believe that the great majority of farmers would welcome the day when it would be unnecessary, or at least optional whether they built any fences or not. That the necessity of keeping up so much fence is a burden felt by every farmer in a most vital part, viz., his pocket, all will allow. It is the duty of every farmer to do all that he can to bring around such a condition of things as suggested by Mr. Hale, though we are afraid it will be some years before such a result will be attained. Farmers' Institutes, Patrons of Industry and kindred societies would do well to take this up, with a view to better legislation regarding fence and herd laws. But as fences would seem to be a necessary evil for years to come, it behooves every farmer to consider how he can best reduce the amount, and build those that are absolutely necessary as cheaply as possible, not forgetting durability, land occupied, and general beauty of the fence. I think Mr. Brown's article on fences very comprehensive and serviceable to farmers just at the present time. His arguments in defence of large fields are fully borne out by our experience, having on our farms some fields containing 30 and 40 acres, and we find on leaving one of the larger fields to work in a 10-acre field how irksome it is for both man and horses, besides a great loss of time. I am satisfied that the majority could save a great deal in time, land, and labor, by a little forethought in arranging the rotation of their crops in such a way that all crops may be contained in one inclosure. His arguments in reference to tramping the head ridge and also tramping the young clover and other grasses, every thoughtful person will allow correct. There is no doubt that if the soiling system were universally adopted this problem would soon be solved satisfactorily; but this system seems to most of us impracticable under existing circumstances.

In considering the most desirable fence to erect, we can only deal in the general view of the case, as much depends on accessibility to material, cost, etc. The first consideration should be to select a fence for road and line; also a permanent fence to divide the farm into two or more parts—a fence that will combine durability and serviceability, and then adopt some style of portable fence that will be easily erected, taken down and moved about. That the old rail fence has had its day, all will allow, and something must be adopted less cumbersome, occupying less land, and yet be sufficient to fill the bill. The smooth wire fence mentioned by Mr. Brown will likely prove very effective, though I am inclined to favor the barb wire, combined with what we call the half-picket wire fence, which presents a barrier to all kinds of stock, from a horse to a goose or duck. A great many find it one of the drawbacks to sheep raising to erect fences that will turn them. Take, for instance, Mr. Brown's fence; I fancy it would not turn sheep better than a barb wire, the effects of which many realize to their sorrow at shearing time, when the fleece will fall in two parts on account of injury with the fence. A serious objection to

the smooth wire is that it is very hard to keep tight. Having had some experience with barb wire, I am satisfied that it can be built so that there is little danger to stock from barbs. We have erected, during the last half-dozen years, nearly two miles of it, and have had only one case where an animal was injured. I consider a good high bank very necessary to make it safe. During the last two years we have been gradually removing the bottom three strand of wire from our wire fences and supplying instead the slat fence, being pickets 2½ ft. long, 4 in. apart, woven on two-strand galvanized wire, making a fence, with two barb wires on top, costing about 80 cents per rod, which will turn all kinds of stock. For a portable fence we use hurdles—two or three strand of barb wire, or half-picket wire fence, just according to kind of stock to be turned. For sheep and hogs, the half-picket is very handy, being in rolls 516 rods in length, easily put up, by merely driving stakes in the ground, taken off and rolled up again and stored. The full height picket wire fence is excellent for yards, but is too much affected by wind for general use.

There is a company styling themselves the "Ontario Hedge and Wire Company" commencing operations in this county this spring for the first time. They claim to have, in thrifty condition, and fit to turn stock, a hedge in four years, payment made in three installments, amounting in all to \$1.25 per rod. The plant used is honey locust. I think it would be well for farmers to go slow in this matter until they ascertain whether it is adapted to their land or not. I think the *ADVOCATE* would do the farming community good service by ascertaining how this style of hedge does in the different places in which it has been tried.

SECOND PRIZE ESSAY.**Farm Fencing.**

BY JAMES D. THOMPSON, DERWENT.

Subject: "Farm fences—the desirability or otherwise of doing away with them or lessening their number."

Fencing is one of the most costly necessities of the farm. Then when you build a fence be very sure you need it, and remove all fences that are not really necessary. If you have crooked fences make them straight, and save timber, time, land and money, and crowd out weeds, thistles and briars from useless fence corners. As timber grows scarcer fences become more costly.

The crooked rail, or snake fence takes up from twelve to fourteen feet, allowing room for whiffletrees to pass corners. That fence straightened would only take up about five feet. When mowing or reaping one can cut clean, and no fence corners to haggle at with the old scythe and waste time in the busiest season of the year. Doing away with fence corners shuts out Canada thistles largely, because if they grow to perfection more one place than another it is in a corner. I don't want thistles in a corner, nor a "corner in thistles." Its a poor crooked fence that will not make a good straight one and leave quite a pile of summer wood "to boot." In straightening use cedar posts, as they are best, put as far apart as length of rails will allow, and put posts at least three feet in the ground. If you have plenty of rails a stake set in the ground beside the post and two wires, lower one six or eight inches from ground (never use a block at the

bottom), and upper wire two or three rails from top. Give posts a little slant from side rails are on, to allow for sagging.

If you are short of rails you can make a neat looking and substantial fence by using posts and four rails fastened to post by wire looped across face side of post and fastened in centre of loop (figure eight) with small staple. Banking at bottom allows of putting rails closer together, making it hog tight. This fence is covered by a \$5 patent. A good board fence can be made three boards high by banking each side. In digging holes use what is called a digger—an auger is no use on hard, strong soils. The digger is made like a pair of tongs, with long handles, greatly reducing labor, which is really the reason, together with cost of good posts, why we see so many patent "make-shifts" called fences throughout the country. Beware of straight fences set on top of the ground; they blow down with every wind storm, and in the long run posts will be found cheaper.

For the front road fence I prefer a board fence four boards high, with one on top of posts which have been sawed off slanting. Beside the fence plant a row of maples about twenty feet apart, which not only serve as a wind break and beautifier of the farm, but to a great extent prevent posts from heaving; a shovel of sand or loamy earth also helps to prevent it; another preventive is a ditch put parallel with the fence. If lumber is not procurable a wire fence is perhaps the next best, using cedar posts and banking well at bottom each side. Put a good tamarack pole, bark peeled off, or strong scantling on top, so that stock can see it, the great objection to barbed wire fences being the frequent and serious injury inflicted upon animals. Brace the end posts thoroughly, and if the fence is long, braces are needed about half way along.

The average farm in this county (Middlesex) has about twice as much fence as is necessary, and the smaller the farm the more fence you usually see. The average snake fence takes up about eight feet of land, not counting space for passing; a straight rail one and a-half feet, a difference of six and a-half feet, which in a rod amounts to a little over 100 square feet, in 100 rods to 10,000 square feet, or nearly quarter of an acre. I know two fifty-acre farms on each of which the land unnecessarily taken up with snake fences amounts to nearly one and a-half acres. In most cases no crop but weeds grows on all this valuable land, "fence-corner hay," as a rule being wiry, useless stuff.

So far as I have seen hedges have not proved their utility at a farm in this country. As feeding soiling crops and ensilage increases, less pasturing will be done, and fields under crop made larger. The more fields on the farm the more costly gates must be built and maintained, opened and shut.

Having made the road fence attractive, the line fences straight and strong, lay out the fields as uniform in size as possible, and gradually displace the old "snake" and "stake and rider" fences with straight ones as described, which is an economical way, and will enable the farmer, with less trouble, labor, and expense to grow more crops, and perhaps save the outlay of buying more land.

I might add, in conclusion, that the only fence which the law requires the farmer to maintain is that between his farm and occupied adjacent property.

Patrons of Industry.

Numerous inquiries having been addressed to us as to the object for which the association known as "The Patrons of Industry" has been formed, we cannot do better than to quote from the constitution adopted by the Supreme Association of this order, which opens with the following preamble:—

"Being impressed with the fact that all parties interested in commerce, manufactures, and other enterprises of importance, are organized and using their combined influence for the promotion of their own special interests, while the farmers and employes, upon whose labors depend the prosperity of the nation, are almost entirely unorganized;

"We, the citizens, farmers and employes of North America, believing that Almighty God, as the source of all power and the ruler of all nations, should be acknowledged in all constitutions of societies, states and nations, do hereby, with due reverence to Him, associate ourselves together under the following articles, and do solemnly pledge ourselves one to another, to labor for the promotion of the interests of farmers and employes, and the good of the nation of which we are a part."

Then follow the articles, the first of which states that: "This order shall be called 'The Patrons of Industry of North America,' and its object is to secure the rights and interests of agriculturists and laborers, and shall be non-partisan and non-sectarian."

The other four articles set forth the manner in which the different associations of which the Order is composed are to be formed, and it is not necessary for us to touch upon them here, as our object is simply to show the general aim of the order itself, which, according to article 1, is "to secure the rights and interests of agriculturists and laborers."

From what we can learn the principal steps taken by the "Patrons of Industry" have been directed towards putting down as far as possible those monopolies or combines under which farmers are suffering to day, such as the "Binder Twine Trust," "The Salt Trust," and other combines of a like nature; and also towards introducing a *cash* system of dealing between farmers and storekeepers, whereby the latter are enabled to sell goods at a much lower rate of profit than hitherto, and in both of these attempts we cannot but feel that the Order deserves the support of every farmer in Canada, for, in regard to the first, it is patent to every onlooker that hitherto the farmers have been at the mercy of any ring that manufacturers or dealers chose to form. Take for example the "Salt Combine," and see what has been accomplished already in that line. As every farmer knows the price of salt of late years has almost doubled, and now a barrel of salt costs \$1.60 at almost any store in Ontario. But, in the county of Lambton, where "the Patrons" first organized in Canada, a change has already taken place in the salt trade, and members of the Order can obtain their salt direct from the well at \$4.00 per ton. Allowing 285 lbs. to the barrel, this would be at the rate of 57 cents a barrel, plus the cost of the barrel and the freight which surely cannot amount to anything like the sum of \$1.03, the difference between the price now charged at the wells to "the Patrons of Industry" and the price charged to farmers by the retailers through the country.

With respect to the second move, *i. e.*, of introducing a cash system by which the farmer pays cash, and receives his goods at a fixed percentage over the wholesale price, a howl has already gone up that it is an attempt to crush the retail storekeeper, that it is the creation of a huge monopoly itself by placing the trade all in the hands of a few men, and that altogether it is a piece of most intolerable impertinence on the part of the farmers, forsooth, to attempt to interfere in any way with the trade. But, we would ask, where is the attempt to interfere with anyone. As far as we can see, the proposition made by the Patrons to the storekeepers is

simply this: "If you will sell us goods at a fixed percentage increase on wholesale prices, we will pay you cash and give you all our custom," and we fail to see any injustice in this to anyone. There is no force about it. No storekeeper is compelled to accept these terms. In fact, the storekeeper is simply in the same position the farmer was in when he objected to the price of salt. The storekeeper said: "If you do not like the price, do not take the salt; you are not forced to." The farmer now says: "If you do not like my offer, do not take it; you are not forced to."

That goods can be sold at a much lower price for cash is an undoubted fact, and if the Patrons succeed in introducing a cash system of doing business, in our opinion they will confer an incalculable benefit on the country at large, for undoubtedly the credit system at present in vogue is one of the greatest curses of the country; and should they also succeed in doing away with the combinations or rings that have of late been formed in all the different manufacturing interests that farmers have to deal with, and so compel the prices of such articles to be regulated by the natural laws of commerce, there is not a doubt in our mind but that the formation of the Order will be a grand thing for the farming community.

We would, however, point out that such results can only be brought about by the thorough co-operation of all interested, and that one or two men, no matter how active or pushing they may be, cannot carry out such a work unless backed up by the solid mass of the agricultural population of the country; and we would also counsel moderation, for while we are in hearty sympathy with the aims of the Order, as we understand them, we do not think anything is to be gained by *too radical* measures, and would urge the leaders of the movement to remember that, while it is only right that farmers' interests should be protected, at the same time, both retail dealers and manufacturers have a right to a *fair profit*, and so we would suggest to them to keep before their eyes the motto "live and let live."

A Leading Manufacturer.

It is refreshing in these days when we are told that certain goods are being sold at close-cut rates, to find another manufacturer step in and undersell at from 25 per cent. to 50 per cent. less than the rates we have been accustomed to hear quoted. At the present time none but the largest manufacturers can keep pace with the times in purchasing the latest improved machinery used in manufactures. Therefore the smaller makers are finding it difficult to reduce their prices without slighting the work or placing inferior material in the articles manufactured by them. Again, when going through the country we find armies of implement agents, travelling at the public expense, endeavoring to introduce the line of machinery their employers are building. By this means it is easily understood how it is that many of the farm implements and much of the machinery sell at such high rates; and, although differing in some particular from the kind we are more familiar with, yet, as far as the cost of building them, the difference would be slight, indeed.

Messrs. Stanley Mills & Co., who have vastly increased their plant for building the line of goods they are manufacturing by the aid of the best-known machinery, and purchasing material at the most advantageous rates, and, above all, by dealing directly with the people who use these articles, are enabled to sell goods that appear wonderfully cheap. By watching their advertisement from time to time, the different lines they manufacture will be seen, which are all the way from road carts to binding twine, and thence to platform scales.

Garden and Orchard.

Spraying Fruit Trees.

Recent census statistics show that the ravages of our insect pests cost the fruit growers of the United States the enormous sum of \$200,000,000 annually, and experiments by leading entomologists and horticulturists show that 75 per cent. of this loss can be prevented by the proper use of insecticides. The actual cost of spraying the average fruit tree does not exceed three or four cents per tree per season, counting time and material. Mr. P. C. Lewis, of Catskill, N. Y., has just issued a catalogue, entitled "Will it pay to spray fruit trees." In this catalogue is given the experiments of many of our leading State entomologists and large fruit growers, and their experience in fighting insect pests. The result of these experiments in many cases have been almost beyond belief, and teach one thing, that is, that in order to raise perfect fruit you must spray your trees. This catalogue is full of valuable information on this important work, and we would advise any of our readers interested in fruit growing to write to Mr. Lewis to the above address for this catalogue, which will be sent free.

Horticulture at the Central Experimental Farm.

The situation of the Experimental Farm at Ottawa gives, owing to the peculiarly trying climate of that locality, special advantages in testing fruits and originating varieties calculated to be of great value to the province of Quebec, the colder parts of Ontario, also Manitoba and the Northwest.

LARGE FRUITS.

The work in this division may be classified under the following heads:—1. Tests of varieties; 2. Methods of propagating; 3. Methods of cultivating; 4. Originating varieties by seedling production and cross-fertilization; 5. Experiments with fungicides. 1. In apples alone the collection includes more than 200 of the Russian varieties, as well as our standard Canadian and American sorts. In plums, cherries, pears, and apricots proportionately large collections are on trial, with all the European and American varieties represented. Mr. Craig is strongly of the opinion that in order to build a sure foundation for the future success of fruit culture in the colder sections of Canada, we shall have to develop our own varieties by careful cross-breeding and selection. With the many widely differing kinds of fruit on the Central Farm the opportunities for the advancement of this work are excellent, and will be pushed as rapidly as possible.

2. Experiments are under way to test the effect of the different methods of propagating fruit trees. The question is one about which there has been and is a great deal of controversy, and until a systematic line of investigation is carried out will remain unsettled.

3. An orchard containing about 5,000 seedlings planted five feet apart each way has been set out. These have been grown from selected seed of Russian and American origin, and will be added to annually, as many individuals in the process of selection will be found tender or otherwise unsuited to the climate; but with so large a collection, and having the work conducted on different lines, the chance of obtaining seedlings of value is largely increased.

4. The methods of cultivating orchards too has a most important bearing upon their health and longevity, and this subject is securing due attention.

5. The annual losses to orchardists of late years, due to the effects of the disease known as "apple scab," or "apple spot" has led to sundry investigations in regard to its life history, development, and best means of combating the disease. After finding that the trouble was due to a minute parasitic form of plant growth, experiments were inaugurated using copper and other salts dissolved and applied in the form of a spray. Encouraging results led to repeated trials with added success. This work has been taken up at Ottawa, and last year's experiments point to a remedy which will soon be in general practice. The results of these experiments are given in full in the annual report of the Experimental Farm now being distributed.

SMALL FRUITS.

Strawberries have been a marked feature of the work in this department. The bulletin on their culture, with descriptive notes on varieties, published by Mr. Hilborn while in charge of the horticultural department, is the most complete manual of its kind issued in Canada; but the work of testing introduced varieties and originating others is still going on.

Many varieties of raspberries, seedlings and hybrids were inspected during the fruiting season of last year by a committee composed of prominent members of the Ontario and Quebec Provincial Horticultural Societies. This committee recommended the propagation of about twenty-five kinds, thought by them to be superior to those now in general cultivation. Speaking of this work as a whole, they stated in the report submitted that the introduction of these varieties alone would more than repay all expenses incurred in the horticultural department of the Experimental Farm.

VEGETABLES.

A few classes of these are being taken up each year for the purpose of testing all new varieties, sifting out duplicates, and selecting seed from the most desirable strains. Last season there were on trial 43 varieties of tomatoes; cabbages, 58; radishes, 45; peas, 56; lettuce, 40; celery, 36; sweet corn, 22.

FORESTRY.

In forestry the work is being pursued along three different lines. 1st. The planting of permanent belts, with a view of determining the adaptability and usefulness of the different timber trees grown in this way. 2nd. In order to stimulate tree growing in the Northwest Territories, where shelter belts are so urgently needed, seedling trees are being distributed free in packages containing 100 each, to voluntary applicants. The distribution amounted to 100,000 trees last year, and arrangements have been made for double that number to go out this spring, the names of a sufficient number of applicants being now on hand to cover all the stock available. 3rd. A large quantity of tree seeds of varieties native to Manitoba has been collected and are being sent out through the mails in small bags to districts in the Northwest remote from timbered tracts. Already over 2,000 of these bags, each containing from 3,000 to 4,000 seeds of such varieties as Manitoba Maple (Box Elder) and Manitoba Ash. These seeds from hardy native forms will furnish the farmers with the right kind of stock-in-trade to start with.

A Few Hints on Tree-Planting.

BY T. G. PATTISON, GRIMSBY.

A large proportion of the fruit trees which are planted each season in this province die before attaining the age of one year; a considerable proportion perish before reaching their second year; after that the proportion of deaths gradually diminish till the trees attain full growth. The infant mortality of the human race, as is well known, is appalling, particularly in the large cities, but the infant mortality of fruit trees is also very large, though not so much attention has been directed to it. The reason in both cases is somewhat similar, viz., that the young of both are deprived of the proper conditions essential to their healthy growth. Now, whatever difficulties may lie in the way of its prevention in the case of the human young, early death in the case of the fruit-tree young is largely and easily preventable. For what is the main cause of so many fruit trees perishing at such an early stage in their transplanted existence? To this question many would at once reply that it is the quality of the stock supplied to the growers by nurserymen and tree agents. No doubt many farmers and growers have been induced by unscrupulous agents to purchase stock either utterly worthless in itself, or else, though in other respects excellent, yet totally unsuited to their locality. A considerable percentage of tree failures is accordingly due to these two classes, but by far the greatest is due to careless planting. For, in spite of all that has been taught and written on the subject, there are hundreds of farmers and growers in the province to-day who do not know how to properly plant a fruit tree; or, if they do possess the requisite knowledge, are too careless to put it into practice. Indeed it is extraordinary what mistakes are made.

The writer knew of an instance—one out of many that could be cited—where hundreds of dollars worth of young fruit trees were planted by ploughing out a double furrow in an old, stiff, blue grass sod, together with a little assistance from the spade. No cultivation was given, and growth and fruit were fondly looked for, but as might have been expected the result was disappointment and pecuniary loss, for at the end of three years only one or two gnarled and stunted survivors remained. The owner was then quite ready to declare that there is no money in fruit-growing. An extreme instance you will say, but there are many like unto it, differing only in degree. In earlier times when the soils of our farms were richer and the climatic conditions more favorable, owing mainly to the protection afforded by our native woods—now, alas! fast disappearing—fruit trees succeeded with less care, and the fling-it-in-let-it-grow-or-die principle was not attended with such dire results as now. The idea is, however, still largely prevalent that a fruit tree has only got to be put into the ground somehow and then left to grow, to thrive, and produce fruit of good quality; and if it does neither, as is highly probable, then the nurseryman or agent from whom it was obtained is a long way worse than should be, in fact little better than a thief. Nurserymen and tree agents have many sins to answer for, no doubt, but they are frequently blamed when quite innocent, and the owner of such a tree must look nearer home for the true culprit. In one of his works the celebrated author, Oliver Wendell Holmes, says that

to produce a favorable specimen of the human race, you should begin about two hundred years before the child is born. Now, without going as far as that in the case of fruit trees, yet you must start right from the very beginning. And first of all the locality and soil should be adapted to the kind of trees you intend to plant. High and well-drained land is, generally speaking, the most suitable for an orchard. If it be set on low-lying lands it must first be thoroughly under-drained. The soil should be made at least as rich and mellow as if it were intended to raise a good crop of roots or corn upon it. The trees may be planted either in the spring or fall, but the former is more usual and probably better adapted to all localities. In the case of spring planting, the ground should be well ploughed the preceding fall. Trees can hardly be got in too early, provided the frost be out of the ground. See that you get good stock. For preference deal with a good local nurseryman if there is one, if not, with some well-known, responsible firm. Traffic not with the irresponsible, wandering will-o'-the-wisp-tree-agent.

Two-year-old trees are the best to get; they should have plenty of small fibrous roots. If they do not, avoid them, they are not likely to grow. If not ready to plant immediately on receipt of the trees, a trench should be dug, the trees placed in it and the roots well covered over with earth; they will keep quite well treated thus for a considerable period before planting. Always take the greatest care that the roots are never exposed to either sun or wind. Have the ground properly marked out, and a stake set exactly where each tree is to go. Get them nicely in line both ways, as it is a great help to cultivation, and gives besides a neat appearance to the orchard. If there is a strong prevailing wind from any quarter, set them with a slight lean towards that direction. When actually engaged in planting, take plenty of time. Time and trouble taken then will amply repay you, and will save much future work in replanting, etc. Your object should not be to see how many trees you can get into the ground in one day. This is the practice of many, but the result is not profitable. Make the holes sufficiently large to allow the roots to have fair play and not to be unduly cramped. All broken roots should be cut off smoothly with a sharp pruning knife. Put fine mellow earth at the bottom of each hole, and work it amongst the roots with your hand; when these are well covered tramp the earth so as to have your tree as solid as a post, but leave the surface covering light and loose. Set the tree the same depth, allowing for setting, as it stood in the nursery, except in the case of dwarf pears, which ought to be deep enough to cover the quince stock on which they are budded to the depth of two or three inches. After the trees have been set, mulch round them with coarse manure, chips, sawdust or hay. This is an important point, especially when planting on a stiff soil. If planted in spring, cut the tops well back at the time; if in fall, defer doing so till the following spring. Before winter sets in, bank up each tree with a mound of fine earth about a foot high, to protect from mice, etc. If the preceding rules are complied with and good cultivation given through the first and succeeding summers, there will be, I think, fewer complaints of "poor stock" and "want of luck."

Do not forget in manuring the trees that the feeding roots are not near the trunk. Keep out.

Poultry.

Is Duck-Raising Profitable?

A correspondent of the Country Gentleman has this to say about duck culture. As he writes from some experience in the matter, his conclusions may be profitable:—

"1. The Pekin or Aylesbury ducks seem to be best adapted for purely economical purposes, having large bodies, white plumage, and a habit of extremely rapid growth. They are prolific egg-producers, and the eggs hatch well.

"2. My experience with the young has been that extreme care is necessary for the first two or three days after they are hatched, as they do not begin to eat or drink readily, even when twenty-four or thirty-six hours old. A little patience, however, in teaching them to eat will overcome this difficulty—if difficulty others have found it. When once they begin to eat they will need no urging, as anyone who attempts to feed a couple of hundred will soon find out.

"3. Their growth from the shell up to the time when they are eight or nine weeks old is simply marvellous. One can almost see their bodies expanding. But to sustain such a growth they must have a large supply of growth-producing foods—milk, meat, bran, oats and whole wheat steamed, chopped clover steamed, and some corn meal, or better, cracked corn. To secure the greatest profit, the young stock should be marketed at about eight weeks of age. Prices in other years have been very good for young ducks at the proper season in the spring."

The Sitting Hen.

BY JAS. ANDERSON.

As some of our farmer friends will be purchasing eggs at this season for hatching from some of our leading breeders, a few hints as how to manage the sitting hen will not be out of place. The greatest danger of loss of the hatching eggs, is being exposed to severe changes of temperature. The hens may allow the eggs to get chilled by remaining off the nests too long, or may not cover them properly while on the nest; and the embryochick is destroyed. In very warm weather there is not so much danger of this, but in its stead comes the danger from want of moisture. When a hen steals her nest she invariably hatches nearly all the eggs. The time she leaves the nest in search of food is invariably in the morning before the dew is off the grass, and the feathers of her body become damp. When she returns to her nest this moisture is brought into contact with the eggs and keeps them in a favorable condition for hatching. I find a good way in setting a hen (but be sure she wants to sit firmly before putting valuable eggs under her) is to put a sod under her, which resembles Mother Earth, and when the weather is very warm I give a sprinkling of lukewarm water just before the hen returns to her nest, which prevents the eggs getting chilled. In the early stages of incubation the hen does not leave the nest so frequently as she does in the later stages, when the heat from the living chickens in the shell increases the evaporation and more moisture is required. Especially is this the case when hatching duck eggs under hens: we often find one-half of the eggs with full-formed, dead birds in them. The cause of this is want of moisture; they often cannot break the shell, then die. You often see the beak protrude, and they can get no farther, the chicken becomes fastened to the membrane of

the egg for want of moisture, and cannot turn to enlarge the opening and free itself. When the birds come out healthy and strong, it is found the shell is broken more than half around before the chick can get its release. When this is the case there is plenty of moisture and the chick can work freely in the shell. When the chicken is found fastened to the shell it can be assisted by holding the egg for a short time in lukewarm water and dampening the membrane. It will not do to tear the membrane or remove more of the shell than is free from it, or you will kill the chick. You must not allow other hens near the sitting hen or you will be sure to lose some of your eggs. I generally put up a large shingle, have it fixed so it will slide up and down; let all the sitting hens off for feed and water at noon, and when through my dinner go out and find them on their nest, put up the shingle and all is safe.

Poultry.

[An Essay read by Mr. Jas. Anderson before the South Wellington Farmers' Institute.]

He said that the rapid strides made in poultry in the Dominion was wonderful. Some eight or ten years ago the Ontario Poultry Association was inaugurated, and the Government granted \$600 towards it through the influence of the late Peter Gow, Esq. As a proof of the great interest taken in poultry, there were over ninety professional breeders advertising in the Canadian Poultry Review, a great many of whom made their living by the business. He next gave a synopsis of his experience in poultry raising during the past 25 years, having commenced in 1862 by trading a Berkshire boar for two pair of Light Brahmas, and paying \$6 express charges on the fowls from Baltimore. He had been breeding six or eight of the leading varieties of fowls ever since, and considered the Light Brahmas still to be the front for general purposes and the Plymouth Rock for a farmer's use. With the mercury averaging from 5 below to 15 above zero, he averaged nine eggs a day from 12 laying hens. Another farmer with 45 hens got 1,218 eggs in three months. The diseases, he said, of poultry were not so numerous if they are kept comfortable and clean. He here described the different diseases they are subject to, and the proper mode of treatment. Continuing he said the turkey was the next bird in value to the farmer. It is a great forager, and picks up any amount of grasshoppers and other insects destructive to his crops. Among all the different varieties the Bronzes were the best, being the largest, hardiest and nearest allied to the wild bird.

The Poultry Journal says:—"After several years of depression, we are again on the crest of a wave of universal interest, which all lovers of fine fowls fondly hope will put the fancy where it ought to be—high in the esteem and favor of the people in general. The mission of the poultry breeder who aims at the highest type is not a lowly one. No other product of Canadian industry is more important than the poultry product; few other products can be produced in every nook and corner of our broad land by every farmer and villager, and every city resident who can command a few square feet of yard room. This product is, in dollars and cents, the most important of our agricultural products, yearly excelling in worth the combined value of cattle, sheep and hogs. Anyone has only to consult the statistics of either Canada or the United States to prove this. It was ordained from the foundation of the earth that the poultry business should never be monopolized. No trust can prevent every family in the land from raising their own fowls and eggs. A pound of chicken is better than a pound of beef, and costs less to raise it, and good fresh eggs are fit for Her Majesty, and may be enjoyed by the poorest in the land."

The Apiary.

May Management.

BY R. F. HOLTERMANN.

The management of bees during the month of May is very important. Some adopt the system of breeding up poor colonies at the expense of the weaker, and some very good authorities do this. It appears to me, in these days, when the hive and combs cost as much, and sometimes more, than the bees on them, it does not pay to try and build up colonies which can barely carry over at the expense of the strong. I would sooner let the strong colony push forward as quickly as it can, and let the first swarm occupy the empty hive and combs of the colony which might have been made to carry through. I am inclined to think that such a system will give the better results. By this time every one should have decided if he shall run for comb or for extracted honey, but many wait until the last moment to order their supplies. The general impression appears to be that a farmer had better raise comb honey, because there is less work about it. That is true; but there are other very decided disadvantages for the farmer in the taking of comb honey. Every colony will not make comb honey to advantage. One having a few colonies has generally neither the time or experience to judge which colonies are best adapted for taking comb honey, and next, he has not enough to select from. A colony which will give good results with comb honey is sure to do so taking extracted honey. Next, it takes more experience to produce comb honey. Colonies have to be kept near the swarming impulse yet not have it. If plenty of room is given, sections will not be well filled, and if not enough, swarming may be the result. Sections must not be left on too long or their appearance may be injured and the product become unmarketable at good prices. Again, as a rule the farmer cannot watch his bees as closely as the specialist in bee-keeping, and the danger from swarming in the taking of comb honey is very great. For the above reasons it is advisable to take extracted rather than comb honey.

Be sure and put supers on the hive too early rather than too late. When the bees crowd the lower story it is safe to put on supers, if it be in the month of May. If the bees are examined every day, I should say wait until you see the comb cells drawn out near the top bar, having a white, fresh appearance. But with the farmer it is generally not safe to do this; his attention is often not closely riveted on the bees, and before he knows it (a day or two may do the work) the bees are losing for want of room, and the swarming impulse is on; therefore, put the supers on in plenty of time. Should the night be cool, try and remember to contract the entrance. As I have before stated, try and get the little boys and girls interested in the bees; give them a small percentage of the honey, and it will keep their minds occupied and teach them business habits, which may be very beneficial to their material prosperity when they grow up.

If there was any plant that I would recommend for honey alone, it would be the raspberry; it continues in bloom for three weeks, and a peculiarity about it is, that bees will be working upon it immediately after a hard shower. The heads hang down, and the rain does not wash the honey out.

Family Circle.

Reason Versus Love.

"Chooching!—Tom, man, can't you feel
 'Tis a danger to your broken wrist?"
 "Yes, I feel it, but a dollar
 From my purse would soon be missed,
 And besides, sir, there's a br' de, sir,
 (Oh, I know whereof I speak),
 And I wait no longer for my heart is stronger
 Than a broken bone is weak."
 "Good man Tom, the heart's not all, sir,
 Heart needs hand and head;
 Haste is folly; often patience
 Swifter to fair end has sped."
 "But the lassie, bonnie lassie—
 You know not the one I seek—
 She is willing, she is waiting,
 And we marry Easter week."
 "There is need for care dear fellow,
 Time may weave the hidden snare;
 Grim the skies may grow and dreary,
 And some hour spring up despair."
 "Be all these things as they may, sir,
 I shall neither pine nor peak
 If dear Cassie, my own lassie,
 Marries me in Easter week."
 "But, my man, in all things Reason
 Should your guide and helper be."
 "Reason's good, but there's another
 Better rule than that for me—
 That is love—the sure-foot fellow—
 He is all the guide I seek;
 Care says "tarry"—love says "marry,"
 And we marry Easter week."
 —Robert Elliott.

AFTER LONG YEARS.

Miss Phyllis Blunt had danced all the evening at a ball at her next door neighbors, the Harveys. She wore a pretty pink dress, with a little lace-trimmed pocket at the side. Her principal partner was young Herbert Harvey, who was deeply in love with her, but had never told his love.

On this night he had written a letter, which by adroit management he contrived to place in the pink pocket aforesaid. It offered her his hand and ended—

"If you do not answer I shall know that you cannot love me, and shall go away."
 No answer came to him. Phyllis had sent the dress, pocket and all, away in a box to the wardrobe, where she put dresses she was weary of. She had not looked into the pocket, and knew nothing of the letter.

Herbert Harvey took silence for refusal, and left the country within a month. In a year pretty Phyllis was dead. Nobody knew it, but she had broken her heart over the departed lover. And so one romance ended. Our story is of another.

Twenty years had passed. Moss grew on the white stones over the breast of Phyllis Blunt. And at the old place her brother lived—a widower, with one daughter.

Looking up at the house from the roadside you would assuredly have believed that the people who lived there were rich.

It was the residence, you would naturally have said to yourself, of people of means.

And being unblest with real estate, you might have sighed, with a little spice of envy, for folk who owned such a solid dwelling, such rare old oaks, such a smooth-shaven, green, velvet lawn, such a garden, and yes, such a gardener. There he was now among the roses; but when you have three wishes given you by a fairy, it is wise, as the old tale proves, never wish yourself anybody else until you examine into the private affairs of that individual.

In the story I allude to, the wisher wished himself "that king there," seeing him in a magic mirror, and, behold! he was transformed into a monarch who had been conquered, and was about to be put to death by decapitation.

Thus the envious admirer of his property, who had wished himself Mr. Blunt because he thought him a rich man, would have been greatly astonished to find himself sitting before an old oak desk, trying in vain to arrange chaotic papers, which, when in order, only proved that he was dreadfully in debt; or to see his daughter waiting behind him, with trembling anxiety, knowing that he could have no dinner but salt pork he so hated, unless, by chance, he had a little money about him.

If he had, it all went well; but, alas! if he had not, he would turn his wild, black eyes on her, when she had spoken twice or thrice, and with his delicate, ivory tinted fingers running through his fine, curling white hair, would ask her, in tone of Lear-like reproach, where she supposed he could have gotten money? He!

It was in the old days when a gentlemen might not work, and that wonderful gardener was their only servant. He was older than Mr. Blunt, and prouder of the family. He did the cooking. He did all the work except that done surreptitiously by Miss Phyllis in the privacy of parlor and bedroom.

There is a fascination to people of his race in making believe a great deal, and old Job spoke of his fellow-servants, gone long ago, as though they were about the place still, and, through his zeal, it looked as well as ever.

He mended the fences, repaired the verandas, kept the lawn and garden in order, trimmed the trees, and flourished a long-handled duster among the cobwebs that gathered so fast in the long, low-hung ball that the spiders loved.

Everywhere the rich old furniture, with little upholstery and much carving about it, resisted decay.

Unless you had stayed to dinner on a meager day, you would never have guessed that anything was wrong; and then the table would have been set with old china and good cutlery and silver spoons. Neither did Mr. Blunt's great Panama hat, indestructible and costly, or his well-laundried linen suits tell anything.

Other women knew that Miss Phyllis had not a good gown to her name; but a man would have thought the afternoon dimity, made out of an old extra-pair of bedroom curtains, very good indeed, when she pinned one crimson rose at her throat and another in her black hair.

The last of a large family early gathered to the tomb, following their consumptive mother thither only a year or two apart, Phyllis at eighteen, was the picture of health. The family sorrows were not hers. All was over when she was born, and life was before her, and her home was lovely, and she felt as much above common folk as a queen. Only asking for housekeeping money and having no wardrobe to speak of worried her, until the makeshift was concocted.

Phyllis had rummaged the garret for years, and had made a cloak out of a brown table-cloth lined with a long, flannel petticoat that had been hers as a baby, had raveled footless silk stockings, and knit them over for herself with cotton tops, and the beaux who dropped in on an evening admired her greatly.

It had been a trying day. Mr. Blunt had been quite tragic since dawn, and had decided to part with the horse and carriage. "This was a blow, Job wept under it! Miss Phyllis turned pale, and had not the heart to put roses in her belt. Mr. Blunt had remarked that it would be just as well not to send the halter away, because he would need that to hang himself with. But at tea time they had preserved apricots and bread and butter with a beverage. Phyllis found a letter at her plate, and, opening it, read this:—

"DEAR MISS PHYLIS:—Uncle Herbert is coming home and we are going to give a party for him. He has been away twenty years. I never saw him before, and I have made up my mind it shall be a fancy dress. Come in some character. It is not a masked ball. Papa disapproves of masks, but it will be fun.
 Come early to see the arrivals. Won't you beg your dear father to break through his rule for once and join us? We should be so honored. He needn't costume unless he chooses. The elder people will be allowed to do as they like, but you must be my dear.
 Your loving friend,
 "BELLE."
 "Oh, papa!" cried Phyllis, all her sadness gone on the instant. "You'll come, won't you?"
 "You have not stated where," replied Mr. Blunt, in his sternest voice.
 "To a fancy dress ball, papa, dear!" replied she. "I, who sit here waiting for the complete downfall of our family—I, who will leave you soon a beggared orphan—go to a fancy ball!" cried Mr. Blunt. "Not another word!"
 "Oh, papa! Then I mustn't go either!" almost sobbed poor Phyllis.
 "You're a woman," replied her father. "The Turks think women soulless. I am not sure but that they are right. However, I am too poor to give you a ball-dress."
 "Oh! I can make up something out of nothing. It's my one talent," cried Phyllis. "But let me tell you the occasion. They say your presence would be an honor, and you might like to meet—"
 "Not another word!" cried Mr. Blunt.
 His obedient daughter held her tongue, finished her bread and jam, and, having called for Job to clear away, went up into the garret with a candle.
 "I'll go as King Copetua's beggar-maid, in artistic rags, if I can't do any better," she laughed.
 She looked the old bureau through, the old chests, the old wardrobe, fruitlessly. Several years of foraging had emptied them. But on the top of the wardrobe, quite out of reach, stood a long paper box.
 What might it not contain of rumbled gauze or lace that might be "done up," or silk that might be cleaned? Phyllis turned on her tiny toes and tripped down the garret stairs.
 "Job!" she cried, "come here and get that box down for me off the wardrobe in the garret."
 Job stumped upstairs, set an old table against the piece of furniture, and climbed up. On his way he stumbled and fell, the box burst open, and spread abroad on the garret floor lay a pink dress of old-fashioned silk, a bow of ribbon to match, a fan and a gauzy scarf, all little boys and fringes. Yes, and a little muslin bag, from which protruded the toes of a pair of slippers, and gloves all rose-color and white.
 "Why! has my fairy grandmother been here?" cried Phyllis, joyously. "What does it mean?" "I know, miss," said Job. "That dress was worn by your aunt, Miss Phyllis. They called her Miss Phyllis, just like they call you. She was pretty, just like you, Miss Phyllis; just like you. And she went to a ball in this dress, so bright and lively and happy. She came home pale and wan, and she sent this dress all folded up in the box up into the garret. Said she never would wear it no more. She hated it, and she never did. She died early Miss Phyllis—that's the story, miss."

"Poor auntie, I don't remember her," sighed Phyllis, "but Job, I think I'll take the dress downstairs. Carry it down for me, will you?" "Yes, Miss Phyllis," said Job; "and excuse me for offering one word of advice. I'm of opinion that if that dress seems to you to be suitable for this ball you needn't have no scruples of conscience about wearing it. Miss Phyllis would have the honor of the family at heart for you to dress well, and she was just your build. That dress will fit you like a kin, Miss Phyllis, and if your aunt were alive she would say wear it my dear child and be happy."
 "I'm sure," thought the girl, as she tried it on before the glass, "Job is right; my poor little auntie would never, never care. I shouldn't if I were she, and it's the prettiest, quaintest thing."
 Then she brushed her hair into a smooth, bat-wing style of the period, and saw a picture so like the portrait of her aunt in the parlor below that she almost screamed.

She wore it to the ball. How pretty she looked! How quaint! How sweet! And who ever lacks a complement when gentlemen are near to whisper it! The sweet intoxication of flattery that is founded on fact had thrilled the girl's young blood before her hostess found the lion of the evening and brought him to the spot where Miss Phyllis stood among her admirers. A handsome man of forty-five, young enough in all outward seeming to be still charming; tall, broad-shouldered, picturesque; with no grey in his hair as yet, and with his own splendid teeth. For the first time in her life the girl's heart fluttered.

"Uncle, this is my friend, Miss Phyllis Blunt," said the young hostess. "Phyllis, dear, Mr. Herbert Harvey."
 Then the poor creature fluttered away, and the rest of the ball was Mr. Herbert Harvey to Phyllis. We all know what that means.

For his part, Herbert Harvey went home with strange sensations in his heart. It seemed to him as if he had once more seen his Phyllis. He had read her name on the mossy tombstone in the graveyard, and the barb of that unanswered letter had rankled in his heart his whole life through; but here, fresh and young again, with a look in her eyes that seemed to say to him: "Try, and see if you can win me," she stood in the person of Phyllis Blunt, her niece, actually in a gown of the same pattern. He did not know it was the very same, with the pink pocket at its side, into which he had slipped the letter twenty years before. He dreamed strange dreams that night, in which twin-girls in his vision; but whichever he grasped proved to be the ghost, and melted in his grasp to nothing.

At dawn he slept. He still slept at eleven o'clock, when Phyllis, in her dimity morning-robe, made out of disused bed-curtains of her grandmother's, folded the ball-dress in its box again. She examined it closely. How well they used to sew; no slighting as we slight our dress-making, and this pocket—how perfectly every stitch was set! She took out the kerchief, and, what was this? A letter—a little, faintly perfumed thing—with her name upon it:—

MISS PHYLIS BLUNT.

She opened it, her heart beating wildly. It was an offer of marriage from Mr. Herbert Harvey.

What a strange, romantic thing to do—a man of five and forty—a rich man, a man of the world! It was love at first sight, and what she had always longed for. And she knew she also had fallen in love with him. She was sure now.

All the morning Phyllis was in a dream. That afternoon she wrote this answer:—

"DEAR MR. HARVEY:—On reaching home I found your letter in my pocket. Since you say silence will mean refusal to you I reply. But you know so little of me—are you sure your feelings will last?
 You may call if you like; papa will be glad to see you—so shall I—but before you do, let me tell you I am a poor girl, indeed. Everything is going from us—even our home, I fear. Even Job stays with us out of love, and though my costly dress last night might make you think I had some money, even that was an illusion.
 It was a dress an aunt of mine, who died young, left behind her, else I could not have been at the ball.
 I conceal nothing; but you ask me if I like you. Surely as well as I could like a gentleman I had seen but once, and perhaps I could like you more; but we must know each other better."
 PHYLIS BLUNT.

Job took this note to Mr. Harvey, who awoke from his strange dreams to read it. He understood it all. Poor Phyllis had never found the letter. It had remained in the little pink pocket twenty years for her niece to answer; and he shed tears for the first time since he left his babyhood behind him.

However, he called that evening on the new Miss Blunt; and they are married now, and his wealth has restored the old place, and its master is happy.

And Phyllis, who loves her husband so well, will never dream that she answered her aunt's love-letter. It is a secret buried in the depths of that chivalrous bosom on which she reposes.

Young lady tourist (caressing the hotel terrier, Bareglourie, N. B.)—"Oh, Binkie is his name! He seems inclined to be quite friendly with me."
 Waiter—"Oo, aye, miss, he's no vera pertec'lar wha he taks oop wi'!"

Minnie May's Dep't.**Bedtime Fancies.**

Out from the corners and over the floor
Come flocking and flocking the shadow band;
I will get in my little white coach and drive
Through the Valley of Dreams into slumberland.

I have four black horses that Night has lent,
I call the name of my coachman Sleep;
And the little white coach is cozy and soft,
As I nestle down in its cushions deep.

Heigho! we are off. The horses go slow
At first, then fast and faster still,
With silent hoof-beats speeding on,
Down to the foot of the Drowsy Hill.

This twilight place is the Valley of Dreams,
Where all the wonderful dream things are,
And the balsam groves and poppy fields
That stretch on ever and ever so far.

The dream forests rustle their secrets out,
The lights of the dream town twinkle and shine,
And the white dream-ships from the harbor sail
Away to the dim horizon line.

Ah! the sounds of the Valley are growing faint,
Its sights are fading on either hand,
I cross the border still and dark,
And enter the real Slumberland.

—Virginia Cabell Gardner in *Independent*.

MY DEAR NIECES:—

One of the principal secrets of success is pluck, and where that is lacking other qualifications do not count for much. More women die from "can't" than "won't," and in this age women's responsibilities are just as great as a man's, so do not sit down in despair when you have made a failure, and attribute it all to being a woman. No; be honest and confess you did not do your best. Try again, and just see if success will not crown your second and best effort. In the life of every woman there comes special trials that demand special courage, and it is our duty to be prepared for them. Fainting is a cowardly way to get out of a difficulty; but to act a brave and resolute part is to lighten the burden and gain strength instead of losing it. The Honorable Joseph Howe, of Nova Scotia, in his essay upon the moral influence of women, says: "The influence which women exercised upon the spirits of their age, on the character and fortunes of their country, has been in exact proportion to the consideration in which they were held, and the rational freedom which they enjoyed. When treated as slaves and inferior beings they have invariably degenerated, as man himself does when so treated, in body and mind; but when regarded as rational beings, as the friends and companions of the other sex, as the wives and mothers of statesmen and warriors, they have constantly shown an elevation of soul, a susceptibility to the impressions of patriotism and national glory, a readiness to sacrifice even the heart's best affections to the interests of their country and the reputation of those they loved, which justifies the high place that they occupy in the history of the more civilized nations of the world." You may think, my dear girls, that a woman's sphere is a narrow one, and what little you can do is not worth doing; but let me ask you how much of the destiny of our fair Canada is in your hands? Never undervalue the character of your own influence, or the extent of your moral obligations. We are proud to call Canada our own; and what has Canada to sustain her but the character, the intelligence, the energy, and self-devotion of her people? Let it be your constant aim, your study, and your pride to cultivate those qualities and to inspire your brothers, husbands, lovers and children with the sentiments from which they spring. You can teach the idlers and

triflers of our sex that Canada has neither hands nor minds to spare. That their favors are to be won only by those glorious "labors which embellish life." In the full enjoyment of all the liberties and privileges, such as no women of any civilized nation enjoyed before, what is to be expected of us? "Each of us can do our little, until it merges in one grand whole, and as time goes on will mark its impress on the destinies of our country." MINNIE MAY.

Minnie May offers the prize of \$2 for the best essay. Subject, "Are the Mental Faculties of Women Equal to Those of Men?" All communications to be in our office by the 15th June.

Some Tested Recipes.

Scrape three-quarters of a cup full of maple sugar into a dry saucepan, put it on the stove and stir until it boils and begins to burn, stir in one wine-glassful of water and set aside; put one and one-half pints of fresh milk to boil, and stir in three parts of a cup of flour, mixed smooth with a little milk, let it boil until perfectly smooth, sweeten with brown sugar; then stir in the maple caramel; set aside to cool, and serve in a pretty glass dish. It can be flavored with vanilla or lemon.

SPRING SALADS.

Slice in thinnest slices a part of a nice white cabbage, put in a vegetable dish or salad bowl, and ornament the top with slices of pickled cucumber or red peppers; mix one tablespoonful of melted butter, half a cup of vinegar, and a teaspoon of mustard, pour over and serve.

POTATO SALAD.

Slice in thin slices six well-boiled potatoes; arrange the pieces neatly in your dish, and ornament with sprigs of parsley; boil two eggs hard; take the yolks and mix smooth with a little melted butter, pepper and salt; add half a cup of cream and serve; cut the whites of eggs in slices, and ornament the top.

CARROT SALAD.

Boil soft two large carrots; take off the skin and slice thin; arrange the slices neatly in a salad bowl or dish, and ornament with celery tops; pour over half a teacup of pickle vinegar, in which a little mustard has been mixed.

BEEF-ROOT SALAD.

Boil two beets tender, skin them and chop fine, with as much nice white celery; heap it up in a salad bowl, and sprinkle a little salt and pepper over.

ONION SALAD.

Slice thin two raw onions, and pour over them half a cup of sharp vinegar, pepper and salt; toss up with two spoons, and serve with cold meat.

ROLLED BARLEY PUDDING.

You may use what remains from breakfast, or put it raw into your pudding dish, it will take a little longer to bake; cover with milk; add sugar to taste, and eggs enough to make a custard. Any flavor you prefer.

PICNIC CAKE.

One cup of butter and two of sugar beaten to a cream; add five eggs beaten separately; three cups of flour, and half a cup of milk, and two teaspoonfuls of baking powder. Bake in a very slow oven; ice with brown sugar icing; half a cup of milk and one cup of brown sugar; boiled five minutes; stir until stiff.

Fashion Notes.

Where shall I begin to describe the bewildering beauties of dresses and bonnets this May morning? The colors are lovely, textures fine, and the variety endless. Gauze ribbons are among the novelties for hats. They are beautiful in color, but rather high-priced, as such novelties usually are, and I would not recommend any of my readers, who can only indulge in one new hat, to have it trimmed with gauze ribbon. It does not seem serviceable. The variety of shapes is endless, and all styles of faces can be suited. The pretty little bonnets for babies are very dainty, being in all shades, even to cream and white, and they are universally becoming to the darlings, too.

Parasols are in all shades, patterns and stripes, colored and plain. Long handles are still in favor, but if you are the fortunate owner of a short handled one, just rest content, for this fad has not all to recommend it. They are heavy to carry and awkward in many places—tram cars, for instance.

Gloves to match any shade of dress are to be had in almost all prices, and the dress goods never were prettier, or in greater variety of pattern and color.

Plaids are in some of the prettiest, but they do not seem to be much admired. Henrietta cloths are among the favorites. They wear well, do not crease, and embrace every shade of color.

Small mantles, heavy with jet lace or fringe, are pretty and snug for these chilly days, and may be had in all prices in silk, brocade, plush or fancy mantle cloths; and you can have them made at home from a pattern. They are very simple in design.

Jewelled lace is seen on summer bonnets, but it has a tawdry look, and will not be worn much, besides being very high-priced; and a smart shower or heavy dew would render your bonnet a thing to be scorned.

The favorite washing dresses are out in great variety, Scotch ginghams and Oxford shirtings being amongst the prettiest patterns, but our old favorite prints never were prettier, neater nor in greater variety. Prints can be made at home, and are cool, neat and lady-like for summer wear.

In sateens, some startling patterns are shown, both in color and design. Many are imitations of China silks, but the texture of sateen is too soft and apt to crease.

Hosiery, in black and colored, is in endless variety; and handkerchiefs bright, cheap and pretty.

Flowers figure on all bonnets and hats, from the simple daisy to the showy cornflower; but white nor cream flowers are not in style this season. All the brighter shades are shown, and buttercup yellow seems to predominate.

All petticoats are made with a yolk, to which the fullness is attached.

The white skirt is seldom seen in the street.

Colored skirts are universally worn, and are made of a variety of materials, the preference being given to silk. Many ladies make over old dress skirts for this purpose.

Plaid or striped ginghams are much used for washing skirts, and always look cool and fresh.

Many ladies have discarded the cotton chemise and wear the Jersey shirts, which can be purchased in all materials from silk to union. They

fit the figure snugly, and are light and comfortable.

Corsets are rapidly disappearing from a lady's wardrobe, and no young girls wear them. In their place they have double cotton waists, neatly fitted to the figure, and bone-buttoned in front, and they keep the figure trim without the compression of the corsets. Two such waists are necessary, so one can be laundered.

House gowns, or tea gowns, continue to be very popular, and are comfortable, as well as cool. The back is always tight in Princess form, and the fronts partially fitted by darts. Then the remainder of the front is left loose, being usually confined at the waist by a short strap to keep the fullness in place. The shoulders, neck and sleeves, in fact all the gown, should fit accurately. The sleeves can be worn of any shape the fancy dictates, and the skirt

Summer

Oh! summertime, of lovely flowers,
And gentle gales, of scented bowers—
Sweet perfume lingers every where!
In blossoms sweet, of fruits so fair;
The meadows, where the new mown hay
Scent the air all through the day.

The sky, with clouds of azure blue,
Each day brings us beauties new.
Lovely river flowing by,
Bears the breeze of summer nigh.
Birds of beauty, singing free,
Carrol songs in joy and glee.

Lambs are skipping o'er the grass—
Pretty, playful as they pass.
The animals seek the shady dell,
And drink the water from the well.
Children, playful, dancing by,
Pick the flowers and berries nigh.

Insects, flies, and buzzing bees—
Lovely butterflies we see.
We shall seek the pleasant shade,
And praise our God, who all hath made.
Scents of summer, oh! so fair,
What shall now with it compare!

—H. S. Pickett.

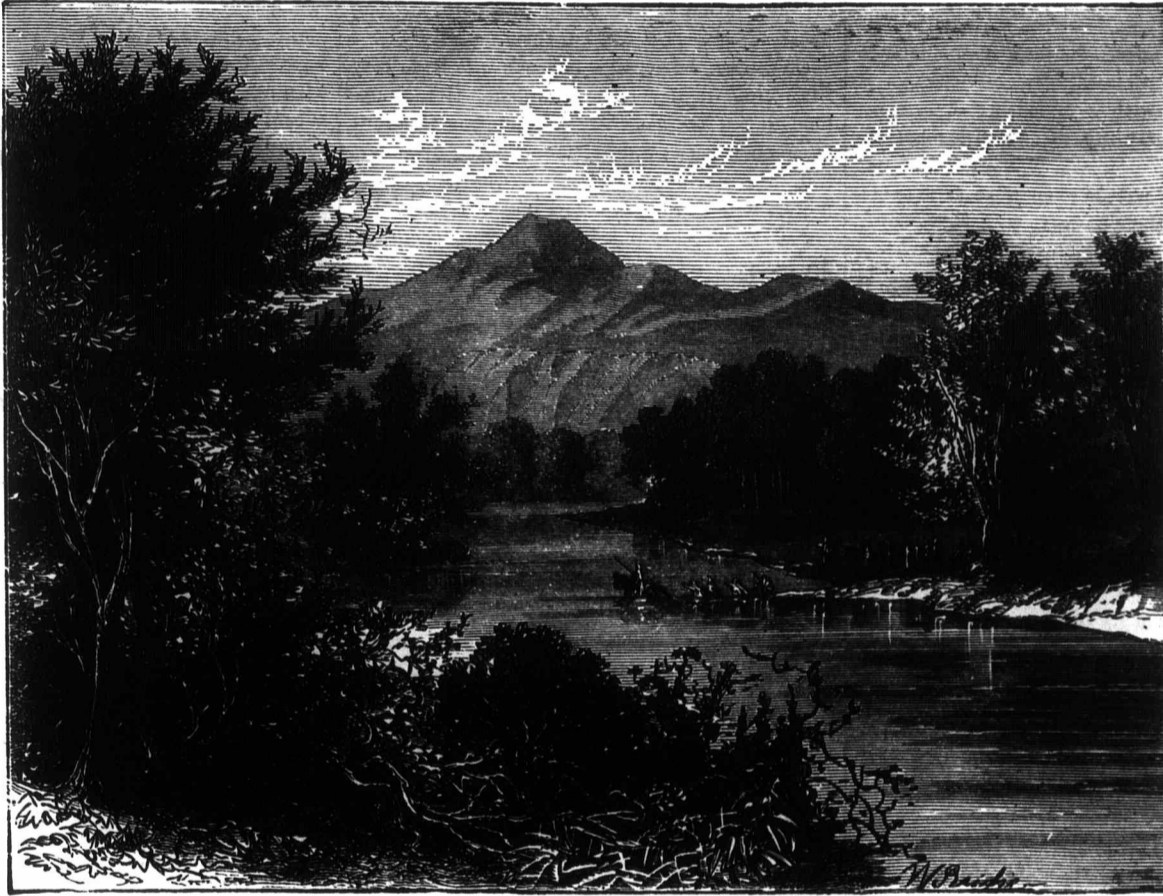
Our Library Table.

Illustrated Family Herald, \$1.00, is all that it represents itself to be, containing reading for young as well as old.

People's Illustrated Journal, \$1.00. Must be seen to be appreciated, containing, as it does, a large amount of sound reading.

The National Farmer comes to us as bright and readable as ever.

The Herald of Health, box 441, New York. For readable, reasonable, well-written articles, the Herald of Health heads the list, and the chapter upon the proper exercises for developing muscles in women must be read with both interest and profit; and if the rules for good health were observed by all as laid down in its pages, there would be no sufferers in the world. Price, \$1.00 per year.



SUMMER.

may be short or trained, and may be made of any material, from silk to calico, or batiste or sateen.

The blouse waist is still a favorite for widows and morning wear, and is useful to wear with skirts whose basque is no longer presentable, and can be made by any young woman handy with her needle and scissors.

The new dress materials come in all sorts of small figures, checks and stripes, and in all prices, from twenty-five cents to one dollar per yard; and in texture they are soft, and graceful in folds. The light shades of brown, tan and gray seem to predominate; but from the diversity of colors shown, no color will be more worn than the other.

Women who are approaching middle age should not wear an entire costume of black, as it deepens the lines on the face and renders the age more apparent.

Duster Bags for Use.

There is something exceedingly amusing to a practical housekeeper in the elaborate directions given for making duster bags out of satin and silk elaborately ornamented with embroidery. The first essential of a bag that holds the duster is that it, like the duster, can be laundered. It is a very convenient and neat practice to keep on hand a supply of well-hemmed dusters of cheese cloth, or some other soft cotton material. A pretty bag of colored linen, red satine or any other washable material is suitable for the making of duster bags. A spider, weaving his geometric web, or any other appropriate design may be used to ornament it. It may be decorated in various other South Kensington designs, making it a veritable thing of beauty. There is no necessity for resorting to such unsuitable material as satin or silk. Even a ribbon is unsuitable in a thing of this sort; it should be hung up by a ring of wood or gilt.

The Domestic Monthly, published at 853 Broadway, New York, is out in an entirely new cover. It contains a great number of illustrations of fashions and home art, besides many well-written stories and short articles.

A Credit to Canadian Journalism.—Those persons who have not seen the Dominion Illustrated since it has been so much enlarged and improved should secure a sample copy at once. Both from the literary and artistic point of view the Illustrated is a credit to Canadian journalism. Published in Montreal every week.

Demorest's Family Magazine, New York, for March, contains a well-written article upon the "Care of Palms" in the drawing-room, as they are now the fashionable ornamentation for indoors, and it is profusely illustrated as well; and an ably written chapter upon physical culture, with diagrams, is well worth the perusal. Kite-making as the Chinese do it, with illustrations,

would win the admiration of all boys, and various other articles too numerous to mention make a very attractive number. Price, \$2.00 a year.

* Good Housekeeping, Springfield, Mass., begins and ends with everything to tempt the housekeeper and encourage her to higher flights, and all is made so simple and plain, even a novice can do anything by the rules laid down. A number of miscellaneous articles complete this useful magazine. Price, \$2.40.

Useful Hints.

Dirty glass bottles may be cleaned with egg shells, sand, or common coarse salt.

Dip brooms once a week in hot soap suds, and they will wear much longer.

Take blood stains out only by saturating the spots with kerosene, then wash out with slightly warm water. Repeat this if not entirely removed.

Do not allow ashes, pie-juice or cinders in your oven. Keep it clean.

Bake all cakes with a folded newspaper between the pan containing them and the bottom of the oven.

Mice object to camphor gum, so it may be sprinkled around their haunts.

Rub tins with newspapers to make them shine.

Banish red ants by keeping a small bag of sulphur where they frequent.

Keep spices, bottles of extracts etc., well labelled, so mistakes will not occur.

After the juice is squeezed from lemons, the peels are useful to rub brass with, dipped in common salt, then brush with dry bathbrick.

Serve cabbage thinly sliced, raw, with a dressing of melted butter and vinegar poured over it for a variety.

A Regular Allowance.

One method would be the granting to the wife of a stated weekly or monthly allowance, for the household and other uses, in proportion to the income of the husband. To the man who says, "But I cannot pay my wife like a servant," the answer must be, "Certainly not." She is a partner, and as such is entitled to a share in the dividends. To the end that she may make the best use of such moneys she should know what she is to expect each week. Undoubtedly, the ideal remedy is perfect trust, confidence and a higher moral development of both men and women; but while mankind is moving steadily on to this the weaker must not be always going to the wall for the lack of a protecting hand.

No woman ought to marry without having some understanding with her future husband on this point. She need not take pencil and paper and make him set down the exact figures of her weekly allowance, but should let him thoroughly understand that she expects one. Any young girl should beware of the man who considers women irresponsible creatures; for, no matter how tender and considerate the master may be, no enlightened human being is happy as a slave.

The truest confession of love to God is made by deeds of love to God done to our fellow-men in his name.

Do we know anybody? Ah! dear me, we are most of us very lonely in the world; you who have anybody who love you, cling to them, and thank God.

Prize Essay.

THE BEST AND MOST SATISFACTORY WAY OF UTILIZING A SMALL SPACE OF GROUND FOR FLOWERS TO HAVE BLOOM FROM THE EARLY SPRING UNTIL LATE AUTUMN.

BY MRS. S. ROBINSON, WELCOME, ONT.

There are many who really love flowers and would like to cultivate them, but are prevented from doing so because they think that too much time and trouble are required to make them a success.

Of course it takes time and some trouble, too, to raise flowers successfully. There is nothing worth having but some trouble must be expended to obtain it. The true lover of flowers, however, will not be deterred from cultivating them by these considerations, for in their successful cultivation will be found ample recompense for all labor bestowed upon them.

Of course the average farmer's wife finds very little time to devote to a garden. Her household duties are generally too exacting to admit of much leisure; but if one thoroughly enters into the spirit of gardening, the culture of flowers will be regarded as a pleasant recreation instead of another link in the chain of the home drudgery.

If your time is limited it is useless to attempt the cultivation of a large space of ground. A small plot well cared for will prove more satisfactory and will produce flowers from early spring until the approach of winter. As to the form of your garden, the space at your command must determine it. I have seen a narrow border look beautiful all summer long, and a brilliant display can be obtained from a circular bed.

For early spring flowers one must depend on hardy bulbs. These must be planted in the fall. Snowdrops, scillas, crocuses, hyacinths, narcissus, early and late tulips keep up a succession until bedding plants are ready to take their place. Snowdrops are the first to greet us in the spring. They are not showy, but who does not regard with pleasure the small white flowers so bravely blooming while snow and frost still surround them. Closely following are the pretty blue scillas, and the bright crocuses. How lovely they are! What a mass of golden yellow, and purple, and white! How the bees revel in their dainty cups, and what delightful suggestions of coming beauty do these early flowers bring. For even before they are all gone the early tulips and hyacinths are bursting into gorgeous bloom, and we forget our first bright harbingers while admiring the brilliancy of their successors.

There is generally a scarcity of flowers in a small garden after the bulbs have done blooming, but if one has perennials there need be no death. Daisies, forget-me-nots, primroses, pinks and violets bloom in spring. It is also the season of the lily of the valley, and if you have planted pansies the fall before they will blossom abundantly at this season. In June, aquilegias, canturbury bells, feverfews, foxgloves, pyrethrum, sweet william, and peonies are in their glory, and before they are faded most of the annuals are in full bloom.

The following annuals are all good bloomers, and a selection can be made from them. Ageratum, asters, balsams, chrysanthemums, calendulas, calliopsis, marigolds, nasturtiums, phlox, petunias, sweet peas, stocks, verbenas,

and zinnias. The aster is a late bloomer, but it is superb in August and September. Ageratum is not showy, but the peculiar shade of its blue flowers is lovely for contrast in bouquets. Phlox and verbenas, when massed in colors that contrast or blend well, make a fine display. Petunias have not so much variety in color, but they make a grand show all summer long. For late blooming nothing can equal chrysanthemums, calendulas, phlox, petunias, stocks, and verbenas. I have gathered flowers from these when everything else was completely destroyed. To insure constant bloom, seed must not be allowed to form. For perfume, mignonette is unrivalled, and no garden is complete without it.

To have your annuals early, it is necessary to give them an early start. One can start a few boxes of seeds in the house; but I use a small hot-bed for most of my seeds. It need not be an expensive affair. You can grow a number of plants in a frame eight feet long and three feet wide. Instead of glass, I use a frame covered with oiled factory cotton. When it is likely to be cold, I cover with some thick material to exclude frost. By this method I can have my plants ready as soon as it is time to set out bedding plants. Most of the seeds will do nicely sown in the border when the weather becomes warm; but to have verbenas and stocks bloom early it is necessary to start them in the house or hot-bed.

In arranging various kinds of flowers in beds, individual taste is generally the guide. Some prefer planting in rows; others in masses or clumps. If you have only a border, it will be better to plant the tall varieties at the back; the low ones near the margin. The annuals can be planted between the bulbs without disturbing them. For beds, phlox, verbenas, petunias, and tom thumb nasturtiums, are very suitable. They make a finer show in beds massed together than in the border. The border is generally well occupied with perennials, and there would not be sufficient room for large masses of color. Gladiolus and dahlias, also zinnias are fine for border plants.

There is generally a little nook in the farm garden which can be devoted to wildflowers. Hepaticas, dicentra, trilliums, wild violets and ferns can all take care of themselves when once established. It will be a spot full of beauty, amply repaying you for the little trouble you have taken with them.

It is too much trouble to have a variety of plants to look after. One bed can be utilized by planting it with bulbs for early spring flowers, and afterwards filling it with geraniums. A bed of scarlet geraniums makes a grand display. But if you use geraniums your bulbs would have to be planted quite a distance apart, or else taken up after flowering. The roots of geraniums encroach more than seedlings, and it would disturb the bulbs too much when you lifted the plants in the fall. Seedling plants can be obtained from florists, but of course it is more expensive than raising them yourself.

If you once begin to take an interest in flowers you will soon understand their nature, and will find no difficulty in having a constant supply of bloom from early spring until late autumn.

One day while Gertie was watching a pet lamb which was quietly chewing its cud, she exclaimed, "O grandma, see! Grandma's little lamb is chewing gum."

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On Cats and Dogs.

BY JEROME K. JEROME.

What I've suffered from them this morning no tongue can tell. It began with Gustavus Adolphus. Gustavus Adolphus (they call him "Gusty" downstairs for short) is a very good sort of dog, when he is in the middle of a large field, or on a fairly extensive common, but I won't have him in-doors. He means well, but this house is not his size. He stretches himself, and over go two chairs and a what-not. He wags his tail, and the room looks as if a devastating army had marched through it. He breathes, and it puts the fire out.

At dinner-time, he creeps in under the table, lies there for a while, and then gets up suddenly; the first intimation we have of his movements being given by the table, which appears animated by a desire to turn summersaults. We all clutch at it frantically, and endeavor to maintain it in a horizontal position; whereupon his struggles, he being under the impression that some wicked conspiracy is being hatched against him, become fearful, and the final picture presented is generally that of an overturned table and a smashed-up dinner, sandwiched between two sprawling layers of infuriated men and women.

He came in this morning in his usual style, which he appears to have founded on that of an American cyclone, and the first thing he did was to sweep my coffee cup off the table with his tail, sending the contents full into the middle of my waistcoat.

I rose from my chair hurriedly, and remarking "———" approached him at a rapid rate. He preceded me in the direction of the door. At the door, he met Eliza, coming in with eggs. Eliza observed, "Ugh!" and sat down on the floor, the eggs took up different positions about the carpet, where they spread themselves out, and Gustavus Adolphus left the room. I called after him, strongly advising him to go straight downstairs, and not let me see him again for the next hour or so; and he, seeming to agree with me, dodged the coal-scoop, and went; while I returned, dried myself, and finished breakfast. I made sure that he had gone into the yard, but when I looked into the passage ten minutes later, he was sitting at the top of the stairs. I ordered him down at once, but he only barked and jumped about, so I went to see what was the matter.

It was Tittums. She was sitting on the top stair but one, and wouldn't let him pass.

Tittums is our kitten. She is about the size of a penny roll. Her back was up, and she was swearing like a medical student.

She does swear fearfully. I do a little that way myself sometimes, but I am a mere amateur compared with her. To tell you the truth—mind, this is strictly between ourselves, please; I shouldn't like your wife to know I said it, the women folk don't understand these things; but between you and me, you know—I think it does a man good to swear. Swearing is the safety-valve through which the bad temper, that might otherwise do serious internal injury to his mental mechanism, escapes in harmless vaporizing. When a man has said: "Bless you, my dear, sweet sir. What the sun, moon, and stars made you so careless (if I may be permitted the expression) as to allow your light and delicate foot to descend upon my corn with so much force? Is it that you are physically incapable of comprehending

the direction in which you are proceeding? you nice, clever young man—you!" or words to that effect, he feels better. Swearing has the same soothing effect upon our angry passions that smashing the furniture or slamming the doors is so well known to exercise; added to which it is much cheaper. Swearing clears a man out like a pen'orth of gunpowder does the wash-house chimney. An occasional explosion is good for both. I rather distrust a man who never swears, or savagely kicks the footstool, or pokes the fire with unnecessary violence. Without some outlet, the anger caused by the ever-occurring troubles of life is apt to rankle and fester within. The petty annoyance, instead of being thrown from us, sits down beside us, and becomes a sorrow, and the little offence is brooded over till, in the hot-bed of rumination, it grows into a great injury, under whose poisonous shadow springs up hatred and revenge.

Swearing relieves the feelings, that is what swearing does. I explained this to my aunt on one occasion, but it didn't answer with her. She said I had no business to have such feelings.

That is what I told Tittums. I told her she ought to be ashamed of herself, brought up in a Christian family as she was, too. I don't so much mind hearing an old cat swear, but I can't bear to see a mere kitten give way to it. It seems sad in one so young.

I put Tittums in my pocket, and returned to my desk. I forgot her for the moment, and when I looked I found that she had squirmed out of my pocket on to the table, and was trying to swallow the pen; then she put her leg into the ink-pot and upset it; then she licked her leg; then she swore again—at me this time.

I put her down on the floor, and there Tim began rowing with her. I do wish Tim would mind his own business. It was no concern of his what she had been doing. Besides, he is not a saint himself. He is only a two-year-old fox terrier, and he interferes with everything, and gives himself the airs of a gray-headed Scotch collie.

Tittums' mother has come in, and Tim has got his nose scratched, for which I am remarkably glad. I have put them all three out in the passage, where they are fighting at the present moment. I'm in a mess with the ink, and in a thundering bad temper; and if anything more in the cat or dog line comes fooling about me this morning, it had better bring its own funeral contractor with it.

Yet, in general, I like cats and dogs very much indeed. What jolly chaps they are! They are much superior to human beings as companions. They do not quarrel or argue with you. They never talk about themselves, but listen to you while you talk about yourself, and keep up an appearance of being interested in the conversation. They never make stupid remarks. They never observe to Miss Brown across the dinner-table, that they always understood she was very sweet on Mr. Jones (who has just married Miss Robinson). They never mistake your wife's cousin for her husband, and fancy that you are the father-in-law. And they never ask a young author, with fourteen tragedies, sixteen comedies, seven farces, and a couple of burlesques in his desk, why he doesn't write a play.

They never say unkind things. They never tell us of our faults, "merely for our own good". They do not, at inconvenient moments, mildly remind us of our past follies and mistakes. They

do not say, "Oh yes, a lot of use you are, if you are ever really wanted"—sarcastic like. They never inform us, like our *inamoratas* sometimes do, that we are not nearly so nice as we used to be. We are always the same to them.

They are always glad to see us. They are with us in all our humors. They are merry when we are glad; sober when we feel solemn, and sad when we are sorrowful.

"Hulloa! happy, and want a lark! Right you are; I'm your man. Here I am, frisking around you, leaping, barking, pirouetting, ready for any amount of fun and mischief. Look at my eyes, if you doubt me. What shall it be? A romp in the drawing-room, and never mind the furniture, or a scamper in the fresh, cool air, a scud across the fields, and down the hill, and won't we let old Gaffer Goggle's geese know what time o' day it is, neither. Whoop! come along."

Or you'd like to be quiet and think. Very well. Pussy can sit on the arm of the chair, and purr, and Montmorency will curl himself up on the rug, and blink at the fire, yet keeping one eye on you the while, in case you are seized with any sudden desire in the direction of rats.

And when we bury our face in our hands and wish we had never been born, they don't sit up very straight, and observe that we have brought it all upon ourselves. They don't even hope it will be a warning to us. But they come up softly; and shove their heads against us. If it is a cat, she stands on your shoulder, rumples your hair, and says, "Lor', I am sorry for you old man," as plain as words can speak; and if it is a dog, he looks up at you with his big, true eyes, and says with them, "Well, you've always got me, you know. We'll go through the world together, and always stand by each other, won't we?"

He is very imprudent, a dog is. He never makes it his business to inquire whether you are in the right or in the wrong, never bothers as to whether you are going up or down upon life's ladder, never asks whether you are rich or poor, silly or wise, sinner or saint. You are his pal. That is enough for him, and, come luck or misfortune, good repute or bad, honor or shame, he is going to stick to you, to comfort you, guard you, and give his life for you, if need be—foolish, brainless, soulless dog!

Ah! old staunch friend, with your deep, clear eyes, and bright, quick glances, that take in all one has to say before one has time to speak it, do you know you are only an animal, and have no mind? Do you know that that dull-eyed, gin-sodden lout, leaning against the post out there, is immeasurably your intellectual superior? Do you know that every little-minded, selfish scoundrel, who lives by cheating and tricking, who never did a gentle deed, or said a kind word, who never had a thought that was not mean or low, or a desire that was not base, whose every action is a fraud, whose every utterance is a lie; do you know that these crawling skulks (and there are millions of them in the world), do you know they are all as much superior to you as the sun is superior to rushlight, you honorable, brave-hearted, unselfish brute? They are men, you know, and men are the greatest, the noblest, and wisest, and best Beings in the whole vast eternal Universe. Any man will tell you that.

Yes, poor doggie, you are very stupid, very stupid indeed, compared with us clever men, who understand all about politics and philosophy,

and who know everything in short, except what we are, and where we came from, and whither we are going, and what everything outside this tiny world and most things in it are.

Never mind, though, pussy and doggie; we like you both all the better for your being stupid. We all like stupid things. Men can't bear clever women, and a woman's ideal man is some one she can call a "dear old stupid." It is so pleasant to come across people more stupid than ourselves. We love them at once for being so. The world must be rather a rough place for clever people. Ordinary folk dislike them, and as for themselves they hate each other most cordially.

But there,—the clever people are such a very insignificant minority, that it really doesn't much matter if they are unhappy. So long as the foolish people can be made comfortable, the world, as a whole, will get on tolerably well.

Cats have the credit of being more worldly wise than dogs—of looking more after their own interests, and being less blindly devoted to those of their friends. And we men and women are naturally shocked at such selfishness. Cats certainly do love a family that has a carpet in the kitchen more than a family that has not; and if there are many children about, they prefer to spend their leisure time next door. But, taken altogether, cats are libelled. Make a friend of one, and she will stick to you through thick and thin. All the cats that I have had have been most firm comrades. I had a cat once that used to follow me about everywhere, until it even got quite embarrassing, and I had to beg her, as a personal favor, *not* to accompany me any further down the High Street. She used to sit up for me when I was late home, and meet me in the passage. It made me feel quite like a married man, except that she never asked where I had been, and then didn't believe me when I told her.

Another cat I had used to get drunk regularly every day. She would hang about for hours outside the cellar door for the purpose of sneaking in on the first opportunity, and lapping up the drippings from the beer cask. I do not mention this habit of hers in praise of the species, but merely to show how almost human some of them are. If the transmigration of souls is a fact, this animal was certainly qualifying most rapidly for a Christian, for her vanity was only second to her love of drink. Whenever she caught a particularly big rat, she would bring it up into the room where we were all sitting, lay the corpse down in the midst of us, and wait to be praised. Lord! how the girls used to scream.

Poor rats! They seem only to exist so that cats and dogs may gain credit for killing them, and chemists make a fortune by inventing specialities in poison for their destruction. And yet there is something fascinating about them. There is a weirdness and uncanniness attaching to them. They are so cunning and strong, so terrible in their numbers, so cruel, so secret. They swarm in deserted houses, where the broken casements hang rotting to the crumbling walls, and the doors swing creaking on their rusty hinges. They know the sinking ship, and leave her, no one knows how or whither. They whisper to each other in their hiding-places, how a doom will fall upon the hall, and the great name die forgotten. They do fearful deeds in ghastly charnel-houses.

No tale of horror is complete without the rats. In stories of ghosts and murderers, they scamper through the echoing rooms, and the gnawing of their teeth is heard behind the wainscot, and their gleaming eyes peer through the holes in the worm-eaten tapestry, and they scream in shrill, unearthly notes in the dead of night, while the moaning wind sweeps, sobbing, round the ruined turret towers, and passes waiting like a woman through the chambers bare and tenantless.

And dying prisoners, in their loathsome dungeons, see, through the horrid gloom, their small red eyes, like glittering coals; hear, in the death-like silence, the rush of their claw-like feet, and start up shrieking in the darkness, and watch through the awful night.

I love to read tales about rats. They make my flesh creep so. I like that tale of Bishop Hatto and the rats. The wicked Bishop, you know, had ever so much corn, stored in his granaries, and would not let the starving people touch it, but, when they prayed to him for food, gathered them together in his barn, and then shutting the doors on them, set fire to the place and burned them all to death. But next day there came thousands upon thousands of rats, sent to do judgment on him. Then Bishop Hatto fled to his strong tower that stood in the middle of the Rhine, and barred himself in, and fancied he was safe. But the Rats! they swam the river, they gnawed their way through the thick stone walls, and ate him alive where he sat.

"They have whetted their teeth against the stones, And now they pick the Bishop's bones; They gnawed the flesh from every limb, For they were sent to do judgment on him."

Oh, it's a lovely tale.

Then there is the story of the Pied Piper of Hamelin, how first he piped the rats away, and afterward, when the Mayor broke faith with him, drew all the children along with him, and went into the mountain. What a curious old legend that is! I wonder what it means, or has it any meaning at all? There seems something strange and deep lying hid beneath the rippling rhyme. It haunts me, that picture of the quaint, mysterious old piper, piping through Hamelin's narrow streets, and the children following with dancing feet and thoughtful, eager faces. The old folks try to stay them, but the children pay no heed.

They hear the weird, witched music, and must follow. The games are left unfinished, and the playthings drop from their careless hands. They know not whither they are hastening. The mystic music calls to them, and they follow, heedless and unasking where. It stirs and vibrates in their hearts, and other sounds grow faint. So they wander through Pied Piper street away from Hamelin town.

I get thinking sometimes if the Pied Piper is really dead, or if he may not still be roaming up and down our streets and lanes, but playing now so softly that only the children hear him. Why do the little faces look so grave and solemn when they pause awhile from romping, and stand, deep rapt, with straining eyes? They only shake their curly heads, and dart back laughing to their playmates when we question them. But I fancy myself they have been listening to the magic music of the old Pied Piper, and, perhaps, with those bright eyes of theirs, have even seen his odd, fantastic figure, gliding unnoticed, through the whirl and throng.

Even we grown-up children hear his piping now and then. But the yearning notes are very far

away, and the noisy, blustering world always is bellowing so loud, it drowns the dream-like melody. One day the sweet sad strains will sound out full and clear, and then we too shall, like the little children, throw our playthings all aside, and follow. The loving hands will be stretched out to stay us, and the voices we have learnt to listen for will cry to us to stop. But we shall push the fond arms gently back, and pass out through the sorrowing house and through the open door. For the wild strange music will be ringing in our hearts, and we shall know the meaning of its song by then.

I wish people could love animals without getting maudlin over them, as so many do. Women are the most hardened offenders in such respects, but even our intellectual sex often degrade pets into nuisances by absurd idolatry. There are the gushing young ladies who, having read David Copperfield, have thereupon sought out a small, long-haired dog of nondescript breed, possessed of an irritating habit of criticising a man's trousers, and of finally commenting upon the same by a sniff, indicative of contempt and disgust. They talk sweet girlish prattle to this animal (when there is any one near enough to overhear them), and they kiss its nose, and put its unwashed head up against their cheek in a most touching manner; though I have noticed that these caresses are principally performed when there are young men hanging about.

Then there are the old ladies who worship a fat poodle, scant of breath and full of fleas. I knew a couple of elderly spinsters once who had a sort of German sausage on legs, which they called a dog, between them. They used to wash its face with warm water every morning. It had a mutton cutlet regularly for breakfast; and on Sundays, when one of the ladies went to church, the other always stopped at home to keep the dog company.

There are many families where the whole interest of life is centered upon the dog. Cats, by the way, rarely suffer from excess of adulation. A cat possesses a very fair sense of the ridiculous, and will put her paw down kindly but firmly upon any nonsense of this kind. Dogs, however, seem to like it. They encourage their owners in the tomfoolery, and the consequence is, that in the circles I am speaking of, what "dear Fido" has done, does do, will do, won't do, can do, can't do, was doing, is doing, is going to do, shall do, shan't do, and is about to be going to have done, is the continual theme of discussion from morning till night.

All the conversation, consisting as it does of the very dregs of imbecility, is addressed to this confounded animal. The family sit in a row all day long, watching him, commenting upon his actions, telling each other anecdotes about him, recalling his virtues, and remembering with tears how one day they lost him for two whole hours, on which occasion he was brought home in a most brutal manner by the butcher boy, who had been met carrying him by the scruff of his neck with one hand, while soundly cuffing his head with the other.

After recovering from these bitter recollections, they vie with each other in bursts of admiration for the brute, until some more than usually enthusiastic member, unable any longer to control his feelings, swoops down upon the unhappy quadruped, in a frenzy of affection, clutches it to his heart, and slobbers over it, whereupon, the others, mad with envy, rise up,

and, seizing as much of the dog as the greed of the first one has left to them, murmur praise and devotion.

Among these people, everything is done through the dog. If you want to make love to the eldest daughter, or get the old man to lend you the garden roller, or the mother to subscribe to the Society for the Suppression of Solo-cornet Players in Theatrical Orchestras (it's a pity there isn't one, anyhow), you have to begin with the dog. You must gain its approbation before they will even listen to you, and if, as is highly probable, the animal, whose frank, doggy nature has been warped by the unnatural treatment he has received, responds to your overtures of friendship by viciously snapping at you, your cause is lost forever.

"If Fido won't take to any one," the father has thoughtfully remarked beforehand, "I say that man is not to be trusted. You know, Maria, how often I have said that. Ah! he knows, bless him."

Drat him!

And to think that the surly brute was once an innocent puppy, all legs and head, full of fun and play, and burning with ambition to become a big, good dog, and bark like mother.

Ah me! life sadly changes us all. The world seems a vast horrible grinding machine, into which what is fresh and bright and pure is pushed at one end, to come out old and crabbed and wrinkled at the other.

Look even at Pussy Sobersides, with her dull, sleepy glance, her grave, slow walk, and dignified, prudish airs; who could ever think that once she was the blue-eyed, whirling, scampering, head-over-heels, mad little firework that we call a kitten.

What marvelous vitality a kitten has. It is really something very beautiful the way life bubbles over in the little creatures. They rush about, and mew, and spring; dance on their hind legs, embrace everything with their front ones, roll over and over and over, lie on their backs and kick. They don't know what to do with themselves, they are so full of life.

Can you remember, reader, when you and I felt something of the same sort of thing? Can you remember those glorious days of fresh young manhood; how, when coming home along the moonlit road, we felt too full of life for sober walking, and had to spring and skip, and wave our arms, and shout, till belated farmers' wives thought—and with good reason, too—that we were mad, and kept close to the hedge, while we stood and laughed aloud to see them scuttle off so fast, and made their blood run cold with a wild parting whoop; and the tears came, we knew not why. Oh, that magnificent young LIFE! that crowned us kings of the earth; that rushed through every tingling vein, till we seemed to walk on air; that thrilled through our throbbing brains, and told us to go forth and conquer the whole world; that welled up in our young hearts, till we longed to stretch out our arms and gather all the toiling men and women and the little children to our breast, and love them all—all. Ah! they were grand days, those deep, full days, when our coming life, like an un-seen organ, pealed strange, yearful music in our ears, and our young blood cried out like a war-horse for the battle. Ah! our pulse beats slow and steady now, and our old joints are rheumatic, and we love our easy chair and pipe, and sneer at boys' enthusiasm. But, oh! for one brief moment of that god-like life again.

Uncle Tom's Department.

The Grumbler.

HIS YOUTH.

His coat was too thick and his cap was too thin;
He couldn't be quiet, he hated a din;
He hated to write, and he hated to read;
He hated to cipher in very deed.
He must study and work over books he detested;
His parents were strict, and he never was rested.
He knew he was wretched as wretched could be;
There was no one so wretchedly wretched as he.

HIS MAJORITY.

His farm was too small, and his taxes too big;
He was selfish and lazy and cross as a pig.
His wife was too silly, his children too rude,
And just because he was uncommonly good.
He never had money enough or too spare;
He had nothing at all fit to eat or to wear.
He knew he was wretched as wretched could be,
There was no one so wretchedly wretched as he.

HIS OLD AGE.

He finds he has sorrows more deep than his fears;
He grumbles to think he has grumbled for years;
He grumbles to think he has grumbled away
His home and his fortune, his life's little day.
But, alas! 'tis too late, it is no use to say
That eyes are too dim, that his hair is too gray.
He knows he is wretched as wretched could be;
There is no one more wretchedly wretched than he.

MY DEAR NIECES AND NEPHEWS:—

This beautiful May weather calls up all the poetry in one's nature. If you look up to the blue sky above in its spring setting of soft cloud masses, or to the green fields below gemmed with flowers, there is something in each and all to rouse the love of the beautiful, and start new trains of thought in every youthful mind. To each of my young readers, were they at hand, I should like to present a bouquet such as T. B. Aldrich gives when he says:—

"Take them and keep them,
Silvery thorn and flower,
Plucked just at random
In the May weather—
Snowdrops and pansies,
Sprigs of wayside heather,
And five-leaved wild-voce
Dead within an hour."

Just such a bouquet may my nieces and nephews gather as they walk to school in the early morning. The dewy grass so fresh, the emerald leaves, the pink and white blossoms on the trees, the bright dandelion looking forth from his green bed, the blue violets in the lane, the pretty spring flowers in the woods, with scent so exquisite none can imitate. Above all, the birds are singing as they have been since the first peep of dawn over the distant hills.

O the beauty, the freshness, the purity which surrounds my farmer girls and boys in their country homes! How dingy beside seem the streets and the blazing sun on the rows of houses in the town; how pure the air, to the close, gaseous, smoky air there. How free and healthy, merry and happy are the bright faces in the one, to the tired, wan, sickly, old faces of the boys and girls we meet in that part of the town where the workmen's families gather. And, yet, can it be true, that that niece of mine is asking me what her chances are in the city? My dear child, your "chances" are that you will lose your health, lose much of that maiden modesty which gives you beauty, as the bloom on the peach's side; that you will be disappointed; that your company will be what you can get, not what you like; that you will have long hours of work, and little time for thought. Shall I add more? If you have sensible friends in the city, if you have means, if you have a good position, you have what will, to some extent, give you a standing; but if you go alone and friendless to earn your living there, leaving home and loved ones behind you, you go not with my sanction, and you go to meet loneliness

and trial, which you may perhaps be proud enough not to own. Go to the city, if you can afford it, to learn there what will fit you for a noble life-work, but hesitate long and think well before you leave your country home, where your presence is needed.

To that handsome young nephew, with open and sunburnt face, who thinks farming too slow a way of making money, let me say—riches are not everything. They do not bring happiness. A wiser head than yours and mine together asked for "neither poverty nor riches." The farm will yield you an independent living. You may be an honest and a happy man as you sow the seed and reap your harvest, but he who is in haste to be rich forgets the means he uses. Riches, with the curse of dishonesty hanging over them, bring no pleasure.

"Better than grandeur, better than gold,
Than ranks or titles a hundred-fold;
Is a healthful body, a mind at ease,
And simple pleasures that always please."

Old-fashioned advice, do you say? Well, the old-fashions in their turn become the newest, and good advice is a perennial. It does not grow old.

Your affectionate

UNCLE TOM.

MY DEAR NIECES AND NEPHEWS:—

Because I reduced the number of puzzles to be published each month this year, is no reason why the competition should be less keen. I should very much like to hear from more puzzlers, especially the girls, and for their encouragement I will offer a handsomely bound book to the one sending in the best original puzzles during the next three months. This offer is open only to those who have never won a 1st or 2nd prize in the *ADVOCATE*. The puzzles need not exceed one or two each month; it is quality and not quantity I want.

UNCLE TOM.

Five Ways to Cure a Cold.

1. Bathe the feet in hot water and take a pint of hot lemonade. Then sponge with salt water and remain in a warm room.
2. Bathe the face in very hot water every five minutes for an hour.
3. Snuff up the nostrils hot salt water every three hours.
4. Inhale ammonia or menthol.
5. Take four hours active exercise in the air. A ten grain dose of quinine will usually break up a cold in the beginning. Anything that will set the blood in active circulation will do it, whether it be drugs, or the use of a bucksaw.

Except the exercise, the best remedy is the quinine, preceding it by a hot foot bath, and following the bath by a glass of hot lemonade.

Things to Remember.

Use soft water and a few drops of turpentine and a little sugar with your stove polish.

Use ammonia in the water you wash glass in.

Use a clam shell to scrape pots and frying-pans with.

Use kerosene oil to clean your wash-boiler.

Use turpentine and machine oil to polish your sewing machine, and rub briskly.

Use flannel to wash the children with in winter, and they will be good-natured while bathing.

It is hard to say whether God discovers more love in preparing heavenly mansions for the soul than in preparing the souls for heavenly mansions.

FIRST PRIZE STORY.

The Teachers' Convention, and What Came of it.

BY MISS ADA ARMAND, PAKENHAM, ONT.

Last May, while visiting my cousins at Almonte, one of whom is a school teacher, the annual convention of the Lanark teachers was to be held in Carleton Place. My cousin was anxious to attend, but did not like to spend two days, and as the trains were running inconveniently she was very undecided. The evening previous we visited the Principal of the high school, and he strongly advised her to attend, and proposed that I accompany her. He said that he and three of the other teachers purposed walking down (distance six miles), and if not afraid of the journey, they would be glad of our company, so we decided to go.

It was a lovely morning. We started about seven o'clock, and arrived shortly after the meeting had commenced. There were present about one hundred teachers; also Dr. McLellan, of Toronto, and the County Inspector. The programme was excellent, instructive and amusing. Dr. McLellan gave an able lesson on "Psychology."

So delighted were we with our visit that we concluded to remain for the doctor's lecture on "Literature," which took place at night, and we could return by the midnight train. In the interim between the meeting and the lecture, the gentleman at whose house we were staying, took his team and drove us around the town and adjoining country for about an hour and a half.

The lecture proved well worth waiting for, and as there was music and readings we spent a very enjoyable evening.

About 11 p.m. we adjourned to the depot to await the coming of our train, but alas! it was proverbially late. I must here inform you that Carleton Place is where the Ottawa and Toronto trains meet, and this evening there were several foreigners waiting for the north-bound express. There were ten Chinamen, several Assyrians, and some Russians.

There was, besides ourselves, only one lady traveller, and she appeared utterly worn out, her head resting on a shawl thrown over her valise, and fast asleep. She was young, fair and pretty, and many were our calculations as to whither she came and where she was going. Soon after our arrival she awakened, and we learned that she was unable to speak any English. We made several futile attempts to converse with her; at length she took from a small grip-sack a little note-book and commenced writing therein. We signified our desire to examine it, whereupon she showed it to us. The writing appeared very nice, but, of course, to us was unintelligible; on the fly-leaf her name was written in another hand, and we contrived to spell it out—Josephine Vesling, Christiana. Oh! how delighted she appeared to hear us pronounce her name.

A gentleman then approached and told us that she was a Norwegian, and had travelled direct from Norway, and was en route for St. Paul, Minn. She was entirely alone, and had by chance met one of her countrymen at the depot to whom she told her story, and who had asked him to take care of her as far as he would be going, which was to Winnipeg. We told him we were going a few miles on that train, and he

requested us to help her arrange a couch out of the seats in the car, as she had not a sleeper. He then consigned her to our care, and we talked incessantly—she in Norwegian and we in English. She learned to say a few phrases in English, and I could count to twenty in Danish, which proved nearly identical with her language. Thus employed the time passed rapidly, and soon the buzz of people moving about informed us that the long-awaited train was arriving. We helped our protegee arrange her baggage, and soon after we were cozily ensconced in a comfortable coach. We continued our chat for the few minutes that sufficed to bring us to our destination. We then bade adieu to the lonely girl, who seemed so cheered by our company, and feeling as if parting from a friend, we made ready to alight.

At Almonte our train and the Winnipeg south-bound had to pass, and there was considerable shunting done. At length everything seemed quiet, and we prepared to get off, but there we were, hemmed in on either side by stationary freights and half-an-acre from the platform. There were two gentlemen intending to get off, but they thought the train would move nearer the station, and advised us to wait, which we did. The train did move—and to our infinite dismay kept moving, the gentlemen meanwhile tugging violently at the bell-rope, but the bell would not ring, nor the conductor be found till we were about a mile from town, when it was useless to stop, so on we went to the next station, which is Pakenham.

It was now between 3 and 4 a. m., but having many friends in the village, I did not mind our escapade. We rapped up a friend, and got into bed, slept till 8.30 a. m., took breakfast, and returned on the morning train to Almonte.

Our adventures were now at an end, and we were willing to admit that we had sufficient to satiate even our romantic appetites.

SECOND PRIZE STORY.

The Great Fire of 1887.

BY MISS ADA T. SELLAR, SOURISFORD, MAN.

It was in the above mentioned year, about the middle of October, that the fire I am about to describe came rolling onward, carrying destruction in its path, and leaving a blackened waste, where before had been a luxuriance of waving prairie grass, which created a fire as swift and sure in its work as it was grand to see.

The fire reached our place about ten o'clock a. m. One of my brothers being away at the post office at the time of its arrival, the rest of us did not expect to see him back before the fire had passed, but imagine our surprise when he came riding up just in time to witness a most comical sight, in the shape of a part of us (myself included) out on a plowed field with wet pillow-cases over our heads, to exclude the smoke from being inhaled into our lungs.

At the house all was confusion. Mamma and some of the others were gathering clothing and various things around the house, and tying them up in sheets and quilts, also gathering jewellery and other valuables, and carrying them out on to the plowing for better safety, in case the house should take fire, which, as it was, it was in great danger of doing.

One of our neighbors who attempted to reach home, but who was unable to do so on account of the fire, and who lost all his buildings except his house, as did many others, came here to see if he could be any assistance.

The fire jumped the creek in various places, and as all our buildings were together close to

the creek, which is heavily wooded just here, you may imagine the perilous position they were placed in when they took fire, and burning branches began to fly with the wind.

The stable and granary were under one roof, and as there was considerable litter and straw around the stable, it was not long before it caught fire from a burning branch, and in spite of our utmost efforts the flames could not be extinguished, so Mr. Shirriff and my eldest brother tried to save what they could from the building. While they were getting out some things from the stable, a valuable retriever dog followed them in, but did not come out again, and it was not long before a mournful howl proclaimed to us the fate that awaited him.

Some of our neighbors had fowls and pigs burned up, but our pigs stayed in the creek, with just their heads above water, until the fire had passed, which it was not long in doing, burning every stable along the creek for a distance of six miles.

Puzzles.

1—ANAGRAMS.

Some naughty boys I saw one day Indulge in games so mean, They took a pony old and gray And painted it all green; Amid nods and cheers from all the rest, One lad hit it a rap, And as they laughed more loudly, He tied on it a cap. To see them mar a nag like that Did vex me much indeed; Ah cared I not if they themselves A similar fate received.

ADA ARMAND.

2—DROP VOWEL.

n-d-y-t-t-m-l-t-s-th-wh-l-f-l-f; -ll-s-r-r-w.-ll-j-y-r-r-m-s-r-d-th-r-n; Th-b-n-d-f-r-p-r-s.-r-r-n-b-l-st-str-f. Th-nly-c-n-t-r-s-g-n-s-r-t-w-n.

H-l-n H-nt J-cks-n.

A. T. REEVE.

3—ILLUSTRATED REBUS.



4—HIDDEN BIRDS' NAMES.

- 1—William was crowned king of England on Christmas Day. 2—They tell me that the snow lodged heavily along the road. 3—Our pew-rent is paid up to date. 4—I thought him to be a popular kind of a chap. 5—The boy through awkwardness was left behind.

LOUISE F. REDMOND.

5—BEHEADINGS.

Behead a spice and leave friendship. Behead money and leave a kind of tree. Behead a vapor and leave to draw. Behead a girl's name and leave an insect. Again, and leave a frozen substance. Behead a flower and leave a liquid. Behead a part of the body and leave a fish. Behead a garment and leave insects.

WM. H. WHITEKER.

Answers to April Puzzles.

- 1—Longfellow. 2—Without. 3—"Be content with small beginnings would you win great ends." 4—Election Day.

Names of those who have Sent Correct Answers to April Puzzles.

Ada Armand, J. St. Clare Barnaby, Em. Skelley, J. Irvine Devitt, Henry Reeve, M. A. Suddaby, Jessie Ellis, Elsie Mason.

MA... A woman... Ho... to... evil... thoug... that... consi... little... deal... If... tryin... that... ings... their... but m... derog... encou... them... notice... It be... degre... to in... place... for he... which... harvest... seed s... NI... Tube... Pampl... Shippi... Wire... Prunin... Sweet... Conap... Chath... Road... Dahlia... Dairy... Plants... Clydes... Free... Jersey... Berks... Inprov... Shrops... Berks... Trotter... Stand... Farms... Shorh... Shrops... Road... Nursen... Spray... Holste... H... Norw... hedges... packing... Vitae... and Sw... to 3 ft... Priced... 305-a... PRU... All... Sciens... work g... 304-... Norw... line of... the und... tion at... plant... would... of your... prices... H... 206-y-

A beautiful woman pleases the eye; a good woman pleases the heart; the first is a jewel, the second a treasure.

How often is it difficult to be wisely charitable—to do good without multiplying the sources of evil! To give alms is nothing, unless you give thought also. It is not written, "Blessed is he that feedeth the poor," but, "Blessed is he that considereth the poor." A little thought and a little kindness are often worth more than a great deal of money.

If parents would occasionally spend the time trying to help their children prepare their lessons, that they give to hearing them retail the happenings in the schoolroom, they would be giving their children practical lessons not only in brain, but moral culture. There are few things more derogatory to the child's moral growth than this encouragement of tale-bearing. It grows upon them, weakens their character, leads them to notice trifles and gives to them undue importance. It belittles and injures them in a far greater degree than it possibly can those whom it seeks to injure, for though a teacher may lose her place through such things, it is merely temporary for her; but for the child it is a life-long lesson which grows with his growth, and yields a harvest seemingly much out of proportion to the seed sown.

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- Berkshires and Cotswolds—J. G. Snell & Bro.
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- Rings—Sears & Co.
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Extracts from a few of the many satisfactory letters received from our patients.

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MR. SAMUEL HUGHEY, of Oak Ridges, Ont., says: "I was a victim of Asthma for 13 years, and had tried in vain to find relief. Hearing of Dr. R. & J. Hunter's treatment by inhalation, I applied to them; their treatment worked wonders. I can now breathe with ease, sleep without cough or oppression, and am entirely cured."

MR. & MRS. W. R. BISHOP, of Sherwood, Ont., says: "Our daughter had Catarrh of the throat, and had tried in vain to find relief. Her disease extended to the lungs. We finally consulted Drs. R. & J. Hunter; after using their treatment of inhalation for one month she began to improve. She is now cured. We heartily recommend this treatment to all those afflicted with this disease."

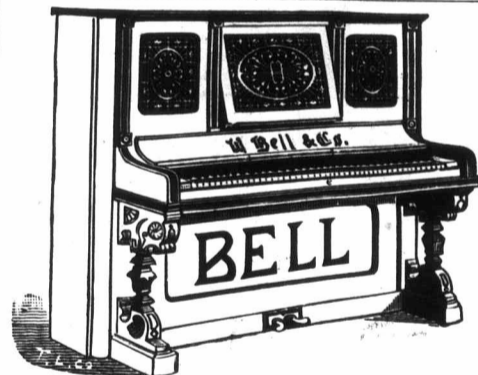
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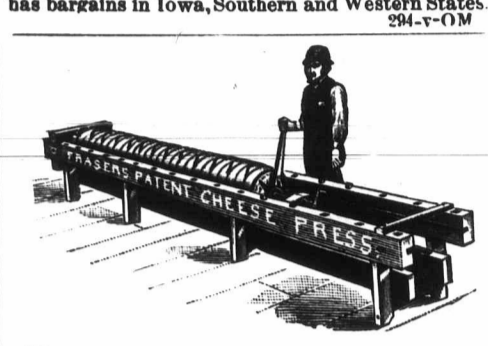
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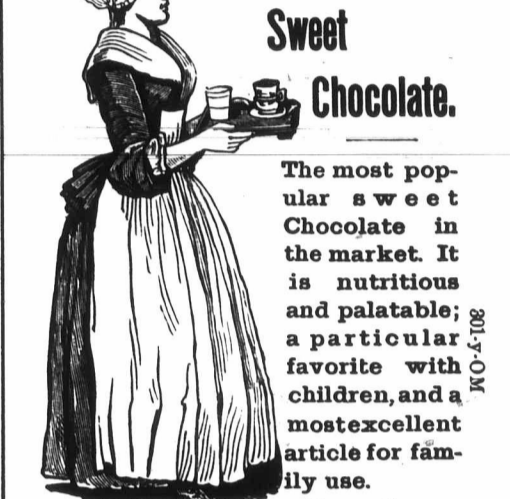
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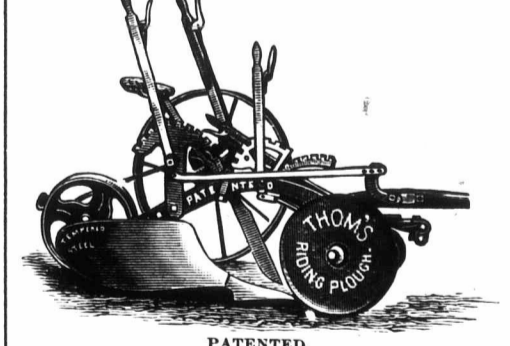


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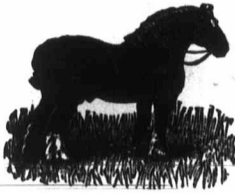
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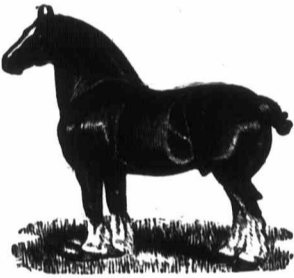
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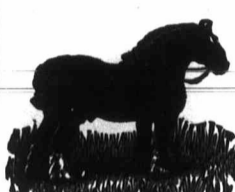
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Athelstan, P. Q.

IMPORTED & CANADIAN-BRED CLYDESDALES.

BEATTIE & TORRANCE, Summerhill Farm, Markham, Ont., Importers of and dealers in Imp. Clydesdale Stallions and Mares, of the choicest strains; also Reg. Canadian-breds always for sale. 304-y-OM



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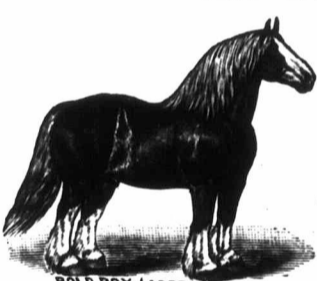
We have on hand and for sale a superior lot of imported and home-bred Clydesdale Stallions and Mares. Several of them were prize-winners at the leading shows in Scotland and Canada. Also a few choice SHETLANDS. Prices to suit the times.

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I have still a few of the twelfth yearly importation of high quality on hand, notably, James Arthur (5888); sire Macgregor (1477); sire of dam Prince of Wales (673); Machelmie (7009); sire Macgregor (1487), own brother to the great breeding horses, Macpherson, Macalun and Energy.



Yorkshire Coachers. Seven imported mares from Druid, Darnley, etc.; four in foal. Also some good Shetlands. Having every facility for purchasing direct from the breeder myself, neither acting agent in Scotland or here, and paying cash, I am prepared to sell on any terms agreed upon. Quality and pedigree of the best. Give me a call. The farm is situated 40 miles southwest of Montreal, on the G. T. R., and 100 miles east of Ottawa, on the C. A. R. Station on the farm. 291-y-OM ROBERT NESS, HOWICK P. O., Que.

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Choice Registered Canadian-bred Clydesdale Colts and Fillies. Shropshires, imported and Home-bred of the very best strains. Berkshires, bred from Snell Bros.' stock. Prices right. Always glad to show stock. T. M. WHITESIDE, Ellesmere P. O., Ont., Agincourt Station on C. P. R. and Midland Div. G. T. R., 1 mile. 304-y-OM

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VICTORIOUS!

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SHIRES, CLYDESDALES, SHORTHORNS, HEREFORDS, JERSEYS, AYRSHIRES, KERRIES, SHROPSHIRE, OXFORDS, HAMPSHIRE AND SOUTHDOWNS, DORSETS, LEICESTERS, LINCOLNS, AND COTSWOLDS, BERKSHIRES AND YORKSHIRES.

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By Walsingham (sire of Latitude 2,193), son of George Wilkes; dam Ladoza (sister to Mambrino King), by Mambrino Patchen. Service Fee, \$30.00, with return privilege.

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By Princess; sire of Trinket 2,14. Greenlander 2,154, etc.; dam Agnes (dam of Star Wilker, sire of four in 2,30 list). Service Fee, \$20.00, with return privilege.

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STANDARD-BRED TROTTERS
 Headed by Mambrino Rattler, alias Crown Prince (12447), the best bred son of Mambrino Patchen in the Dominion. Write for his terms of service. Also standard Mares of choice breeding. A grand young Stallion for sale. **A. M. Vansiele,** Jerseyville Stock Farm, Jerseyville, Ont. 305-y-OM

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STALLIONS:
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Shorthorns for Sale.
 Bulls and heifers, sired by Laird of Kinellar, of the Campbell-Buchan Lassie family, from which we have some fine show animals, several prize takers at the Provincial Show, 1889.

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Shorthorns, English Berkshires & Improved Large White Yorkshire Swine. Some choice Shorthorn Bulls from six to sixteen months old, the get of "Roan Prince." A number of first-class Berkshire Boars fit for service; also young pigs, six weeks old, good quality and from imp. stock. Also Improved Yorkshires of same age and from imported stock. Prices reasonable. 305-y-OM **H. J. DAVIS, Woodstock, Ont.**

Shorthorns, Yorkshires and Berkshires.
 My Shorthorns are bred from stock imported by such noted breeders as Arthur Johnson, J. C. Snell and Green Bros. I have a few choice heifers for sale. My Improved Large Yorkshires were imported directly from the famous herd of C. E. Duckering, Kirton, Lindsay, England. I have some young pigs imported in their dam, for sale. Prince Regent, bred by Snell Bros., heads my Berkshire herd. Times are hard and my prices are right. Write or call. **A. F. MCGILL, Hillsburg, Ont.** 302-y-OM

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We breed Scotch Shorthorns, founded on choice representatives, from the famous Aberdeen herds of Duthie, Marr and E. Cruickshank, headed by the Cruickshank Victoria-Nouparell bull INDIAN PRINCE. Produce only for sale. Address—

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Extensive breeders and importers of Clydesdales, Shorthorns and Shropshires. Business established in 1848. We always have on hand and for sale a large number of imported, and home-bred animals. A visit, or correspondence solicited. 294-y

FOR SALE. The Imported Campbell-bred bull Killery = 6377 = and two grand yearling bulls; a few choice heifers and 40 extra good Berkshire Pigs. Prices low. **E. JEFFS & SON, Bond Head.** 294-y-OM

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HOME-BRED AND IMPORTED
Shropshire Sheep.
 The imported 2-year-old Aberdeen Hero
 And a choice lot of young bulls of our own breeding. Some No. 1 imported Ewes & Lambs FOR SALE.
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Shorthorns, Berkshires.
 Representatives of the Scotch families are MINA'S & STRATHALLAN'S. The sires in use are the Sweepstakes Silver Medal Bull **SIR CHRISTOPHER** and **RED KNIGHT**, winner of 1st prize at Toronto and London in 1888; also, prize-winning Berkshires. 297-y-OM

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Have always on hand and for Sale young Bulls and Females, which we offer at reasonable prices.

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and improves the health of all animals by its use. One trial will prove its usefulness and economy. Send for testimonials, prices, &c., &c. 298-y-MO

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My motto: "No business no harm."
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Three yearling Bulls for sale from imported sire and dam. Good, strong animals.

PRICES TO SUIT THE TIMES.

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FOR SALE.

THE RICHLY-BRED YEARLING BULL

RASSELAS

A. J. C. C. 24805.

Dam Imp. Thaley 14250, whose sire, Guy Fawkes—F-251—H C, is full of the blood of the celebrated Coomassie. Guy Fawkes is the sire of a long list of performers, including Island Star (butter record, 21 lbs. 3 ozs. per week) and Thaley, the dam of Rasselas (butter record, 16 lbs. 5 ozs. per week). His sire is Romeo of St. Lambert's 2nd 17502, who is 34% per cent. Victor Hugo, 25 per cent. Stoke Pogis, 96% per cent. Mary Ann St. Lambert.

Rasselas is a grand individual, and closely resembles his prize-winning sire.

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T. E. BRAMELD, Proprietor, offers for sale, at very reasonable figures, choice A. J. C. C. Jerseys from his prize-winning herd; also a few extra good high-grade Cows and Heifers, and registered Improved Large Yorkshire Pigs. Write for prices. P. O., Station and Telegrams, Oakville, on G.T.R. 302-f-OM

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Prince of Oaklawns (imp.) 12851, heads the herd. Young stock for sale. Also a few choice un-registered and high grade cows.

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Some of the finest heifers and calves I ever bred, and at lower prices than I ever offered before. Registered, and express paid by me to any reasonable point. Herd headed by the famous pure St. Lambert bull, Canada's Sir George, prize winner every time shown, son of Alle of St. Lambert, 295 lbs. butter in one week; Massena's son, pure St. Lambert sire, dam the great Massena, one of the wonders of the Jersey world, estimated to have made 902 lbs. 2 oz. butter in one year and eleven days—actually yielded 9,099 lbs. milk in one year and eleven days; Signal of Belvedere, inbred Signal, dam the celebrated prize cow, Miss Sate-nella, 20 lbs. 6 oz. butter in one week, on second calf only.

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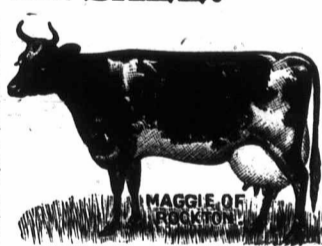
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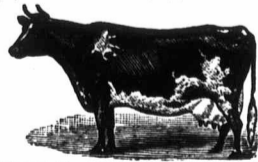
I have at present one of the largest & best herds in Ontario, which has been very successful in the prize ring. They are deep milkers and of a large size. Bulls, cows and heifers for sale always on hand.



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I have on hand a large herd of finely-bred Ayrshires of splendid quality. My Clydesdales are also first-class. Stock for sale. Prices and terms liberal.

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PARK HILL HERD OF AYRSHIRES.

This herd took all the first prizes in Quebec in 1887 and 1888, and in Ontario in 1889, in competition with all the leading herds. Young stock for sale, all of which is from the celebrated bull ROB ROY (3971), which is at the head of the herd.

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I have a few very nice pure-bred registered Holsteins, bulls and heifers, for sale at very reasonable figures. Write or come and see me. Also one or two high grades.—JNO. A. LINE, Sherwood, Ont., Richmond Hill Station. 304-f-OM

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All imported or bred from imported stock. "Sir Mac," of the famous Aaggle tribe, heads the herd.

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Of the most remarkable families and greatest performers. Stock of all ages for sale at the lowest possible prices. Railway Stations—Tavistock and Hamburg, on G. T.R. Post Office—Cassel, Ont. H. & W. F. BOLLERT.

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ADVANCED REGISTRY STOCK.

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HOLSTEIN-FRIESIAN

STOCK FOR SALE AT REASONABLE PRICES.

All my stock I have carefully chosen for their extra fine breeding and large milk records, and are all registered in Holstein-Friesian Herd Book. A visit, or correspondence solicited.

R. HOWES CRUMP, Masonville,

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THE GREAT MILK AND BUTTER HERD OF HOLSTEIN-FRIESIANS.

SMITH BROS., Credit Valley Stock Farm,

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Two nicely marked Yearling Bulls of the best milking strains.

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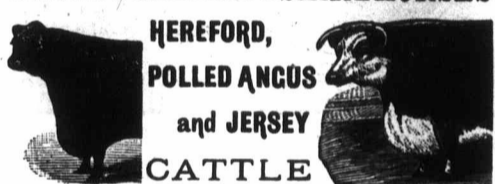
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BERKSHIRE AND YORKSHIRE SWINE.

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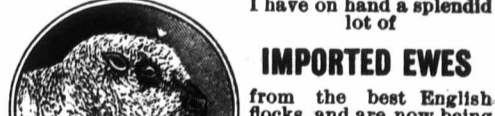
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I can sell six dandy Shearling Rams and some choice Ram Lambs, bred direct from imp. stock, at prices to suit the times. Come and see them.

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IMPORTED EWES

from the best English flocks, and are now being bred to a first prize imported ram.

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Shropshire Sheep

Now ready for shipment. Imported and Canadian bred Rams, Ram and Ewe Lambs, the get of the choicest imported sires. Good heads, good carcass

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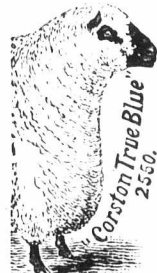
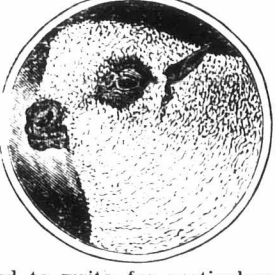


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Yorkshire pigs from last year's prize winners.
W. MEDCRAFT & SON
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JUST IMPORTED.

I have just arrived from England with forty-six Shropshire Yearling Ewes and a number of choice Ewe Lambs & Rams, all selected by myself from six of the leading British flocks. The ewes are all in lamb to noted English sires. My flock now numbers over 70 head. Parties wishing to found a flock, or buy choice specimens at fair prices, are invited to write for particulars. Come and see me. Visitors welcome. Satisfaction guaranteed.
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Has taken all the principal prizes in Scotland for several years. His sheep are of the purest blood, and carefully bred; every sheep eligible for registration. Pedigrees and prices on application.
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My sheep are imported from the flocks of Henry Webb, Geo. Jones, J. I. Coleman and W. Toop. Will now sell a few ewes from the above in lamb to imported rams, also a few ewe lambs of my own breeding.

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Importers and breeders of Dorset Horned Sheep and improved Yorkshire Pigs. **JOHN TAZEWELL,** Indian Village farm, Port Credit, Ont. **THOS. HECTOR,** The Cottage, Springfield-on-the-Credit, Ont. Stations—Pt. Credit, on G. W. R. Streetsville, on C. P. R.
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MY SPECIALTY.

These sheep drop their lambs at all seasons of the year; are good mothers and most prolific. Devon Dairy Cattle, good milkers and grazers. Flock and Herd established nearly one hundred years. Also Shire Horses and Berkshire Pigs. Sheep, Horses and Pigs exported to America have given every satisfaction

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—BREEDER OF—
Improved Large Yorkshire Pigs,
YOUNG PIGS FOR SALE.

Address—
JAMES BRAY,
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IMPROVED LARGE YORKSHIRES

The oldest herd of pedigree pigs of this famous breed in America. Orders now booked for Spring Pigs. None but choice pigs shipped, and satisfaction guaranteed. ADDRESS:—
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LITTLE'S PATENT FLUID
NON-POISONOUS
SHEEP DIP AND CATTLE WASH.

For the destruction of Ficks, Lice, Mange, and all insects upon Sheep, Horses, Cattle, Pigs, Dogs, etc. Superior to Carbolic Acid for Ulcers, Wounds, Sores, etc.

Removes Scurf, Roughness and Irritation of the Skin, making the coat soft, glossy and healthy. The following letter from the Hon. John Dryden, Minister of Agriculture, should be read and carefully noted by all persons interested in Live Stock:

"MAPLE SHADE" HERDS AND FLOCKS.
BROOKLIN, ONT., Sept. 4th, 1890.

DEAR SIR,—I cannot afford to be without your "Little's Sheep Dip and Cattle Wash." It is not merely useful for Sheep, but it is invaluable as a wash for Cattle, etc. It has proved the surest destroyer of lice, with which so many of our stables are infested. I have ever tried; it is also an effectual remedy for foul in the feet of Cattle. I can heartily recommend it to all farmers and breeders.

Seventeen Gold, Silver and other Prize Medals have been awarded to "Little's Patent Fluid Dip" in all parts of the world. Sold in large tins at \$1.00. Special terms to Breeders, Ranchmen and others requiring large quantities. Ask your nearest druggist to obtain it for you; or write for it, with pamphlets, etc., to

ROBERT WICHTMAN, DRUGGIST, OWEN SOUND, ONT.
Sole Agent for the Dominion. 303-y-OM

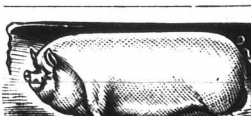
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One of the oldest herds in Ontario. Imp. Boars of Spencer's and Duckering's stock in use ever since founded. Choice stock for sale. **JAS. FIELD & SON,** Castle Hill Farm. ANCASTER, ONT. 293-y-OM

Improved Large (White) Yorkshire Pigs and Scotch Shorthorns.



Entire breeding stock of Yorkshires are imported; specially selected from stock of F. Walker-Jones and Sanders Spencer, Eng. Registered sows and boars supplied notakin. Shipped to order and guaranteed to be as described.
J. E. BRETHOUR, Burford, Brant Co., Ont.
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Improved Large Yorkshires

We have animals of all ages for sale, of good breeding and excellent quality.

SMITH BROS., Credit Valley Stock Farm,
CHURCHVILLE. ONT. 301-1f-OM

YORKSHIRES ONLY!

MESSRS. BUNBURY & JACKSON, Oakville, Ont., have for sale choice young Boars and Yelts of the Improved Large Yorkshire breed, bred from stock imported from the best herds in England. Orders booked now for spring pigs. P.O., Telegrams and Station, Oakville, on G. T. R. 302-y-OM

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OF THE BEST QUALITY CAN BE OBTAINED AT MODERATE PRICES, FROM

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the oldest and most successful herd in the country, having gained since 1856 nearly 3000 prizes. All pigs supplied either entered or eligible for entry in the herd book.
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THE - GLEN - STOCK - FARM

SCOTCH SHORTHORNS,

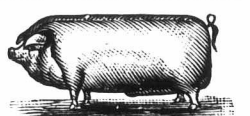


SHIRE HORSES,
Improved Large (White) Yorkshire Pigs.

Our pigs are specially selected from the prize-winning herds of Sanders, Spencer, Ashforth, Charnock and F. Walker-Jones, who won upwards of \$10,000 in prizes in three years. Orders now booked for young registered pigs. Shorthorns and Shire horses for sale.

GREEN BROS.,
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Mapleview Farm,
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Importer and Breeder of Ohio Improved Chester White Swine. First-class registered stock for sale in pairs not akin. Also a few fine young Sows, bred to an imp. boar, for sale. Satisfaction guaranteed. Prices within the reach of all.
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ALSO REGISTERED POLAND CHINA SWINE
Our herd of Chesters won the sweepstake herd prize at the Toronto fair last fall.

Young Stock for Sale.
Single rate by express. 298-y

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Importer and Breeder of Ohio Improved Chester White Swine



100 pigs for spring trade, sired by four Imp. boars. I make Chester Whites a specialty. All ages. Pairs not akin. Special rates by express. 293-y-0

CHOICE PURE-BRED BERKSHIRES!
A few grand pigs of both sexes, just weaned, from a first-prize sow. **A. D. ROBERTS**, Walmer Lodge, ANCASTER, ONT. 305-y-OM

IMPROVED BERKSHIRES.
Imported and home-bred; from the best strains
-YOUNG STOCK FOR SALE-
at Right Prices. Apply to—
Richard Delbridge,
299-y-O WINCHELSEA, ONT

S. COXWORTH,
CLAREMONT, ONT.
Breeder of Pure-Bred Berkshires of the choicest strains. The imported boars Royal Standard and Prince Albion (1113) head my herd. My Sows comprise some of the best specimens that money could buy from such breeders as Snell Bros. and Geo. Green. I guarantee every pedigree, and furnish to register. Write for prices, and you will find them and the stock right. Satisfaction guaranteed. 304-y-OM

BERKSHIRES
—AND—
COTSWOLDS.
J. G. SNELL & BRO.
EDMONTON P. O.,
Brampton and Edmonton Railroad Stations.
Now is the time to secure young pigs from choice imported sows, and got by the renowned imported boars "Enterprise [1378]" and "Perry Lad [1378]." "Enterprise" won first prize at the two leading fairs in Ontario last year. He weighed just after landing from England 850 pounds. His pigs are coming fine, and are particularly well marked. We have for sale a grand lot of Yearling Cotswold Rams and Ewes which are well worthy the attention of those in want of such. Will be pleased to have visitors come and see our stock. Write for prices. 298-y-OM

EXCELSIOR HERD
40 HEAD PURE BRED IMPORTED AND PEDIGREED
Poland-China Hogs
Champions and favorites in the U.S. Most pork for food consumed. Docile, mature quick, always fat even on grass. Coming hog of Canada. They must predominate on merits. Best hog in the world for profit. 200 head for sale this season.
G. M. ANDERSON, Tynside P. O., Ont.

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JOHN BELL, Clydesdale Farm,
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offers for sale young Boars and Sows bred from registered stock, imported from the best herds in England. This famous breed of bacon pigs is recommended by the largest bacon curers in the world. Try them, it will pay you. Orders now booked for spring pigs. Some A 1 Clydesdale Stallions kept for service. Imported and home-bred Colts and Fillies for sale. 304-y-OM

POLAND CHINAS
All pure-bred and registered. From the very best strains in America. First come first served. Write for prices. I mean business.
298-y-OM **W. S. HARRIS, Homer, Michigan, U.S.**

A. FRANK & SONS, The Grange P. O.,
Ont., Cheltenham Station, C. P. and G. T. Railways.
The Centennial - Sweepstakes herd of
SUFFOLK PIGS,
being the oldest, largest, and most successful prize winners in America. The boar I-am-First, at the head of this herd, is 17 months old and weighs 440 lbs.

Shorthorn Cattle
of the Cruickshank blood. Young bulls for sale, got by Baron Camperdown = 1218 =, imp., (473-9) and Baron of the Grange = 10854 =. 294-y-OM

J. F. QUIN, V. S., BRAMPTON, ONT.
Ridging horses successfully operated upon; write for particulars. 275-y

DAHLIAS.
1,500 drv roots, large and small flowering, first prize sorts, none better, \$1.25 per 10; \$8 per 100; 500 roots of best mixed varieties, 75c. per 10; \$6 per 100. By mail, postage paid, at these prices. Descriptive catalogues free on application.
GEO. LESLIE & SON,
3.5-a-OM Toronto Nurseries.

Sick Headache

IS a complaint from which many suffer and few are entirely free. Its cause is indigestion and a sluggish liver, the cure for which is readily found in the use of Ayer's Pills.

"I have found that for sick headache, caused by a disordered condition of the stomach, Ayer's Pills are the most reliable remedy."—Samuel C. Bradburn, Worthington, Mass.

"After the use of Ayer's Pills for many years, in my practice and family, I am justified in saying that they are an excellent cathartic and liver medicine—sustaining all the claims made for them."—W. A. Westfall, M. D., V. P. Austin & N. W. Railway Co., Burnet, Texas.

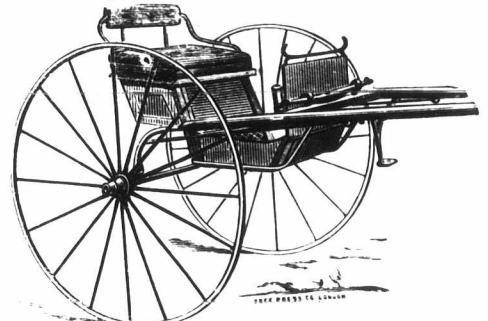
"Ayer's Pills are the best medicine known to me for regulating the bowels, and for all diseases caused by a disordered stomach and liver. I suffered for over three years from headache, indigestion, and constipation. I had no appetite and was weak and nervous most of the time. By using three boxes of Ayer's Pills, and at the same time dieting myself, I was completely cured."—Philip Lockwood, Topeka, Kansas.

"I was troubled for years with indigestion, constipation, and headache. A few boxes of Ayer's Pills, used in small daily doses, restored me to health. They are prompt and effective."—W. H. Strout, Meadville, Pa.

Ayer's Pills,

PREPARED BY
Dr. J. C. Ayer & Co., Lowell, Mass.
Sold by all Druggists and Dealers in Medicine.

NO EQUAL OR NO SALE!



Dealings Solicited Only With Responsible Parties
Address— 304-a-OM
The STRINGER CART CO., LONDON.
See notice on page 207.



A Sure Cure for all Throat or Lung troubles; Kidney, Liver and Stomach affections; and never failing in all forms of Skin diseases. Address—

Wm. Radam Microbe Killer Co., Ltd.,
120 King-St. West, Toronto, Ont.
WILLIAM ELLIS,
98 Dundas St., London, Agent for Western Ont.
Branch Office for the Northwest:
298-y-OM 610 MAIN ST., WINNIPEG, MAN.

STOCK GOSSIP.

In writing to advertisers please mention the Farmer's Advocate.

The attention of our readers is directed to the advertisement of Messrs. J. G. Snell & Bro. in another column. Parties desiring choice Berkshires and Cotswolds would do well to write them.

Jacob Rager, Williams Centre, Ohio, writes that his Chester Whites are in a flourishing condition. No cholera in his herd. Shropshire Down sheep and Ayrshire cattle have come through the winter in good form. He adds that he enjoys the stock articles in the ADVOCATE.

P. Robertson, Howick, P.Q., writes us as follows:—I have got 21 Ayrshire cows milking. Two calved 12 months; 4 do. 9; 4 do. 6; 4 do. 4; 5 do. 3; 2 fresh, giving 500 lbs. of milk per day. Now, this is nothing to puff about, but I think it is a very good average, considering the time since some of them have calved, and all young.

We are in receipt of the lately issued catalogue of the celebrated West Dereham Abbey herd of Shorthorns, owned by Mr. Hugh Sylmer, Stokes Ferry, Norfolk, Eng. Besides a number of the birds of the harem some twenty-three grandly bred young bulls from twelve to twenty-four months old are included, in which a number of Fame, Bliss, and other well-known Warlab families are represented.

Dr. C. Dunn, of Hamilton, writes us that he has purchased from Mr. John Atkins, Scipio, N.Y., the imported French Coach stallion Invador. This is a beautiful brown horse, standing 16 hands high and weighing 1,300 lbs., showing a wonderful lot of breeding combined with substance. Invador should prove a very valuable stock horse to the farmers of his neighborhood.

We call attention to the advertisement of Mr. Wm. Johnson's (Montreal) very richly-bred young Jersey bull *Rasselas*, which appears in another column. His sire, *Romeo* of St. Lambert's 2nd, being particularly rich in the blood of *Stoke Pogis* 3rd, said to be the best Jersey bull living or dead. He also has 96% of the blood of *Mary Ann* of St. Lambert's, *Romeo* of St. Lambert's 2nd being a first prize bull at the Quebec Provincial in 1887, when \$1,000 was refused for him. *Thaley*, the dam of *Rasselas*, is a good performer herself, and is sired by *Guy Fawkes*, the sire of a number of great performers, and also carries the blood of *Captain Philip Le Brogue's Welcomes*, through her dam *Fauvette*.

Mr. R. Auzias-Turenne, Manager of the Haras National, writes as follows:—"Six societies of agriculture of Quebec have chosen six of our stallions for the season of 1891, as per special contract with the government. No. 1, *Terrebonne*, gave preference to the *Norman*, *Marquis de Pulsance*; No. 2, *Berthier*, to the *Percheron*, *Bonne Chance* 32170; No. 3, *Brome*, to the *Norman*, *General Fotte*; No. 4, *Vaudreuil*, to the *Percheron*, *Joly* 15168; No. 5, *Lac St. Yean*, to the *Percheron*, *Brilliant Blue* 18168; No. 6, *Bellechasse*, to the *Percheron*, *Eventail* 18862. The Haras gave them choice amongst fifteen head of superior sires, by special favor. These sires will remain during the season in the aforesaid counties, under the care of the Haras grooms."

The London Stock Journal has the following:—"Questions are not infrequently asked, which was the heaviest pig which has been registered in England? In 1854, Mr. John Parry, of St. Giles', exhibited at Wimborne market a pig weighing 45 scores. It was 8 feet long; the hams weighed 74 lb. each, and the head weighed 54 lb. Nor was this the only monster of the season; Mr. Swales, of Wetherby, exhibited one which weighed 44 scores 1 lb. at fifteen months; and Mr. Kingston, near Bridlington, slaughtered a fat pig at Christmas, 1855, which weighed 44 scores, carcass weight, and a pig of hers, born in the previous year, was sold weighing 34 stones 7 lb. In the records of these loose fat was not included. We believe that we have seen heavier weights than these (one above 59 stones), but these are all given in a paper of the time as having been recently ascertained. The heaviest sheep of which we can find any record is one killed at Walgrave, in Northamptonshire, which weighed 96 lb. per quarter, with 16½ lb. of rough fat."

In a business letter from R. Y. Manning, manager of the Grange Supply Co., of Toronto, was enclosed the following open letter from Thos. Haggard, Pilot Mound, Man., which explains itself:—"I am induced to write you in acknowledgement of the favor I received from you in handling my wheat during last winter, as I shipped a car of wheat to you on the 6th of Dec., 1890, for which I could get only 29 lb. 40c., and upon you making returns, I found it sold for 85c., thus making a clear profit, after paying all expenses in connection with said car, of \$103.23 in my favor, more than I would realize from selling to local buyers. I send you this feeling it my duty to let you know the benefit you are to the farmers of this province in handling their grain, and feel satisfied that if more would take the same steps that better times would be brought about. I do not think for one moment that as large a profit can always be expected; but if one-half that amount can be realized, it is our duty to take advantage of your trade. The great difficulty with a great many is to make them believe your business relations are safe, and also the length of time it takes in getting returns after sending away in some instances. I see by your price list you appeal to the farmers of this province to purchase from you."

STOCK GOSSIP.

In writing to advertisers please mention the Farmer's Advocate.

R. Y. Manning, Manager of Grange Supply Co., writes:—"We send you another of our catalogues, which are in great demand. There is not a mail that comes to hand but that there are such statements as, 'seen your ad. in FARMER'S ADVOCATE.'"

Among the foremost Clydesdale breeders in the county of Halton is Mr. D. McPherson, of Merton. Mr. McPherson has at present on hand a choice pair of stud colts, one rising three years, by Mount Annan (imp.), out of the registered mare Nellie, by Boydston Boy; the other, rising two years, is out of the same mare and by Lord Harry, a colt of imp. Lord Harry. This is a low-down, thick coat of very draughty appearance.

We understand that Messrs. Graham Bros. have sold to Mr. John Reidel, of Linwood, Waterloo Co., the Clydesdale stallion Craigisla. This is a big well-colored horse, got by Prince George, a son of the famous old Prince of Wales, and out of a mare by Young Lofty. Craigisla should prove a very valuable sire, as he is a horse of grand breeding, and Mr. Reidel deserves every support from the farmers in his neighborhood in his effort to improve the class of draught horses in that section of country.

Mr. Wm. Stewart, Jr., Menie, Ont., writes us to the following effect:—"On looking over the stock columns of your valuable paper for April I notice an article from the pen of Mr. Alex. Hume, Burnbrae, stating that they captured the prize for herd of dairy cows wherever exhibited. Now, Mr. Editor, as this is the second time this has been put before the public, I will endeavor to show how incorrect it is. At the North Hastings Agricultural Society all breeds competed together for the herd prize. The herd from the Menie yards has won this prize for three years in succession, Mr. Hume competing for the same. That we took these prizes we are prepared to prove by the donors of the prize."

Messrs. J. C. Snell & Bro., Edmonton, Ont., report the demand for Cotswolds as being remarkably good. They have sold since August last 118 head of pure-breds, and have purchased nearly all the good grade Cotswold lambs in their county for persons in the United States. While they have shipped sheep to most of the States, they find the best market in Ohio and Indiana. Their flock has wintered well. Up to the present writing they have not lost a single one since going into winter quarters, and they have had over 100 head on the farm all winter. Four of the yearling lambs of last year rams, weighed on March 31st, turned the scales at 293, 269, 265 and 259 lbs. respectively. Their crop of young lambs have come strong and good.

E. D. George, Putnam, Ont., reports a brisk demand for Chester Whites by wide-awake farmers requiring profitable feeders, combined with size, quiet disposition and general good appearance. Note following sales:—W. L. Lepard, Sharon, 1 boar; Geo. Taylor, Beeton, 1 boar; J. Boyd, Fairmount, 1 boar and 2 sows; J. Lawrence, Stukley, P. Q., 1 boar; J. Woodruff, St. Catharines, 1 sow; L. H. Cote, Rimouski, P. Q., 1 pair; Haras National Stock Co., Montreal, 1 boar; T. Agnew, St. Marys, 1 pair; D. McDonald, Pine River, 1 boar; S. P. Knight, Bedford, P. Q., 1 boar; A. E. Curtis, Stanstead, P. Q., 1 pair; J. Oughton, Crystal City, Man., 1 pair; R. Collis, Shoal Lake, Man., 1 pair; J. Mullen, Havelock, N. S., 1 pair; J. Nediger, Allen Park, 2 boars; J. Stratford, Bradford, 1 boar; J. Snell, Jamestown, 1 pair; P. Gaviller, Beeton, 1 boar; C. Birch, Canning, 1 boar; J. Nell, Lucan, 1 boar; J. McBair, Chesley, 1 sow; J. E. Barkwell, Lucknow, 1 boar; R. Furness, Vernon River, P. E. I., 1 boar; C. McGuire, Salmon Arm, B. C., 1 pair; S. B. Scott, Marden, 1 boar.

Bollert Bros. write under date of April 14th:—"Last week our senior (H. Bollert) visited the famous herds of T. G. Yeomans & Sons, Walworth, and R. S. Stevens, of Attica, N. Y., and from the latter selected a young bull to place at the head of our herd. After a thorough inspection, he finally settled on Colanthes Abbekerk, a very superior individual, and of unequal breeding. His nearest female ancestors are such cows as Alberta Abbekerk, winner of 1st prize at Detroit Exposition, and 2nd at Buffalo International, for best butter cow; Colanthes, the famous milk, butter and show cow; Mechtchilde, the Queen of all the Holsteins, with 39 lbs. 10 $\frac{1}{2}$ oz. of butter in seven days to her credit. His sire is the invincible Colanthes Sir Henry, who swept everything before him at all the greatest American Fairs in 1890, he by Sir Henry of Maplewood, the sire of world beaters. We shall at some future time give the breeding of this young bull in full. While H. was purchasing, W. F. was selling, and during the week sold seven head of the very finest breeding. J. E. Barkwell, Lucknow, took the bull Sir Westwood, our stock bull during the last two years; to James Hunter, Lucknow, the bull Duke of Blenheim, and the Barrington cow Esfa 3rd, and her heifer calf. These will make a foundation for a fine herd. Thos. Patton, Paris Station, two very superior heifers, which we imported last summer, and to C. C. Fry, Bright, the bull Bonnie Queen's Westwood, a bull of unusual quality. Numerous as our sales are, not all the good ones have been taken, and we have several very choice ones on hand yet. It might interest some of your esteemed readers to hear that in those famous herds I visited, I found only one cow which exceeded our present milking cows several pounds daily, with much better care and by feed than ours are having. We expect great results from the cross with the selected bull."



SHROPSHIRE SHEEP

—AND—
COLLIE DOGS.

A choice lot of Ewes bred by Mr. David Buttar, Couper, Angus, Scotland; two Shear Ewes, imported last season, and their produce. Also Collie Dogs just imported. 296-y-O-M W. E. BEATTIE, Wilton Grove, Ont.

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MONTREAL, CANADA.

HON. LOUIS BEAUBIEN, Pres., MONTREAL.
BARON E. DE GRANCEY, Vice-Pres., PARIS, France.

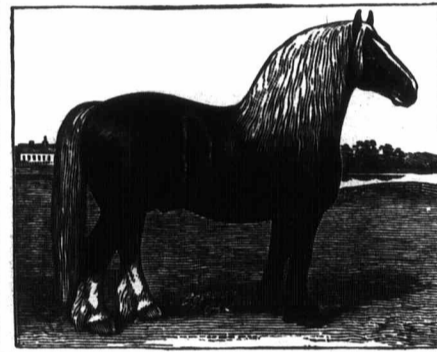
LA COMPAGNIE

Du Haras National



NORMAN, PERCHERON, BRETON STALLIONS.
CANADIAN HORSES.

303-c-OM



BLAIR BROS., Aurora, Ill.

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CLEVELAND BAY, GERMAN COACH HORSES,
English Shire and Clydesdale Horses.

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We have a choice lot, selected with reference to style, action, and quality, combined with good pedigrees. We have winners at many of the greatest shows of England, including the great London and the Royal Shows. We offer first-class animals of the choicest breeding at very low prices. Every animal recorded and guaranteed. Visitors welcome. Catalogues on application. Stables in town. Address as above. 301-c-OM

HEADQUARTERS FOR Booker Brook Farm,
Goldust Stock, Eminence, Shelby Co., Kentucky.

THE HOME OF
Lexington Goldust, sire of Sir
Rodger, 2.23 $\frac{1}{2}$; Indicator,
2.23 $\frac{1}{2}$, made in a fourth
heat when 19 years old.

T. & J. HORNSBY,
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Trotting-Bred -- Horses

OF THE BEST STRAINS.

Write for Catalogue and References of former purchasers.

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Our aim is to combine size and quality with speed & style. We have sold more horses into Canada than any other breeder in the State.

Silver Lake Stock Farm,
Frankfort, Ky.

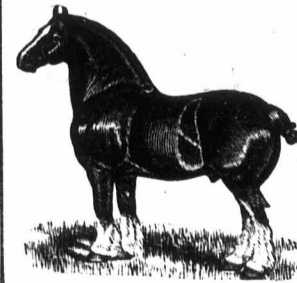
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—BREEDERS OF—

Trotting-Bred = Road = Horses

We have a choice lot of young Stallions and Fillies sired by Pretender, Onward 1411, and others for sale at reasonable figures. We keep none but the best, and do not look for fancy prices. Send for illustrated catalogue and prices. 300-f-OM

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Shetland and Welsh Ponies on hand and for Sale.



My last importation consists of a large number of Stallions and Mares from one to four years old, and the gets of such noted sires as Darnley (222), Macgregor (1487), Top Gallant (1850), Prince Gallant (6176), Knight of Lothian (4489), etc. Also a few choice thoroughbred Shorthorn cattle.

A call solicited. Visitors always welcome.
T. W. EVANS, YELVERTON P. O., ONT.
Pontypool Station and Telegraph Office on C. P. R., fifty miles east of Toronto. 300-f-

W. C. EDWARDS & CO., Importers & Breeders



Pine Grove Stock Farm
ROCKLAND, ONT.

Scotch Shorthorns
THE IMPORTED

Cruikshank Bull,
"GRANDEUR,"

is at the head of this herd of Imported and Home-bred Cows and Heifers of the most approved Scotch families.

ALEX. NORRIE, Manager.

ELMHURST

STOCK & DAIRY FARM

CLARENCE, ONT.

Shorthorns, Shropshires and Berkshires

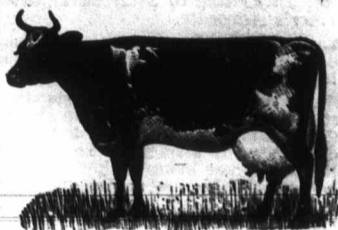
Our flock is from the choicest English flocks, headed by the Ram sent out by Mr. Thos. Dyke, also

MILKING SHORTHORNS

Imported Bull "PIONEER"

at the head of the herd.
HENRY SMITH, Manager.

LAURENTIAN
STOCK
AND
DAIRY-
FARM



North Nation
Mills, P. Q.

Ayrshires, Jerseys and Berkshires.

IMPORTED "EMPEROR"

at the head of a grand lot of Imported and Canadian-bred Ayrshires; also St. Lambert Jerseys and Imported Berkshires.

GEORGE CARSON, Manager. 303-Y-OM

Imported Clydesdale Stallions and Mares for Sale.

Highest Prize Winners in the Leading Shows of Scotland and Canada,
AND THE GET OF FAMOUS SIRES

- Such as Lord Erskine, Darnley, Old Times, McCammon, Prince Lawrence, Lord Hopton, Bold Magee, Sir Wyndham, Good Hope and Fireaway.

Prices Reasonable. Catalogues Furnished on Application.



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ROBT. BEITH & CO.

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Bowmanville is on the line of the G. T. R., 40 miles east of Toronto and 294 west of Montreal. 289-7

IMPORTED AND REGISTERED

CLYDESDALE AND HACKNEY

STALLIONS AND MARES

CONSTANTLY ON HAND, AND FOR SALE AT REASONABLE PRICES



Our last importations comprise a large number of one, two, three and four-year-old registered stallions and mares, the gets of such sires as Macgregor (1487), Darnley (222), and Prince of Wales (673). Also a few choice SHETLAND PONIES. Correspondence solicited, and visitors always welcome.

GRAHAM BROTHERS

Twenty-five miles east of Toronto, on the C. P. R. 305-OM CLAREMONT ONT.



FREE!

THE UNSPEAKABLE DELIGHT OF IT! THE VIM AND BUOYANCY! HAVE YOU EVER BEEN A PRISONER? ARE YOU A PRISONER NOW? DOES DISEASE HOLD YOU? ESCAPE! YOU CAN. COMPOUND OXYGEN WILL HELP YOU HERE. COMPOUND OXYGEN IS A CONCENTRATION OF OZONE. IT IS CHARGED WITH ELECTRICITY. INHALED TO THE LUNGS IT SENDS A GLOW OF REVITALIZATION ALL THROUGH THE SYSTEM. IN ORDER TO INHALE COMPOUND OXYGEN IT MUST BE RELEASED FROM THE INHALING APPARATUS BY HEAT. THIS SENDS A WARM, OXYGENATED VAPOR TO THE BREATHING SURFACES THAT IS NOT ONLY MOST SOOTHING AND HEALING, BUT IS MOST EFFECTUAL IN REMOVING CLOTS AND OBSTRUCTIONS. COMPOUND OXYGEN MAKES STRENGTH. THAT'S THE POINT; AND STRENGTH IS THE SPECIFIC OF ALL SPECIFICS TO WORK WONDERS FOR THE SICK MAN.

A BOOK OF 200 PAGES WILL TELL YOU WHO HAVE BEEN RESTORED TO HEALTH AND STRENGTH BY THE USE OF THIS POWERFUL REMEDIAL AGENT.

THE BOOK IS FILLED WITH SIGNED INDORSEMENTS, AND WILL BE SENT ENTIRELY FREE OF CHARGE TO ANY ONE WHO WILL ADDRESS

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120 BUTTER ST., SAN FRANCISCO, CAL. 56 CHURCH ST., TORONTO, CANADA.

STOCK GOSSIP.

In writing advertisers please say that you saw their advertisement in the Farmer's Advocate.

J. E. Brethour, Burford, Ont., writes as follows: "I have recently made the following sales of Imported L. W. Yorkshire pigs, and I am pleased to say that purchasers have reported entire satisfaction in every case where I have shipped to order. My stock of pigs were never in better condition than it is this spring. I have now a good full stock of different ages, my entire herd numbering over eighty head. I have recently purchased the entire breeding stock of Mr. E. M. Jarvis, of Clarkson, Ont., in all thirty-five head, comprising his imported boar and sows, some of which were prize-winners at the Toronto Industrial last fall. I have now the largest herd of Improved Large White Yorkshire pigs in Canada: Sow, Robert Tuttle, Brantford; boar, E. W. Payne, Granby, P. Q.; boar, Chas. Gurney, Paris; boar, Messrs. Bidout & Percavit, Solsgrith, Man.; sow, W. S. Campbell, Brantford; sow, Geo. Weir, Cathcart; brood sow, J. H. Jull, Mt. Vernon; boar and two sows, Geo. Ballard, Red Deer, N. W. T.; boar and sow, C. H. Banneman, Red Deer, N. W. T.; boar, H. A. Malcolm, Harrisburg; brood sow, C. H. Waterous, Brantford; brood sow (imported), Bilton Snary, Croton; boar and sow, Dennis D. York, Harrietsville; brood sow (imported), Geo. Ballaebey, Brantford; boar and sow, L. W. Ross, Bobcaygeon; boar, William Parson, Otterville; boar and sow, John Morin, Belle Rivere, P. Q.; brood sow, A. B. G. Tisdal, Brantford; boar and sow, Henry Walker, Camlachie; imported boar, Robert Anderson, Thornbury."

Smith Bros., Churchville, Ont., write as follows: "Our sales of Holstein cattle did not begin this year until February, and then they were not very good, we having sold only the promising young bull Maid of Clinton's Mink Mercedes, to Mr. Warren Taylor. Maid of Clinton gave us 2,479 1/2 pounds of milk during fifty days, ending March 31st, so that this young bull will have size, milk qualities, and richness. His sire is our Mink's Mercedes Baron. Mountain Princess went to Mr. Simons, of St. George, and in her he has a fine cow, and one of the best breeders of this breed; her pedigree is surpassed by very few, so that Mr. Simons has a good one to begin with. March came and went without a sale, but early in April Mr. James Fennel purchased one of the finest and most promising young heifers in our herd, Jessie Church. She is large, comes of advanced registry stock, and for size and build she is unsurpassed. She will be heard of some day, for she has the quality in her. With her went Hedda 2nd's King, a snugly made young yearling. Mr. Jas. Glennie, of Portage la Prairie, Vice-President of the Manitoba Dairymen's Association, paid us a visit, saw our cattle fed and milked, and decided to take some of the tops of our herd. He took Modest Girl 3rd, 1st prize heifer at Toronto Industrial, with a two-year-old milk record of 41 pounds in one day, 1,120 1/2 pounds in thirty days. She has in her veins some of the best of the Aaggie and Wayne blood. Her grand-dam produced 18 lbs. 12 oz. of butter in a week, 76 lbs. 12 1/2 oz. in 30 days, and 19,122 1/2 lbs. of milk in a year, and her grand-sire and grand-dam are both in the Advanced Registry. He took with her Lady Bonheur, her equal in every respect, also young heifers from Saldy's Leake and Daisy Leake. Their half sisters took butter-test prizes at Michigan shows as two-year-olds, and their half brothers have also been renowned prize-winners. Then to head the herd he selected the rich y bred young bull Ykema Mink Mercedes King, whose sire is our Mink Mercedes Baron, dam Coretia Ykema. These make up a herd that should give a good account of themselves in the near future, and goes to show that Mr. Glennie is awake to the dairy interests of the Northwest. Then we shipped Cornelia Tensen's Mink Mercedes to the Guelph Agricultural College. He took first prize at Toronto Industrial last fall. His dam gave 19 lbs. of butter in a week, 14,184 1/2 lbs. of milk in 10 months, has never given us a calf, but it took 1st prize wherever shown. She has been a prize-taker herself. His sire is Mink's Mercedes Baron, who is proving himself to be a splendid stock getter. Since then we have sold eight head, five to one person and three to another, but these we will leave over for the next issue. People believe that good stock pays."

STOCK GOSSIP.

In writing to advertisers please mention the Farmer's Advocate.

A. Geary, Dundas, Ont., recently shipped thirty-one valuable heavy draught horses to British Columbia.

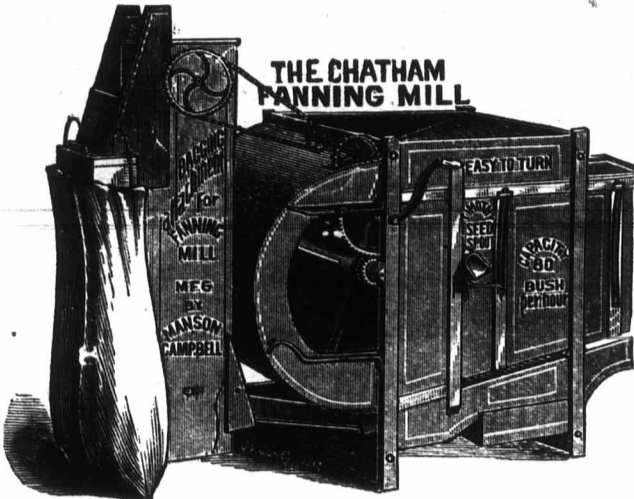
Mr. Arthur Johnston reports the Greenwood herd as having wintered in fine shape. Not a loss, and not a sick one out of a herd now numbering over eighty, of all ages. The demand for young bulls has never been brisker, though prices have ruled low. There are still a number of good ones for sale in the herd, as well as cows and heifers of various ages fit for show.

In a letter Mr. J. S. Smith, Maple Lodge, writes as follows:—Our sale of Shorthorns, held 25th March, was fairly successful. We had a good attendance from different parts of Canada, some from Michigan, and a good share of buyers. Eighteen head were sold at an average of about \$100, which is not too bad for the times, and 13 of the number being one year or under. Bulls seemed to be in extra demand, and those offered sold readily at prices ranging from \$102 to \$129, and they were an extra, even, fleshy lot. The following gentlemen were purchasers:—Wm. Chapman, Brucefield; James Creighton, St. Marys; John Dempsey, Fairview; P. Maloney, Metropolitan; H. Call, Jura; Duncan McLaren, Cromarty; D. Milnie, Kthel; Peter McEwen, Wroxeter; Smith Bros., Hay; John Kerr, Crediton; John Madden, Mount Carmel; David Hill, Staffa.

R. S. Stevens, Attica, N.Y., writes us as follows:—Among recent sales of Maplewood bred Holstein-Friesians are two that will interest your readers, as they embrace two of the richest bred Holstein-Friesian bulls that ever entered Ontario from the United States. The purchasers were Smith Bros., of Churchville, and H. & W. F. Bollert, of Cassel. H. & W. F. Bollert selected the bull Colanthes Abbecker, and he is, as his breeding would indicate, a very superior individual. He has on both sire and dam's sides a long list of unbeaten prize-winners, both in show rings and in public tests. Such well-known individuals as the following appear in line of his direct ancestors: Sir Henry of Maplewood, Colanthes Sir Henry, Sir Mechtchilde, Constantyn and Empire, in males; and Colanthes, Alberta Abbecker 1st and 2nd and Mechtchilde, in females, each of which has been a record breaker. Mechtchilde now holds the world's butter record, 9 lbs. 10 1/2 oz. in 7 days, 150 1/2 lbs. in 30 days, and 322 30-100 lbs. in 60 days; milk record, 112 lbs. 4 oz. in one day, 2,693.23 lbs. of milk in May, 1890, and 2,860 lbs. of milk during June, 1890. Mechtchilde was sold last month for \$1,500 cash, and is now owned by J. H. Packard, of Colorado, who also purchased the sire of Colanthes Abbecker at \$1,500 cash. We are glad to have Maplewood bred and Mapewood bred Holsteins represented in your section, and to have the individuals in such good hands. They will be heard from in the leading show rings later in the season.

A. C. Hallman & Co., New Dundee, Ont., report as follows:—Our stock is doing nicely, and has come through winter in fine shape. The sales made since our last report are as follows: A pair of cows to Geo. W. Clemons, St. George. These cows are of excellent breeding—of more than ordinary importance; Baillie 2nd, a descendant of the world famous Netherland Prince. She has also a dash of Aaggie blood, besides being closely related to such famous cows as Echo, 23,775 lbs. 8 oz. milk in one year; Constance S., with a record of 83 lbs. milk in one day as a three-year-old; Franklin, record 70 lbs., and a host of others of almost equal importance. Vida's Princess, a very promising young cow, traces back seven times to old Rooker, the fountain head of the Aaggie family. She is a daughter of Vida Rooker 3rd, whose dam is half sister to the great cow Tyrannia, who swept all the butter tests at the exhibitions a few years ago in the states. These cows have created such an interest in Mr. Clemons that he since came back and bought the dam of this young cow, Vida Rooker 3rd, which is a very promising young cow, and will be heard of some day. To head this choice herd, Mr. Clemons has secured the richly bred bull Artis Aaggie Prince, being a son of our celebrated Prairie Aaggie Prince, who, in three years' show ring competition lost but one 1st prize, and won in that time two diplomas, and three times headed the 1st prize herd (two diplomas, and one "silver medal"). This bull is also full brother to our "silver medal" heifer Artis Kassie 3rd, who won the 1st prize and medal when but 16 months old, competing against a heavy class of imported cows. Her dam, Artis Kassie, we sold to the O. A. College a year ago. This bull will be a prize to Mr. Clemons some day. Mr. Joseph Stratford got the fine young bull Cvar of Springbrook; dam Mina Rooker, which we sold to the N. S. Experimental Station; sire African Prince, which went to the O. A. C. Guelph a year ago. Messrs. W. J. & R. Sproule got a pair of fine yearling heifers, Mina Rooker 5th, daughter of Mina Rooker, and Mina Rooker 3rd Pride, she by Mina Rooker 3rd, got by Prairie Aaggie Prince; sire African Prince. To head this list he selected the richly bred bull Netherland Statesman's (Cornelius, he by Netherland Prince, and g. dam Lady Fay; dam Gem 2nd No. 2, a very large, handsome cow of excellent breeding, she by Joe, whose dam Johanna gave 88 lbs. milk in one day; also closely related to such cows as Pledge, 110 1/2 lbs. milk in one day, and Copia, 99 lbs. 8 oz. in one day. This is a rich dairy bull, and will no doubt leave valuable stock. We have still a fine lot to be selected from.

24,600 CHATHAM MILLS NOW IN USE!



**2,000 MILLS SOLD IN 1886
2,300 MILLS SOLD IN 1887
2,500 MILLS SOLD IN 1888
3,600 MILLS SOLD IN 1889
4,000 MILLS SOLD IN 1890**

More than have been sold by any 10 factories in Canada put together.

Over 4,000 Bagging Attachments now in use.

Bagging Attachment is run with a chain belt that cannot slip. The elevator cups are also attached to endless chain belt that cannot slip nor clog.

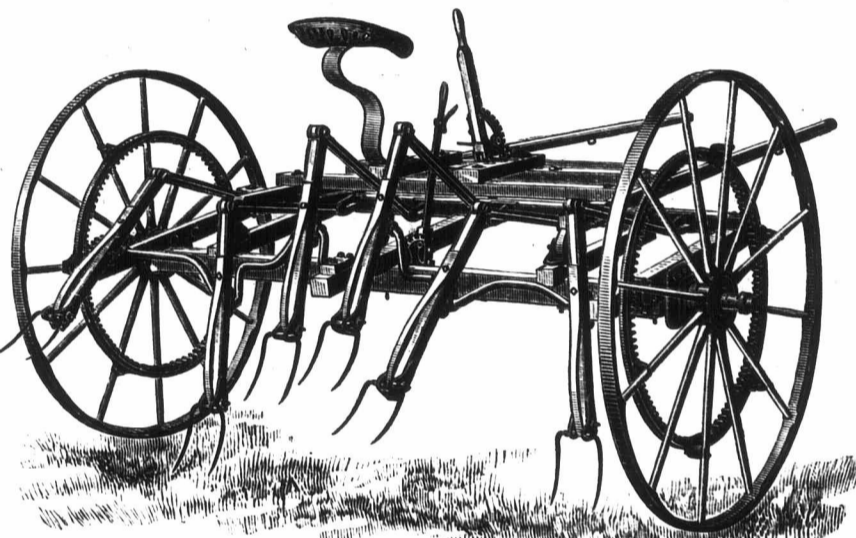
The Mill is fitted with screens and riddles to clean and separate all kinds of grain and seed, and is sold with or without a bagger.

SATISFACTION GUARANTEED.

MANSON CAMPBELL, CHATHAM, ONT. 303-c-OM

THE IMPROVED "WISNER" HAY TEDDER.

IMPROVED SPRINGS, STEEL CRANKS, AND METAL CRANK BEARINGS.



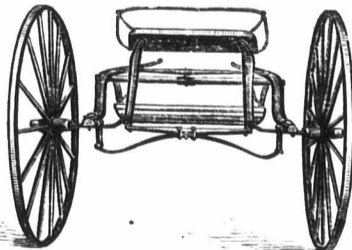
CANADA'S BEST FARMERS SAY: IT IS A PAYING IMPLEMENT.

Manufactured by **J. O. WISNER, SON & CO., BRANTFORD, ONT.** 15-c-OM

WE LEAD. LET THOSE WHO CAN, FOLLOW.

\$16 ROAD CARTS.

Everybody wonders how we can make them for the money. We offer to every person sending us \$16 a good, strong Road Cart, equal to any \$35 cart ever yet put on the market. We use none but the very best material and workmanship. We guarantee that. We do not want agents, we prefer to sell direct to the public. The following is the specification of the



Best Steel C. B. Axles; Round Edge Steel Tires, Flat Steel Springs, all Braces and Seat Railings of Heavy Round Iron; Sarven Wheels of good material; Point Hub Bands; Sword Whiffletrees; Double Bent Shafts; best 1 1/4 x 1 1/4 Seat Risers; seat for two; Cross Bars and Foot Slats of very best stuff; Whip-Holder; Hold Backs, etc., all complete to hitch to. Finished in Wine Color or Natural Wood, and varnished as desired. Great attention is given to the material, especially the Wheels and Woodwork used in the construction of these now famous carts. The style of the cart is without a doubt the very best pattern ever produced. It is absolutely without the customary horse motion that is so common with the great majority of road carts.

PRICE.—Only \$16 F. O. B., Hamilton, Ontario. We pay no freight and allow no cash discount. Our terms are spot cash with the order. Send money by registered letter or post-office order. We ship promptly.

In Quantities of Half-dozen or more, we quote Special Price on Application.

HARNESSES.—Send for catalogue, giving full description of our \$10, \$13 and \$15 single harness. They are remarkably good value.

SCALES.—To any person sending us \$5 in a registered letter, we will ship one of our 240 lb. Union Scales, or for only \$12.90 one of our 1,000 lb. Farmers' Platform Scales on wheels. These goods are first-class quality and low in price. Send for catalogue.

TERMS.—Our terms are cash with the order. We ship no goods without being first paid for them. We sell too cheap to run any risk whatever of payment. Send for Catalogue, and mention this paper.

S. MILLS & CO., Wholesale and Retail Hardware Merchants and Manufacturers,
94 JOHN STREET SOUTH, HAMILTON, ONTARIO.

Send us \$2 for the best tree sprinkler made. 305-a-OM

SECTIONAL VIEW OF WHITE SELF-CONTAINED RETURN TUBE BOILER, SHOWING DRY PIPE.



This style of boiler is used with all our threshing engines, enabling our customers to produce abundance of steam with long, rough, cheap wood. We utilize water space surrounding and at back end of fire box in connection with our improved internal straw burner.

Manufactured only by **GEORGE WHITE & SONS, London, Ont.**



THIS cut represents the most convenient Wagon ever put on a farm, because it is suitable for all kinds of work, and always ready, no changes being necessary.

THIS WAGON was invented and first introduced in Michigan, U. S., and is now very extensively used by leading farmers in the United States.

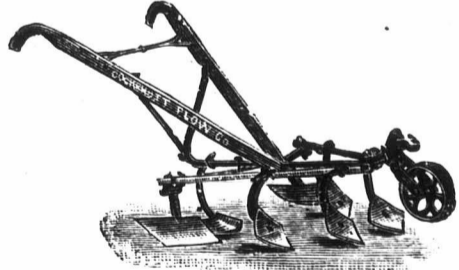
AND EVERY WAGON made and sold by us in Canada is giving entire satisfaction. For further particulars and prices

288-1f

Address, **BAIN WAGON CO., Woodstock, Ont.**

OUR - DIAMOND - POINT - CULTIVATOR

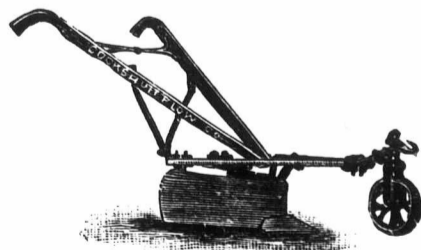
Will Keep Down the Weeds better than any other. Try one and prove it.



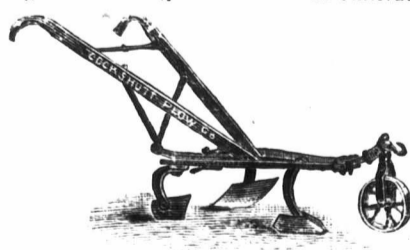
Arranged with Seven Teeth for last time through Corn.



Arranged with Turnip Blades for Flat Cultivating.



Arranged with Long Hillers for Potato Hilling.



Arranged with Three Teeth for first time through Turnips.

COCKSHUTT PLOW CO., Ltd, BRANTFORD, CANADA.

Send for our descriptive catalogue. 304-a-OM

STOCK GOSSIP.

In writing to advertisers please mention the Farmer's Advocate.

Mr. G. A. Watkins, of Detroit, Mich., has selected a valuable lot of about forty Shetland ponies from the Marquis of Londonderry's stud in Bressay, at prices ranging up to £50 each. There are nine stallions, including Magnus Troil, a beautiful black pony, only 8 1/2 hands high, and of perfect shape. Several prize ponies are comprised in the selection, which is altogether of exceptional excellence. None of the ponies exceed 10 hands, and most of them range from 8 1/2 to 9 hands.

NOTICES.

"ACCOMPLISH ALL CLAIMED."

Dromore, Ont.
The Lawrence-Williams Co., Toronto, Ont.:
Dear Sirs: I have been using Gombault's Caustic Balsam for the last two years, and find that it will accomplish all that is claimed for it. Inclosed find \$1.50, for which please send by express, prepaid, one bottle to my friend, Wm. Booth, Boothville. Truly yours, JOHN C. CALDWELL.

Mr. P. Flint, Byron, Ont., purchased a spraying outfit from the United States last season, and by using it once obtained a capital crop of shipping apples, while his neighbors' apples were wormy, and not fit to ship. The outfit cost him \$15, which well repaid him. He now speaks most favorably of a pump made for this purpose, manufactured by J. D. Cleveland, Glendale, Ont., which does its work with perfect satisfaction, and the cost is just one-third of that used by Mr. Flint. See the advertisement on page 197.

Belmont, April 25, 1891.

Mr. H. A. Stringer, London:—
Dear Sir,—I have owned four different styles of carts, and rode on most all kinds of carts made in Canada, and I must say that the cart that I got from you on trial last fall beats them all for easy riding, durability and lightness, and I would not now part with it for the same as I have paid you for it unless I was sure of getting another like it, for I have rode all day in it and not been tired the least, as your torsion make of springs takes off all horse motion. Yours truly, FREDERIC TRAYER. (See adv. page 203).

We call our readers' attention to Manson Campbell's Fanning Mill advertisement which appears in another column. It is very gratifying to note the yearly increase in his business. We have used one of his mills ourselves, and are pleased to say it has given us entire satisfaction. Below will be found a testimonial from Mr. James Rogers, of Eversley.

Mr. Manson Campbell:—
Dear Sir,—The Fanning Mill, with the Bagging Attachment, which I purchased from your agent, Thos. W. Stephens, has given me good satisfaction. It turns easy, does first-class work, and will clean all kinds of grain. I would recommend the Mill with Bagger to any person requiring a first-class article. Yours truly, JAS. ROGERS, Eversley P. O.

OPPORTUNITY.

Master of human destinies am I,
Fame, love and fortune on my footsteps wait.
Cities and fields I walk. I penetrate
Deserts and seas remote. And passing by
Hovel and mart and palace, soon or late
I knock unbidden once at every gate.
If sleeping wake; if feasting rise before
I turn away; it is the hour of fate
And those who follow me reach every state
Mortals desire, and conquer every foe
Save death; but these who doubt or hesitate,
Condemned to failure, penury and woe,
Seek me in vain, and uselessly implore;
I answer not, and I return no more.

But fall not in this respect:
Seize every opportunity to travel
Over the Chicago, Milwaukee & St. Paul Railway

In reply to a Parkhill subscriber we have to say:—
—Dr. Oronhatekha, the founder and Supreme Chief Ranger of the Independent Order of Foresters, is a man of indomitable energy and perseverance. The Order has grown into rapid prominence as one of the leading Benevolent Institutions of the country. It will last long after its founder has passed away, and will doubtless bring aid and happiness to many homes. The following extract, from a report just issued, will show its growth:—
"One year ago we numbered a band of 18,030 members, and though but a young Order we had already distributed in benefits \$480,000.00 and still had left in our treasury a balance amounting to \$184,879.35. Since then our numbers have been constantly augmented, so that at the beginning of the last month we had over 26,000 members in good standing upon our books. During the year past we paid in benefits the sum of \$170,000.00, thus bringing our total payments for benefits to the large sum of \$650,000.00. We have, at this date, a clear surplus of cash in the treasury of \$311,031.64, which is being rapidly increased month by month."

JOHN SMITH,

Live Stock Auctioneer, Brampton, Ont. Sales conducted in all parts of Canada and the United States. Pedigree stock a specialty. Write for terms. References: J. C. Snell, Brampton, Ont.; M. H. Cochrane, Compton, P. Quebec.; T. C. Patteson, Eastwood, Ont. 297-y-O

RUPTURE Consider your own interest. You can get at the lowest price, the very best the land produces. Your Physician knows my goods. The only system to positively suit your case. Truss especially made for you and sent by Mail same day. Fully equipped factory at my command. It took me over twenty years to perfect this work. Send 6c. stamps for Ill. Book. Valuable information, etc. etc.

CHAS. CLUTHE, Surgical Machinist
134 KING STREET WEST, TORONTO, ONT.

USE THE
Halladay Standard Geared Windmill, I X L Iron Feedmill
EVERY FARMER HIS OWN MILLER



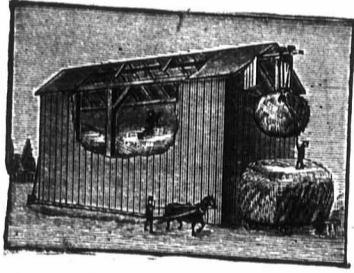
THE BEST IS THE CHEAPEST.

And do your grinding at home, thus saving toll and teaming to and from the grist mill. This work can be done rainy, windy days when outdoor work is suspended on the farm. The same mill will cut corn stalks, saw wood, run churn and grindstone, pump water, &c.

We manufacture the Halladay Standard Geared Pumping Wind Mills, I X L Iron Feed Mills, Steam Well-drilling Machines, Saw-tables, Standard Haying Tools; also, a full line of Tanks, Tank Fixtures and Pumps, both iron and wood, for farm, ornamental, village and railway purposes. Large descriptive catalogue mailed free on application.

ONTARIO PUMP CO. (Ltd.), Toronto, Ont. 301

BUCHANAN'S
(Malleable Improved)
PITCHING MACHINE
For unloading hay and all kinds of loose grain.



Unloads on either side of barn floor without teaming car. No climbing necessary. Malleable Iron Cars. Steel Forks. Knot Passing Pulleys. Will work on stacks as well as in barns. Satisfaction guaranteed.



The Common-Sense Sheaf-Lifter
Works in connection with Pitching Machine, and is the most complete apparatus ever offered to the public for pitching sheaves. Sheaves left in the mow just as they come from the load.

RESPONSIBLE AGENTS WANTED
Circulars, Prices and Terms on application to
M. T. BUCHANAN, Ingersoll.

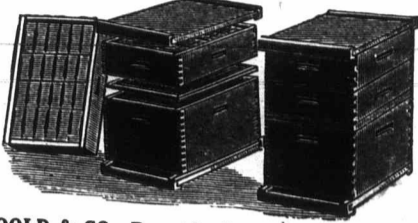
303-c-0

The Grand Union Hotel

WINNIPEG, MAN.

Newly fitted and refurbished. First-class and thoroughly equipped with all modern improvements. Centrally located, and in the vicinity of the Opera House. Cuisine unexcelled in the Northwest, and under the management of an experienced chef. Graduated prices. Free omnibus.

303-y-0 A. E. J. PERCIVAL, Proprietor.



GOLD & CO., Brantford, Ont., can supply the celebrated Dovetailed Hives, also Extractors, Sections, Foundations, &c. Bees by the colony or by the pound for sale. Bees, per colony, \$6.50; in lots of 10, \$6 each. Write for price list. 303-c-0

HOME STUDY
Secure a Complete Business Education at Your Own Home.

Thorough and practical instruction given by MAIL in Book-keeping, Business Forms, Penmanship, Arithmetic, Business Law, Letter Writing, Grammar and Shorthand. Prepare for Success in Business. Low rates. Distance no objection. Satisfaction guaranteed. Over 1000 students registered. Send for free Circulars to

BRYANT & STRATTON'S COLLEGE,
300-y-0M 24 Lafayette Park, Buffalo, N. Y.

LANDS FOR SALE

—BY THE—

CANADA COMPANY

WILD LANDS. IMPROVED FARMS.

TITLE GUARANTEED

The Canada Company have still a large number of lots to dispose of at reasonable prices, (from \$4 to \$30 per acre, according to quality and location)

In Western Ontario.—In the Counties of Essex, Lambton and Perth; also in the Township of Tilbury East, in the county of Kent; and in the Township of Aldboro, in the County of Elgin.

In Northern Ontario.—In the County of Simcoe; also in the Township of Euphrasia, County of Grey; and in the Township of Amaranth, in the County of Dufferin.

In Central Ontario.—In the Counties of Peterborough and Hastings; and in the Township of Sheffield, in the County of Addington.

In Eastern Ontario.—In the counties of Lanark, Carleton, Prescott, and Russell, besides many lots scattered through the older sections of the province.

These lots are, generally speaking, within a short distance of a railway, and are easily accessible by good travelled roads from a market town. Many of the farms have from fifteen to twenty-five acres of clearing fenced ready for cultivation.

The Climate of Western Ontario.—The winters being comparatively mild and short, and the summers correspondingly long, is specially adapted to the successful cultivation of corn, grapes, peaches and all kinds of fruit, for which this section is rapidly becoming noted.

To actual settlers the most liberal terms of payment are offered, only a small payment being required down, the balance payable in seven or ten years, with interest chargeable as a rental at the rate of 4 per cent. per annum.

Full particulars, with complete lists of vacant lands, and prices of any lots selected by applicants, will be furnished on application to the

COMMISSIONERS OF THE CANADA COMPANY,
TORONTO, - - - ONTARIO. 301-f-0
Offices, 204 King St. East.

ADIES, SEND HALF-A-DOLLAR FOR YARN REEL—Handiest Made—Catalogues Free.
J. J. HAZELTON, Guelph, Ont.
300-y-0



SOLID GOLD FILLED.
35 Cts. for a \$2.00 Ring.

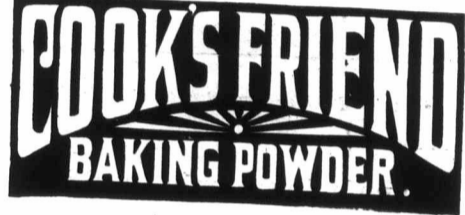
This ring is made of Two Heavy Plates of SOLID 18 KARAT GOLD, OVER COMPOSITION METAL, and is WARRANTED TO WEAR AND RETAIN ITS COLOR FOR YEARS. A bona fide written guarantee is sent with each ring; also a blank which you can fill out and return with the ring any time you become dissatisfied and get all your money back. The regular price of this ring is \$2, and it cannot be told from a \$10 ring. To introduce our watches and jewelry we will send the Special Terms to Agents, etc., on receipt of 25 cents in postage stamps. Such a ring was never advertised before. Order immediately; it is your last chance. (Send a slip of paper the size of your finger. Address, SEARS & CO., 115 Yonge St., Toronto, Can.)

FARMERS!

If you want the best value for your money. If you want an article that will never disappoint you.

If you want thoroughly good and healthy Baking Powder, into which no injurious ingredient is ever permitted to enter.

BUY ONLY THE GENUINE



REMEMBER THAT
McLAREN'S COOK'S FRIEND
IS THE ONLY GENUINE.
THE BEST GROCERS SELL IT.
303-y-0M

FARMERS! FARMERS!

PAY for what you get, but why pay half-a-dozen middle-men to get it for you.

GRANGE WHOLESALE SUPPLY CO.

will give you your supplies nearer the first cost than any other institution in the Dominion. We have reduced expenses to the lowest point, and we buy at the closest cash prices, and we will supply you with goods at the smallest advance that will pay for handling. CO-OPERATE WITH US, THE MORE WE SELL THE CHEAPER WE CAN SELL.

WE HAVE A SPLENDID LOT OF
-NEW TEAS-
Greens, Blacks, Japans, Hysons, and India Teas.
Try our Special Blend at 35c. per pound.

WE KEEP THE
BEST SUGARS
And always as low as the lowest, and everything in the Grocery Line Fresh and Good.

IN DRY GOODS
We have in stock, Cottons, Cottonades, Shirtings, Flannels, Blankets, Towellings and General Staple Goods.

BOOTS & SHOES
Hardware, Patent Medicines, Whips, Harness, Horse Blankets, Brushes, Curry Combs, and everything that a farmer wants, and at prices that will convince you that co-operation is what the farmers must have. Be sure and see our price list. Sent to every farmer on application.

SUITS CUT & MADE TO ORDER

Any person can send their measure by using one of our Direction Cards, which will be sent free to all who ask. Samples of Tweeds and other cloths sent to customers on application.

Butter, Eggs, Grain of all kinds, and all farm produce sold on commission. Send us good produce and we will sell it for you at the highest market price.

GRANGE WHOLESALE SUPPLY CO.
R. Y. MANNING, Manager,
35 COLBORNE STREET, TORONTO
304-b-0M