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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.*
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No. 411



HON. SYDNEY A. FISHER,
 THE NEW CANADIAN MINISTER OF AGRICULTURE.

EDITORIAL.

The New Canadian Minister of Agriculture.

Sydney A. Fisher, farmer and stock-breeder, whose portrait adorns our first page, has been appointed Minister of Agriculture in the new Canadian Government. As most of our older readers are aware, he is the owner of Alva Stock Farm (comprising some four hundred fertile acres, near Knowlton, P. Q.), whose Guernseys have won distinction in the show-rings for their owner and breeder. It ranks among the most beautiful and best-managed farms of that thrifty agricultural district, and its dairy and other products, as well as its live stock, attest the practical skill and enterprise of its owner.

Hon. Mr. Fisher was a son of Dr. Arthur Fisher, of Montreal, whose grandfather came to Canada from Dunkeld, Scotland. He was born on June 12th, 1850, so that now he is in the very heyday of a vigorous manhood. Educated in the High School and McGill University, he graduated in Trinity College, Cambridge University; hence, his attainments in that respect are of the very highest order. For twenty-three years past he has devoted his whole time and abilities to the study and practice of agriculture, which he very properly regards as a science as well as a business, the principles of which men must observe if they would succeed. Connected with no other business or profession, he once bluntly and modestly described himself as "only a farmer." He was first elected M. P. for his present seat (Brome) at the general election of 1882, and was re-elected in 1887. In 1891 he sustained a reverse, but in the recent election he was again triumphant. During his nine years of parliamentary service in the House of Commons he interested himself especially in whatever concerned the interests of farming. His long residence and active interest in the affairs of his county caused him to be made Justice of the Peace for Bedford district. For a number of years he has been a director and Vice-President of the Quebec Provincial Dairy Association, director and Vice-President of the Provincial Fruit Growers' Association, and a director of the Agricultural Society of his own county, so that both locally and provincially he has earned the confidence of his fellows.

When the British Association for the Advancement of Science assembled at Montreal in 1884, he was asked to write a paper, which was presented to that learned body, on behalf of farming in the Province of Quebec.

The new Premier, in casting about for a representative of agriculture in his Cabinet, accorded to Mr. Fisher the honor for which his experience and attainments alike seem to have pre-eminently fitted him. Canada being essentially an agricultural country, we long ago took the ground that the time had arrived when the necessities of the situation demanded that the Agricultural Department should have such a man at its head. In this connection it is also satisfactory to note the presence of Hon. Mr. Joly in the Ministry, who, though not a farmer, has always taken a personal interest in the agricultural progress of his Province, especially in the matter of forestry, which is with him a great hobby. Then the new Postmaster-General, Hon. Mr. Mulock, though eminent as a lawyer and scholar, is likewise a farmer on a large scale in the County of York, Ont. Breeders will remember the vigorous and helpful way in which he brought before the last session of Parliament the matter of outrageous freight rates on breeding stock which some overreaching railway officials sought to impose last winter.

Mr. Fisher is to be congratulated upon this distinction, which we believe will command general favor; but it is a position imposing many and serious responsibilities, and we feel safe in bespeaking for him the co-operation of all who have at heart the interests of farmers and breeders, feeling certain that whatever promises to promote their interests will have his most careful and enthusiastic aid.

Our aim in the conduct of the FARMER'S ADVOCATE has been to make it of practical, timely service to the farmers and breeders of Canada; and we certainly appreciate the many letters received from readers, such as that from Mr. W. H. Bull, a progressive farmer and stockman, in another column, who says he has been both "delighted and profited by the valuable information given in its columns." He specifies one article on milk fever which saved the life of a \$300 Jersey heifer—certainly a handsome return for the \$1 invested. Once in a while we come across a farmer who "can't afford" to take the ADVOCATE, which usually turns out to be another case of "saving at the tap and wasting at the bung-hole." In these days of tremendous competition in agricultural products, and the business of farming every year requiring greater knowledge and skill, the man who thus deprives himself of helpful information simply shuts out the light that would guide him to success.

The Advantages of Sorghum.

The articles and letters which have been published recently in the ADVOCATE (two additional ones appearing in this issue) will no doubt serve to awaken fresh interest in the production of sorghum syrup, especially throughout portions of Ontario and other Eastern parts of the Dominion. The climatic and other conditions favorable to the growth of the sorghum plant correspond in the main with those for corn, the warmer sections having a decided advantage. The yields of syrup per acre reported by our contributors are large, and the syrup is well liked, selling at prices which show a good return per acre. Besides the direct return from syrup, there is the seed (growing in the form of a large dark tassel or plume on top), which ranks along with corn for feeding purposes, and of which Mr. Gray, in our July 1st issue, reported yields of from twenty-five to thirty-five bushels per acre. It is when the seed is ripe that the maximum of saccharine matter is found in the stalk, so that there is nothing to prevent a maximum crop of both being secured. The leaves, stripped off when the plant is ready to cut for the crushing-mill, make excellent fodder, Dr. Collier reporting them to have a higher nutritive value than hay or grass. There is next the bagasse, or stalks after the juice has been crushed out, analyses of which show a considerable quantity of sugar and other solids. A mixture of the leaves and fresh bagasse has been found to be of greater value as food than corn ensilage. If any readers of the ADVOCATE have had experience ensiling these by-products of sorghum we would like to hear what the result has been. In the Western States dried bagasse has been also used for fuel. The skimmings from the evaporator, settlings, etc., make a superior article of vinegar. When all these points are considered, there doubtless seems much to commend the growing of sorghum, and the letters we are publishing from our readers show that this line of farming is being successfully carried on now in Canada, though doubtless not as extensively as it might be, with advantage. As compared with the beet sugar industry, only a small amount of capital requires to be invested.

City Street Building.

Many of the leading New York horsemen are making strong protestations against the laying of asphalt pavements upon the streets principally used by carriage, saddle, and other pleasure horses. Fifth Avenue, which leads to Washington Park, is to be asphalted from 43rd to 59th streets, and, perhaps, clear to the Park. It is because of the location and use of this avenue that strong protests are being made. The objections are based on the ground that asphalt is extremely dangerous to both horse and driver. Mr. F. C. Stevens, President of the West End National Bank of Washington, and proprietor of a large stock farm at Attica, N. Y., who is one of the largest importers and breeders of Hackneys, has made a close study of the asphalt subject in Washington, and has come to the conclusion that on an average horses last less than one year on it before becoming lame. Col. Lawrence Kip, President of the Coney Island Jockey Club and Vice-President of the National Horse Show Association, claims that valuable horses cannot be risked on asphalt pavement, as the danger of slipping and straining themselves, if they do not fall and break their hips and limbs, is altogether too great. The objection to asphalt on the part of truckmen is a matter of notoriety, for their horses cannot get a foothold for hauling on asphalt, even when the pavement is at its best. No doubt the character of the objection will have sufficient weight—at least, in some instances—to cause other sorts of streets to be laid. The one great redeeming feature of the smooth, hard, easily-cleaned pavement is the advantage to public health, which is certainly a grave consideration in a large city; but whether or not a properly-laid Macadam road would not answer the purpose admirably, especially upon resident streets, is a question worthy of consideration. In the City of London, Ont., at the present time, we notice that streets are being put into excellent condition by first lowering the bed a few inches, then putting down layers of coarse gravel and broken stone to the depth of six and four inches respectively, and finishing the surface with coarse sand or screenings. Frequent use of a heavy steam roller makes it very solid and enduring, and quite smooth, but without the slippiness of asphalt. When finished, the bed is about eight inches deep. If our leading country roads could be constructed in a like manner, the

question of roadmaking would, for a considerable time, be solved, though timely repairs would yet be needed.

The cost of asphalt paving, where the traffic is extremely heavy, would be about \$2.65 per square yard, or, on residential streets, \$2.25, while streets paved with broken stone, etc., as above described, has cost the city probably 30 cents per square yard. On country roads it could be done for very much less. In London the stones were broken in winter by men who applied to the city for relief. In many of the States, particularly south, convicts are set to work breaking stones, and then by the use of grading machines and heavy rollers main roads are put in magnificent condition. In other places machines are used for crushing the cobblestones, though, where practicable, stone-breaking would seem a wholesome employment for prisoners, and an effective item in the programme of road improvement.

Protect the Birds.

It is a deplorable fact that as year after year passes, the birds, especially the desirable kinds, are becoming more and more scarce. The American people, who are noted for being prompt to take action when the time seems ripe, early observed Arbor Day in the public schools, and are now seeking to apply the same principle for the protection and increase of the feathered tribes. It is recognized that the greatest benefit of Arbor Day is the sentiment and interest aroused on the subjects of forestry and floriculture and in the broader study of nature. It is believed that the observance of Bird Day would appeal to the youth even more strongly.

The movement has already been tried in a few American cities and proved a decided success. The Department of Agriculture, under whose jurisdiction the movement is promoted, has received inquiries concerning Bird Day from a few of the States, and the matter is attracting attention in others.

Object of Bird Day.—From all sides come reports of a decrease in native birds, due to the clearing of the forests, draining of the swamps, and cultivation of land; but especially to the increasing slaughter of birds for game, the demand for feathers to supply the millinery trade, and the breaking up of nests to gratify the egg-collecting proclivities of small boys. While game laws and statutes protecting insectivorous birds have been passed in many States, these cannot be expected to accomplish much unless supported by popular sentiment in favor of bird protection. This object can only be attained by demonstrating to the people the value of birds, which can be most effectively accomplished by instilling into the minds of the young citizens the proper regard for birds. The object, then, of Bird Day is to diffuse knowledge concerning the native birds and their habits, beginning with those in the school neighborhood, and to arouse a more general interest in bird protection.

The value of setting apart at least one school day in the year for the study of birds and their protection need hardly be commented upon, it is so evident. Is it not worth while to do something to protect the birds and prevent their destruction before it is too late? A powerful influence for good can be exerted by the schools if the teachers will interest themselves in such a movement, and the benefit that will result to the pupils can hardly be attained in any other way at so small an expenditure of time. It is believed and recommended by the American Secretary of Agriculture, that Bird Day can be adopted with profit by schools of all grades, and the subject is recommended to the thoughtful attention of teachers and school superintendents or inspectors throughout the country, in the hope that they will co-operate with other agencies now at work to prevent the destruction of native birds. Such an action is surely much needed in Canada, and we would heartily recommend it.

Plant-Lice in Oats.

The little pale green plant-lice (*Aphides*) seem to have little choice in their diet, as they are from time to time found infesting all sorts of crops. Last year great numbers were noticed upon the fall wheat about the time the heads were filling, but they did little apparent damage. Just now we notice several fields of oats in Middlesex Co., Ont., badly infested. They literally cover some of the heads, and are doing considerable damage. They seem to cluster upon the fine, hairlike threads supporting the grains, which are falling off in great quantities. They seem to have discovered where the most concentrated sap is to be found, viz., just before it enters the grain. So destructive threatens the attack in one field, its owner will likely cut it green for fodder in order to save further loss by the pest. The "ladybug" (*Coccinella*) or "ladybird," as sometimes called, is their great enemy, and will likely prevent an increase of the lice.

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Country Roads.

In consequence of the bad roads in a small town in New Jersey, the wagonmakers constructed four-horse vehicles to carry 55 bushel baskets as a maximum load, which was regarded as heavy hauling. Real estate thereabout had gone a-begging for years; there was no possible market for it. It had been impossible to settle up estates because no purchaser could be found for the land. But a few years ago the people of the community woke up. The town issued \$4,000 worth of bonds, and applied the proceeds to making better roadways. As a result the New Jersey wagonmakers of the vicinity of Philadelphia are making two-horse vehicles to carry not 55 bushels baskets, but loads made up of from 90 to 125 bushel, and still the loads are not regarded as heavy.—*Monetary Times.*

STOCK.

Weaning Lambs.

Generally speaking, lambs dropped before May 1st should be weaned before August 1st. They will by that time be sufficiently "sheepy" to look out for themselves in the matter of diet, provided they have access to suitable pasture. It is also necessary for the welfare of the ewes that the lambs be taken off by that time, as they invariably become thin before then and are giving little milk, when the big, strong sucklers butt unmercifully in their efforts to extract it. The ewes should be given an opportunity to pick up well before the mating season comes round. The better (not fatter) the condition the earlier will that time be. Pedigreed lambs should be ear-labelled before weaning, so that no mistake be made as to dams.

The favorite spot for newly-weaned lambs is a second-growth clover field, but a rape patch has much in its favor for such a purpose. In fact, every farm upon which sheep are kept should have a rape field, to be fed in conjunction with other pasture. Sheep, more than any other class of stock, enjoy and profit by a change of run and a variety of foods. It pays well to indulge them in their whims, especially at this season, when a setback would be of permanent and serious injury. It is well to place a few old dry ewes or yearlings among the weaned lambs in the new pasture, to lead them to the salt and grain trough, also to the water trough, which should always be present except when rape forms the food, which will provide enough succulence for their welfare. Feed grain moderately at first—a quarter of a pound of oats and a little bran is enough to commence with. A few cracked peas added in a week or two will send the flock along well. The sexes should be separated at weaning time, as the early male lambs become bothersome to the ewes, which hinders the well-doing of all concerned. If a tick can be found the flock should be dipped with one of the reputable dips.

The mothers as well as the youngsters require special attention. They should be placed upon a bare pasture, out of the hearing of the lambs, until their milk has dried up. Some of the most copious milkers will require attention the day after weaning and for some days following. It is not only cruel but a positive injury to liberal milkers to allow them to go without occasional milkings, and that means a financial loss, which one cannot afford. It is not wise to milk a ewe out cleanly, but enough should be drawn off to render the udder quite lax. After the milk has passed off liberal feeding should be practiced. A rape field can hardly be improved upon, but fresh clover, cut corn, and a little grain will soon put them into thriving condition. They should be gotten into vigorous form before the mating season commences.

Precautions in Pasturing Rape.

To those who have grown rape for a few seasons no word of precaution is necessary, but to the great number who are just commencing to cultivate it a knowledge of some of the dangers associated with feeding it will be helpful. Without care, bowel disorders are likely to occur with some of the flock; especially so if the rape is young or wet with dew or rain. If hungry sheep are turned among rape before they have become accustomed to it, there is great danger of bloating, and perhaps death if relief is not given. If such occurs, a salt and water drench should be given and a wooden gag tied in the mouth to facilitate the escape of gas. To avoid any such trouble have the rape well grown and dry before turning into it; then never admit hungry stock. Until they have become accustomed to it, which will be about a week or ten days, sheep should be allowed to remain in it only during the dry portion of the days. After that they can be fairly safely admitted at their pleasure, if they also have access to a grass pasture. This rule, however, must be departed from as soon as frosty nights commence. Frosty rape is about as dangerous a food as can be given, causing inflammation of the bowels and death in short order, but when this fact is understood it can be guarded against.

Another source of trouble in a rape field, especially with fat sheep, is that of becoming cast upon their backs in the merest depression. Drilled rape is especially liable to cause trouble in this way. When fat sheep become very full they become entirely powerless to regain their feet if once they roll into a depression with their feet in the air. The means of guarding against such a trouble is to visit the flock at least twice a day.

Care for the Calves.

"A penny saved is a penny gained," is as true now as ever it was. In fact, it is more than true, if such were possible, with calves in the matter of preventing a loss of flesh during the hot, dry, fly time. Calves that have done well up till now will require better care during the coming month than for those that are past. Not only will the heat make a draft upon the growth and flesh, but the swarms of horn flies have become a constant worry from morning till night. The wise stock-breeder will enclose his calves within darkened, cool stables during the days of August and part of September. They will get all the needed exercise if turned into a second-growth clover pasture during the night, and go on gaining and growing at a profitable rate.

Halter-Breaking Show Animals.

Many a prize has been lost by a want of schooling before the animals have been brought out to the show-ring. While this is especially true of colts and fillies, it also applies to cattle. A fidgety, nervous animal, that will shrink away from the touch of the judge, never shows to anything like the same advantage as the one that will walk up boldly to where it is wanted, and then brace up in an assured, graceful manner. The only way to properly halter-break cattle is to commence with the calf, and spend considerable time every day or two until the animal understands what is demanded. The older a calf is allowed to become before the schooling commences, the more tedious and painstaking will the course of training become. The writer has found a rope halter which fits nicely over the head, back of the ears, and around the nose, a good sort to use. It should not be allowed to draw up tightly around the jaw. A good length of shank is necessary to hinder a strong calf from gaining its freedom. It is well to commence by tying the calf until it realizes the strength of the halter. Never allow the pupil to get into a run and then undertake to stop it suddenly, as then there is danger of a somersault, and perhaps a broken horn. Give a few lessons in the stable before taking the subject out to the yard.

In showing a colt or horse of any age to halter, a great deal depends upon the way he goes, whether or not he is to be successful, and in order to have him at his best a deal of work must be given. The Hackney classes are perhaps the most attractive of all the halter-shown classes, largely because of their graceful action and manners, much of which has to be trained into them. No severity is needed in training a colt. He should be taught to go on a square trot, and never allowed to go around his trainer. Go slow at first and keep close to the head until he learns to trot in a straight line. In a short time more and more line can be given until the pupil is going with a long rein, which is the nicest way. In halter-training a colt, the trainer should never wear him out, but seek to keep him fresh and fond of him. Study the disposition of the animal and handle him accordingly.

Dogs vs. Sheep—How the Advocate is Valued.

To the Editor FARMER'S ADVOCATE: SIR,—In reply to enquiries in your June 15th FARMER'S ADVOCATE, regarding dogs worrying sheep: 1st, how to prevent; 2nd, how to treat injured sheep; 3rd, what course would I recommend regarding the suppression of dogs:—

1st. *Bells on Sheep.*—My farm is near the limits of the town of Brampton, where many dogs are kept. Many of my neighbors have given up the idea of keeping sheep on account of the loss by dogs. I have kept bells on my sheep, say one nice, clear-sounding, medium-sized, open bell on every fifth sheep; have kept a large flock for 22 years and never had one worried by dogs. Bells are the preventive.

2nd. *Prevention is Better than Cure.*—I have never seen much success or satisfaction in the treatment of worried, torn sheep; they almost invariably pine away and die. Washing with warm water, a bran poultice, anointing with carbolic oil reduced, is probably the best treatment.

3rd. *The Law.*—With regard to dogs, many townships have passed a by-law that all dogs wear a numbered tag bearing owner's name, registered with the township clerk. This should be insisted upon; then when the dog is caught in the act there would be no denying ownership, which is almost always the case. I would recommend that \$1 be levied on one dog, and \$5 on each additional dog. Most people can feed one, but when they keep more they are starved, and it is generally those that worry the sheep. Also a tax of \$5 or \$10 on every bitch, for it is frequently when dogs are on the ramble that they get into mischief. This tax would insure a better class of bitches being kept, and the country would soon be rid of mongrel dogs that are of no use, and almost invariably do the mischief.

I wish the FARMER'S ADVOCATE every success. I am delighted with and very much profited by the valuable information I receive from time to time from its columns. One article on the treatment of milk fever saved the life of a heifer I value at \$300, Rhoda of Brampton, a granddaughter of Kitty of St. Lambert. B. H. BULL. Peel Co., Ont.

More Than Shrops in Canada.

To the Editor FARMER'S ADVOCATE: SIR,—I imagine many Canadian sheep breeders were, like myself, amazed at the expressed opinions of "Scotland Yet" in his last letter, where he remarks that "Sheep cannot be of much interest to Canadian readers, except, perhaps, the Shropshires." No doubt, for the time, the writer overlooked the success of Canadian flocks of all breeds, except Cheviots and Merinos, at World's Fair, Chicago, in '93, and also at the great New York Live Stock Show of 1895. It would be a pleasant eye-opener to "Scotland Yet" were he to visit Canada during the holding of the Toronto Industrial, and other great live stock events of a like nature, where he would doubtless see classes of nearly all the British breeds, comparing favorably in numbers and quality with those of the greatest sheep shows in the Old Land. "CANADA YET."

Hackneys--1896.

[Paper read by Geo. H. Hastings, of "Deer Park," Toronto, at the Hackney meeting held in the Albion Hotel, May 15th, 1896.]

The owners and breeders of the Hackney horse can hardly fail to regard the year 1895 as a season to be remembered. Prime Hackneys have been in good demand in the home market. Prices made at public auction have been such as nobody could have anticipated a few years ago. Even the unpleasant things said by a few persons who suppose that they are well-informed in regard to horses may not be without their uses for those who desire the steady improvement of the Hackney.

It is a fact that great progress has been made since the Hackney Horse Society was founded on the 30th of June, 1883, and more especially since the Society's first show in the spring of the year 1885—how great even Hackney breeders are apt to forget. But those who do not look with a kindly eye on this evidence of public favor have a better memory. They recognize that, so far as the mass of horse breeders are concerned, the Hackney is the new comer; moreover, they have not cared to look up the evidence that the Hackney has in foreign lands, as well as at home, well sustained the test that is everywhere recognized as the best proof of purity of blood—the power to impress its own characteristics on the produce of mares of other varieties of the horse; not even excepting the Eastern breeds, and the British compound of Eastern and the old English courser which we speak of as Thoroughbred. Hackney breeders know that the purest-blooded Hackney horses are just such another compound, but with the old English Hackney instead of the courser as the foundation. And they may readily admit that as this best breed were so few as to be spoken of as "well-nigh extinct" fifty years ago, Hackney owners had to master more of the science of breeding than has been demanded of the man whose taste is for the racer or the hunter. None should be more ready to admit that short pedigree has uncertainty as its attendant, since in recent years the one particular sought after by the owner of Hackneys is the back-breeding of sires and dams when a man desires to breed only the best.

Ireland saw, last April, the founding of an Irish Harness Horse Society, with an influential array of noblemen and gentlemen as its supporters. The declared purpose of this Society is to increase the supply of harness horses bred in Ireland by farmers who cannot hope to produce a made hunter, as Hackney stallions have been the means by which foreigners have been enabled to send to Great Britain "harness horses with action," for which there is a constant demand. The Harness Horse Society further proposes gradually to form a register of mares specially suitable for breeding harness horses.

The Harness Horse Society had stated that after the Horse Show of 1894 "the different journals were unanimous in expressing their approval of the action of the Royal Dublin Society in reintroducing Hackney classes, stating that it was part of the Society's duty to encourage a development of industry among all classes of farmers, and not practically to confine their efforts to one branch only of the horse trade." As a consequence, no classes were provided for Hackney stallions at the Dublin Show of 1895, and there was only the barest possible recognition of Hackney mares. The excuse was that the breeding of hunters would be made more hazardous by the possibility of farmers using a Hackney stallion. It was further asserted that big carriage horses were harder to get in Yorkshire since farmers there had bred Hackneys more freely, this apparently discounting the promise held out to Irish farmers by the Harness Horse Society.

One result of this dog-in-the-manger policy has been a letter to the *Live Stock Journal* by Mr. R. G. Carden, of Fishmoine, Templemore Co., Tipperary, whose "whole aim," he says, "has been to breed weight-carrying hunters with as much Thoroughbred blood as possible." This unprejudiced observer, acting as judge at district shows instituted by the Congested Districts Board, gives one of the strongest possible testimonies yet received as to the value of the Hackney stallion; and this, be it remembered, when the horse was used over Irish country mares—"deficient in bone, quality, and shape." Mr. Carden says of the young stock exhibited: "With regard to the young stock, the produce of the Hackney stallions, the really splendid show of two-year-olds, yearlings, and foals (particularly the last) which came before us would have done credit to any show in the country, and it was hard to realize when one saw the foals trotting beside their dams that one could have been the offspring of the other, so much has the Hackney impressed his make and shape." Further proof of what the Hackney is already doing for Ireland is found in Mr. Carden's statement that many of the farmers had got nearly double the price for the produce of the Hackney stallion that they had been hitherto receiving. Here is the promise of 1895 for British breeders of the prime Hackney, as it is also abundant warrant of increased efforts of the Irish Harness Horse Society.

Scotland has more than maintained the lively interest which has been aroused there by a few earnest lovers of the Hackney. Her Majesty the Queen is there an occasional exhibitor. There is also a noteworthy readiness to provide classes which shall lead to the more general use of the Hackney stallion. This policy, in such strong contrast to that pursued in Dublin, is followed consistently both by the Highland & Agricultural and

the Edinburgh Societies. County and district associations have thus a good example set them that is rapidly bearing fruit.

The year has, as we have said, been noted for the exceptional prices realized at several of the sales by public auction. Mr. Alexander Morton in March offered Hackneys and ponies from his stud at Gowankbank Darvel. A couple of Hackney geldings made 400 guineas, and the average for nineteen harness horses was £90 6s., as against £67 14s. 6d. for ten sold in 1893. Two sales on following days in the East Riding opened the English season. At Mr. F. Usher's, Middlethorpe, the top price was 145 guineas, for Maggie Murphy, and 100 guineas was given for a yearling filly. The first seven mares sold made a total of 459 guineas. Lady Cranbrook, 205 guineas; 8215 Martha, 185 guineas. Sir Gilbert Greenall's Hackneys were offered at Tattersall's, when Orange Blossom was bid up to 1,400 guineas and withdrawn at 1,450 guineas. Amusement was withdrawn at 900 guineas. Sir Humphrey de Trafford's ponies, sold on September 5th, previous to the removal from Flodden to Swafeld, in Norfolk, were yet more sensational: 4703 Snorer 2nd, 600 guineas; Georgina 5th, 600 guineas; 1081 Dorothy Derby, 600 guineas; Dorothy Derby 2nd, 720 guineas; 8461 Snorer 2nd, 700 guineas; Miss Sniff, yearling, by Cassius, 900 guineas; Snorter 4995, 350 guineas;—the stud of breeding ponies totalling £6,100 10s. The reason of this phenomenal sale is their suitability for breeding Hackney cobs and polo ponies, which are in great demand up to big weight and very fast and active for saddle. They fetch higher prices than the hunters, as they are quicker, and several large breeders are breeding this class.

General Gordon Stud sale of Hackney ponies, on September 10th, was followed two days later by another Lancashire opportunity, Mr. R. Hartley's Woodford Park Stud at Blackburn. The top price at this sale was 250 guineas for Countess of Derby; 230 guineas was given for Fearless, three-year-old filly, and 170 guineas for Golden Belle, also a three-year-old.

In Canada there has been several good sales made, and only this month Mr. Geo. H. Hastings sold a complete stud of Hackneys and mares to go to North Carolina. They comprised: Black Prince, Miss Noble, Noble Girl, Soubrette, Little Duchess, sire Young Nobleman; Lady Bardolph and Geraldine, by Lord Bardolph, and Norfolk Duchess. Two of them were left at A. J. Cassatt's Farm to be bred to Cadet, and two were sent to Dr. Seward Webb to be bred to Matchless of Lownesborough. The purchaser was more than pleased with them, and it is his intention to cross them with trotting mares, of which he has a large stud.

Americans are more and more demanding style and action in their pleasure horses, and there has also sprung up a good demand for geldings with the Hackney characteristics, which tends to the advantage of the importers and breeders.

Some Parasites of the Domesticated Animals.

[From an address to the Farmers' Institute, by Fred. Torrance, B. A., D. V. S., Brandon, Man.]

The study of parasites covers an immense field, and even if we limit our view to those which are outside the domain of bacteriology, we are surprised and appalled at the vast number and variety of parasites. And so common are they that with most animals it seems to be the normal condition to harbor more or less of these little pests; and when not very numerous an animal seems able to afford food and refuge to its parasites without inconvenience to itself. But it is far different when the parasites are numerous enough to affect the health of the host. Then the parasites seem to thrive the more as the health of the victim becomes feebler, and unless art steps in to the rescue, the animal may lose the battle in the unequal combat of one against thousands, or even millions, and go to an early grave.

In the Province of Manitoba there are some varieties of parasites which are very common and entail great loss to farmers, especially among young stock, and it is my purpose to say a few words about these special varieties.

LICE.—Pediculi.—All the domesticated animals may be affected with lousiness, and each species has its own variety of louse, but in many cases the lice will attack more than one species. Thus, some varieties of the horse louse will attack cattle also, and poultry lice will infest horses as well as hens. It is during the winter months that lice are more troublesome to stock, and the farmer should always be on the lookout to detect the presence of these parasites as soon as possible. They show themselves first by causing the animal to rub himself against the sides of the stall and bite his sides and flanks to relieve the itchiness. In bad cases the hair will be worn from the body in patches by this constant rubbing, and the animal is thin and out of condition. On young colts lice are very effectual in preventing them from thriving and attaining their growth; and under the long hair which grows upon colts during the Manitoba winter the lice are often not detected until they have caused much damage. The injury which the presence of lice inflicts on an animal is caused not so much from the abstraction of blood as from the continual irritation of the skin. Some varieties of lice do not suck the blood at all, but gnaw at the outer layers of the skin with their strong mandibles. Lice may be detected by parting the hair and watching closely, when their movements will betray their presence.

Getting rid of lice is not always an easy matter, especially when several head are affected and they have long winter coats on. Some of the most effectual remedies are of no use in this climate during the winter, when it is unwise to apply anything which will wet the hair and perhaps cause a severe cold. The remedy then for winter should be either ointment or a powder. A mixture of coal oil and lard is very effectual if applied freely, but it takes a large quantity when the hair is long. Coal oil itself is deadly to the parasites, but will take off the hair as well, and should not be used without mixing it with lard or oil. Of powders, the Persian Insect Powder is the most effectual. It should be dusted into the hair along the back, and will gradually make its way down the sides and kill all lice it comes in contact with. It has no effect on the nits or eggs, however, and should be reapplied in about a week to kill the fresh brood. In mild weather the lice may be destroyed by wetting the skin with coal oil emulsion prepared as for spraying trees, one part strong emulsion to ten of water.

Horses are sometimes infested with lice from poultry when hens are kept in the stable. They give rise to intense itching, especially at night, and cause the horses to lose flesh and become emaciated. Poultry lice are smaller than horse lice, and therefore more difficult to detect. But the effects they produce on the skin are characteristic. The hair comes off in small circular patches, giving the animal a flea-bitten appearance, and these spots are not more general on the neck and near the root of the tail than on other parts of the body. There is another variety of these parasites of poultry, the *Dermanyssus Gallinae*, which remain hidden on the roosts and woodwork of the henhouse during the day, and at night crawl on to the birds while roosting. They will attack horses, and even human beings, and when numerous cause much damage by the abstraction of blood and by preventing the birds and horses from obtaining rest.

In order to get rid of them it is necessary to employ the remedies already mentioned for destroying lice, and, in addition, to give the woodwork a good coating of lime wash. In henhouses the roosts should be painted with coal oil, and it is hardly necessary to say that hens should not be kept in the stable with the horses.

[TO BE CONTINUED.]

FARM.

Crimson Clover.

To the Editor FARMER'S ADVOCATE:

SIR,—For a quick-growing nitrogen trap nothing equals crimson clover. Having seen so many reports in the rural press in regard to whether this variety of clover would stand our severe winter or not, I concluded to try it; and, after two repeated trials, have come to the conclusion that it is just as hardy as the red or Mammoth varieties. I sowed a small plot on heavy clay loam soil, in August, 1894. The seed did not germinate for some time, owing to the drought, but had a nice start when winter set in; and when the snow went off in the spring it commenced to grow rapidly, and began to bloom about the 5th of May. As it was such a small plot, I did not bother with the seed, but thought I would try it on a larger scale. Last fall I sowed 1½ acres, at the rate of 15 lbs. to the acre, on black, sandy soil, about September 1st. Part of the seed was sown in corn at the last plowing, the balance on early potato ground after the potatoes had been removed. After sowing, the continuous drought retarded the growth greatly; but when winter set in it had a fair start, and although the weather was very severe, not a plant was winter-killed. It made a very heavy growth in April, and was in full bloom about the 8th of May, standing two feet high, and presenting a beautiful appearance; its sweet scent attracting thousands of honey bees from the neighboring hives. At time of writing (June 12th) it is fit to cut for seed, and, from all appearances, I will get seven or eight bushels of seed, one of my neighbors estimating the crop at ten bushels.

I intend disking up my stubble ground after harvest, and turning under next spring when in full bloom.

My experience is that this should be sown, if for no other purpose than for a mat or cover for the ground during the winter and for early pasture in the spring. Farmers should not be backward about raising it, on account of climatic changes, as no doubt it will become hardier when it becomes acclimatized; and it has stood the winter with me when the red clover was completely killed and heaved out. I consider it a veritable godsend to farmers on poor, run-down farms, where a heavy crop can be turned under in the spring, and for fruit orchards it is invaluable.

Essex Co., Ont.

GEO. S. CORNWALL.

Give the work horses a night pasture near the stables. After the day's work they should receive the same care in the stable as if they were going to remain there; and after being cooled, fed, and cleaned, turn them into the pasture or large paddock, where they can get a generous bite of grass, and roll and rest. They should receive same amount of feed in the stable. It is cruel to expect them to work all day and pick around all night to satisfy their hunger.

Preparing for Another Wheat Crop.

It is generally admitted that too much work cannot be put upon ground intended for fall wheat. There is no doubt but on hard baked land a deal is needed to obtain a properly mellowed seedbed, which must be had if possible. In getting this the desirable firm bottom is also secured. Years ago almost all the fall wheat grown was on summer-fallow, but it is now conceded that two seasons cannot be afforded to obtain a single crop, especially one that is somewhat uncertain, and the price for which is as low as wheat has ruled for a long time. Anything less than a large yield of good wheat will not pay.

Where summer-fallowing has been done this season, the most successful wheat growers would say, do not plow very near the time of sowing, but give frequent surface cultivation during the last three or four weeks.

A popular spot for fall wheat is upon pea ground that was plowed out of sod last spring. Not only does such land work up well, but the decaying vegetable matter from the sod sends the wheat plants along at a good rate. When such a field is very clean, many good farmers favor not plowing it at all, but simply cultivating well with a disk or other good cultivator several times over. If it is to be plowed it cannot be done too soon after the peas are off. One dislikes to plow down scattering peas that the pigs might pick up, but if wheat is to be prepared for the peas will have to be sacrificed.

It is hardly worth while sowing fall wheat after oats or barley unless a dressing of manure can be given, and that is an unlikely possibility with most farmers this year. Where early clover was taken off, the second growth may be plowed down for wheat, but it is almost too late to think of that just now.

The advantage of a fine surface and firm bottom lies in the fact that when the seed is put in the ground that is sufficiently moist, in a few days it will put forth its main root pointing downwards, and its cotyledon or spear pointing upwards. This main root will grow straight down until it strikes the compact soil, which checks its growth. Being thus restrained in its downward extension, the root gives off a great number of laterals, running in all directions. Hence, the roots of the young plant lie almost entirely in the loose, fine soil during the fall and winter. When the ground freezes, this loose soil heaves in a mass, taking with it the roots of the plant in a body without tearing them, thus enabling it to better withstand the freezing and thawing of winter and spring. When the frost is out of the ground the under soil is soft, and the sun of spring tells nature to wake up and do something. The roots then begin to grow and penetrate the lower soil. The finer this soil is and the more vegetable matter it contains, the more porous it will be, which facilitates the ramifying of the roots through it. The time of sowing varies with localities, but from the last week in August until the 10th of September seems to be the favored time. This season, in many sections, such as Western Ontario, vegetation is two weeks in advance of other years, so that fall wheat seeding will be correspondingly early.

To sum up: (1) Sow early; (2) have a thoroughly pulverized seedbed; (3) soil enriched by manuring; (4) sow a good sample of seed of a variety that has proved meritorious under conditions similar to your own.

Big Yield and Good Prices for Sorghum Syrup.

To the Editor FARMER'S ADVOCATE:

SIR,—I have had five years' experience in growing and making sorghum into syrup. We think it a first-class syrup in our section, and I make into syrup on an average about seven hundred gallons each year. The kind of seed we use is the Early Amber. I think it makes the best quality of syrup. The Early Orange is a good kind, and will produce more syrup per acre, but not of so good a quality. If it is a good crop, an acre will run about three hundred gallons; that is, in rows three feet apart, hills two feet apart. Cultivate the same as corn; when three or four inches high, thin out and leave five or six of the largest stalks in the hill. Plant about the first or middle of May, if the weather is warm; if not, do not plant till the first of June, as it will not grow in cold weather. As to harvesting, when the seed gets black and hard cut off the top (that is, the seed) and strip off the leaves. Cut, tie in bundles, and take right to the mill, being careful not to get sand or dirt on the cane, as sand will not mix well with syrup. I use one of the Grimm evaporators, and they are the best machine made for either maple or sorghum syrup. I can make sorghum as clear as any honey, and could sell more than I could make, at 50 and 60 cents per gallon. Dunwich Tp., Ont. C. SMITH.

Sorghum Syrup -- Nine Years Experience.

To the Editor FARMER'S ADVOCATE:

DEAR SIR,—I have had nine years' experience in making sorghum syrup. The variety I find most suitable is the Early Amber. Any good soil is suitable. The best way to grow it is in drills, about three feet apart; then thin to about three or four inches apart. I have made over two hundred gallons per acre planted this way. I have used the G. H. Grimm Champion Evaporator two seasons and find it to be the best. I can make from forty to fifty gallons per day. Elgin Co., Ont. J. C. KEILLOR.

Winter Wheat Experiments.

BY C. A. ZAVITZ, B. S. A., EXPERIMENTALIST, ONTARIO AGRICULTURAL COLLEGE, GUELPH.

In view of the excessively low price of wheat, it is certainly clear that every practicable means must be adopted to grow the largest possible yield of wheat per acre, and of the best quality. The farmer cannot afford to grow grain by hit-or-miss. If he expects to meet with the best success he must make use of every available means which will be helpful in obtaining the best results. A little carelessness in the choice of varieties, in the selection of seed, in the dates of seeding, or in any one of a number of other things, might easily cause a failure where skill and carefulness would have been rewarded with a bountiful harvest.

Within the last seven years very careful and systematic experimental work has been conducted at the College with winter wheat. All the procurable varieties throughout Canada have been obtained, and also leading varieties have been brought in from Germany, France, Russia, England, etc., and also from the United States. These varieties are all grown on plots exactly the same in size and as nearly uniform in every respect as it is possible to have them. New varieties are added year by year, and nearly all kinds are grown in the trial grounds for at least five years, and the leading varieties for even a longer period of time. Upwards of one hundred and twenty varieties have been tested within the past seven years. Some of the most successful kinds of winter wheat among the above number are as follows:—

Dawson's Golden Chaff.—The Dawson's Golden Chaff has given the largest average yield of grain per acre among fifty-three varieties of winter wheat grown for four years in succession previous to 1896. This variety was also placed first in general appearance from among eighty-two varieties grown during the present year and examined by five judges. It is a wheat which possesses a stiff straw, a red chaff, a bald head, and a white grain. The straw is usually not more than medium in height and the crop is perhaps less subject to lodge than any other variety that has been tested, thus making this a variety well suited to both rich and average soils. The grain weighs on the average about sixty pounds per measured bushel, which is a little less than some of the other varieties. The weight per measured bushel this season, however, is about sixty-one pounds.

Early Red Clawson.—The Early Red Clawson has been grown for seven years in succession and is a good yielder. It is, however, rather weak in the straw and somewhat soft in the grain. The weight per measured bushel of this variety in the average of four years experimental work is only fifty-eight and a half pounds. In localities where winter wheat is almost sure to stand up well, and where the grain is usually very plump, the Early Red Clawson would no doubt be a valuable variety.

Early Genesee Giant.—The variety known as the Early Genesee Giant is a close rival of Dawson's Golden Chaff for the first place among all our varieties of winter wheat. We have had this variety for four years in succession, and it has certainly made a good record. It possesses a stiff straw, a short, thick, bearded head, and a white grain, which usually weighs well. The straw is long and rather coarser in growth than that of the Dawson's Golden Chaff. The Early Genesee Giant was placed second in general appearance by five judges who examined the eighty-two varieties of winter wheat under test this season. Both the Dawson's Golden Chaff and Early Genesee Giant will be very prominent varieties in the comparative results of the varieties grown in 1896, the results of which will be made public as soon as possible. These two varieties were grown in the large fields at the College this year, and the crops have just been threshed. The yield per acre of each variety is about thirty-five bushels, and the quality is good.

Other Prominent Varieties in 1896.—Some of the other varieties which will likely stand high in the comparative results of the present year are the Russian Amber, Poole, Simcoe Red, New Columbia, American Bronze, Reliable, and Golden Drop. The Andrews' No. 4, Giant Square-Head, and Queen Meg are all very similar to the Early Genesee Giant.

Co-operative Experiments.—After testing different varieties of winter wheat in the experimental department at the College for a few years in succession, the best varieties are selected and distributed to farmers throughout Ontario. Eleven varieties were thus distributed in 1893, nine varieties in 1894, and nine varieties in 1895. The Dawson's Golden Chaff gave the largest average yield per acre among these leading varieties in each of the years mentioned. The Early Genesee Giant was distributed in the fall of 1894 for the first time, and stood next to the Dawson's Golden Chaff in average yield per acre in 1895; the Early Red Clawson standing third. Only a few of the reports of the co-operative experimental work for 1896 have yet been received, but so far the Dawson's Golden Chaff in particular is making a good record. The results of the co-operative work will be made known as soon as the reports are received. It will be remembered that the Dawson's Golden Chaff, which was tested at the Central Experimental Farm, Ottawa, in 1895, for the first time, gave the largest average yield of grain per acre among twenty-six varieties grown in their trial grounds during that year. The Early Genesee Giant was also grown in 1895 for the first time, and stood third in point of yield of grain per acre.

Different Dates of Seeding.—An experiment has been conducted in our trial grounds for four years in succession in growing wheat at different dates of seeding, extending from the latter part of August until the 26th of September, and we find that the best results have been obtained from seeding about the first of September, and it is usually unsafe to sow winter wheat in the neighborhood of Guelph after the first week in September. A number of other experiments have also been conducted, but the results have not yet been sufficiently worked out for presentation to the public.

Distribution of Seed in 1896.—Persons who wish to receive small packages of seeds of leading varieties should apply to the Experimentalist for a circular which will describe the method of distribution, and which will also indicate the varieties which will be distributed this season.

Road Rolling.

BY A. W. CAMPBELL, PROVINCIAL ROAD INSTRUCTOR FOR ONTARIO.

The roller as a roadmaking machine is entirely ignored in the rural districts of Ontario, and very few of the larger towns and cities know its real value. It is safe to say that a municipality can make no investment that will yield more abundant returns than the purchase of a road-roller. A popular belief is that they are intended to be used in cities only, but wherever good roads are of value, in that locality will the right machinery to build them be necessary.

Machinery is as useful in building roads as in building any other form of structure. To try to build a good road without a roller is as sensible as for a carpenter to try to build a house without a hammer, or for a farmer to cut a field of oats with the old-time sickle in place of the self-binder.

A road, in order to be good and remain good, must be kept dry. Every precaution must be taken to keep as much water as possible out of it. This is effected by subdrainage, to maintain a solid earth foundation and prevent the natural soil being softened by water soaking in from the sides and below; and by surface drainage, to carry the water quickly to and along the side gutters and prevent it passing into and through the road metal. Crowning or rounding the roadway gives the proper fall to shed the water to the side gutters. But if the roadbed is rutted or has hollows in the surface, or is pervious to water, crowning is of little service.

The common way of making an earth roadway, especially in rural districts, is to throw the earth from the ditches to the center of the road. This soft material is left for traffic to consolidate. But traffic at once creates tracks and hollows, which, holding the water in wet weather, quickly become ruts and pitchholes, and the road is soon a spongy mass, scarcely passable. When gravel is applied, this is again left just as it falls from the wagon for traffic to consolidate. But traffic again in this soft material repeats the story of wheel-tracks and hollows, of ruts, pitchholes, and impassable roads. At the same time the water is absorbed by the loose material, passes into the earth foundation, the gravel is worked downward into the mud, and the mud is pressed upwards into the gravel. When it is understood that the gravel (crushed stone, or whatever road metal may be used) should be kept as clean as possible to insure permanent consolidation, the perniciousness of this method (or, rather, absence of method) is more apparent.

If, instead, a roller had been used until the earth foundation and the metal placed upon it were as hard and compact as rolling could make them, the result would be very different. Wheel-tracks would not have been formed; the water would be shed readily over the smooth surface to the sides; the surface, having been made compact, would not admit the water into or through it; so that neither the road surface nor the soil under it would be softened—sinking, mixing, and wearing easily beneath traffic. The road would be traveled easily immediately after being constructed, and would be more easily and cheaply maintained.

A number of municipalities in the Province have recently purchased rollers, or are on the eve of doing so; but in France and in England, rolling is as much a part of roadmaking as is the putting on of gravel, broken stone or other road metal; and if Ontario is to have good roads, the example these countries have set us in this respect must be followed.

A new process of buttermaking, whereby it is said butter can be produced in a minute, has been invented by Herr Salenius, a Swedish engineer. The butter is made from sterilized milk, the milk being heated to a temperature of 100 degrees and then suddenly cooled to a temperature of 50 degrees, by means of small cooling-frames through which iced water is constantly run. The cream which rises is taken by a skimmer and raised to the churning-chamber of the machine. The cream is then forced into a tub, which is perforated with tiny holes, and emerges with great force onto each fresh layer of cream as it rises, converting it into butter by concussion. The butter is then in the form of granules, and is drawn into a tub, where it is mixed with buttermilk. After a thorough mixing, it is put under pressure in a butter-worker and almost all the buttermilk is squeezed out. The butter is then placed on ice, where it is kept for two hours. It is then worked over again and made up.

DAIRY.

Points in Dairy Practice.

[BY F. J. S.]

CREAM.

Keeping and Ripening.—Too often cream is handled in a haphazard way, without system, in a go-as-you-please fashion. Many seem wholly unimpressed with the necessity of careful, systematic methods of caring for cream. It is quite true that in farm practice not more than one batch of cream in a half-dozen is well handled. Order and method render all things easy, and, it may be added, lead to excellence. The following principles and practices may be relied upon to give satisfaction, and will be found suitable to farm management:—

A tin can for holding the cream, and in which it may be ripened (a crock is just as good, but not so suitable when the temperature of the cream is to be changed), of sufficient size to hold all the cream intended to be churned at once. Greater uniformity in the ripening is secured by one can rather than more, since, if ripened in more than one vessel, it is not likely that the different lots of cream will come to the churn in a uniform stage of fermentation, and if not, then the batch cannot be churned thoroughly, the result being the loss of fat in the buttermilk.

It is wisest to recognize two distinct stages in handling cream, viz., a keeping and a ripening stage. The usual herd does not require the farmer to churn oftener than twice or three times a week, and to allow cream to sour or ferment from first skimming to churning time—two to four days—is to ensure a second-class cream, to lose control over the work, to get an over-ripened cream, and to invite difficulties generally. Good buttermakers keep cream sweet while gathering it, and do not ripen or sour it longer than about twenty-four hours. While gathering, preparatory to ripening, it should be well stirred at every addition of fresh cream, and occasionally between times. This we esteem very important. We have handled many batches of cream from farm dairies that were miserably cared for in this respect, being kept too warm and rarely stirred. Such creams do not churn thoroughly, and they give butter of impaired flavor. A speckled butter may also result. When enough cream is gathered for a churning then the ripening may begin. *When the ripening has begun no more sweet cream must be added.* Inattention to this rule of practice results in immense losses of butter-fat in the buttermilk, more perhaps than anything outside of wrong temperatures. If we, as dairymen, could use the Roentgen Rays on our buttermilk, astonishing revelations would be made. Be it remembered and practiced, that sweet and sour cream cannot be churned together and all the butter be taken out of the sweet cream; sweet cream cannot be thoroughly churned at sour cream temperature. Even though the two creams be thoroughly mixed by stirring, there will certainly be loss.

Cream, if kept sweet, will of necessity be cold. To ripen it, it must be heated. This may be done by placing the can containing the cream in warm water (90°-100° F.) and stirring constantly. A few minutes will suffice to raise the cream to ripening temperature, about 60°-62° F. in summer and 64°-68° F. in winter. We do not give these temperatures as absolute, but as a safe guide. Use the thermometer and not the finger to test temperature. When the cream is warm enough it may be taken out of the hot water, and set in a suitable place to ripen.

A "Starter."—We are well aware that cream cannot be ripened satisfactorily at these temperatures at all seasons of the year within the twenty-four-hour limit. In all such cases the use of a well-prepared "starter" is a decided advantage. A starter is simply something that will assist in the ripening of the cream, and may be buttermilk, sour cream, sour whole milk or sour skim milk. Unless churning every day, the first two are not the most suitable, since, unless kept quite cold, they become too sour before needed. They are also a little dangerous with others than first-class buttermakers, since, should the cream (and consequently the buttermilk) get off flavor, it might pass undetected, and spoil the cream into which it is put. The use of whole milk results in some loss of butter-fat, so that, all things considered, skim milk makes the most suitable starter. Use preferably the skim milk from the product of a fresh cow, as from such we get the finest flavors. Prepare as follows: Put the skim milk into a tin can and heat to 85° F. by placing in hot water, then set aside to sour or ripen; add water to the extent of one-fourth of the skim milk, and cover can closely. Do not stir the contents of the can. Inside of twenty-four hours the starter will be quite thick, and of a mild, acid, buttermilk flavor. Skim off the surface of the starter, and break up the remainder quite fine. Strain some of the starter thus prepared into the cream, and stir the whole thoroughly. Plainly, the starter must be prepared and put into the cream while the latter is still sweet, the ripening commencing with the addition of the starter. On no consideration use an ill-flavored starter. First-class starters accomplish a three-fold purpose. First, they result in a finer flavored product; secondly, they make it possible to ripen cream in a short period; and thirdly, by their use cream may be ripened at lower temperatures.

Churning.—The temperature at churning time is most important, and, perhaps, among the majority, least kept in mind. Be it understood that *there is no set temperature at which to churn all creams.* A host of conditions prevent this. Never mind what temperature is printed on the thermometer for churning. You must yourself be the judge. *There is, however, a right temperature at which to churn a given cream,* and this right temperature is best arrived at by considering the length of time taken to churn, together with the texture and body of the resulting product. We esteem it very unwise, and also unprofitable, to churn in less than twenty minutes. On the other hand, we rarely find it necessary to churn longer than forty-five or fifty minutes. Churning in five, or ten, or fifteen minutes, means that the cream has been too warm, and always results in two serious evils—an impaired texture and body, and an unnecessary loss of butter-fat in the buttermilk. The higher the temperature above the right one, the greater is this loss and the less excellent the texture. We have frequently tested buttermilk that showed a loss of three or four pounds of butter per hundred, due largely to a lack of knowledge of proper churning temperatures. This is unwarranted extravagance, since butter-fat at even fifteen cents a pound can hardly be considered a cheap fodder for the production of five-cent pork. On the other hand, when dependence is placed upon the finger, cream may be put into the churn too cold, and two or three hours labor thrown away to no purpose, a high price to pay for carelessness. The temperature of cream is best changed by placing the vessel containing the cream in hot (90°-100° F.) or cold water, as is required, and not by putting the water into the cream. In summer time, in farm dairies, cream from deep-setting cans may usually be safely churned at from 55° to 58° F., while in winter, when cows have been long milking and receive nought but dry feed, a temperature even 10° higher may be found necessary. Cream richer in fat—that is, with less skim milk in it (separator and shallow-setting cream, for example)—may be churned at much lower temperature.

Observations.

A MODEL PRIVATE DAIRY.

The sight of Malcolm's Brae Side Creamery, Township of Kinloss, Bruce Co., is one that will not soon fade from memory. A more complete private creamery and cheese factory we have not been privileged to see. We would that every one of the readers of the *ADVOCATE* could see it, but we will attempt a brief description. The building, we would think, is about fourteen feet square inside, with an upper and lower story—the lower one partly underground, with stone walls and cement floor, where the cheese is made in summer and the butter in winter; the upper one being utilized as a curing-room and as a storage room. Messrs. Malcolm make cheese in summer and butter in winter. The making-room contains a large water tank, in which the milk is held over in nice condition. This tank is supplied, by windmill power, with beautifully clear, cold water, which is kept frequently renewed. The cheese is made every other day. The cream is separated from the milk in this tank during winter.

A small furnace (in the form of a kettle walled in brick, with fireplace beneath, in which any rough wood may be used) supplies all the hot water required. A small cheese vat occupies the farther side of the room. A cream-ripening vat, somewhat after the style of Boyd's cream vat, stands in the corner. The smaller utensils are neatly arranged on the wall. *Everything is scrupulously clean,* and the fittings and work throughout bear the impress of thoroughness and skill. We were shown the cheese (what was not already sold), and it is, perhaps, enough to say of it that none has been sold this season for less than eight cents per pound. In finish and uniformity of the shelves are a picture. The windmill before mentioned ensures a constant supply of water for both dairy and outbuildings. Last winter these gentlemen sold their butter for twenty-two cents per pound, and we congratulate those people who have the privilege of eating regularly the butter made, as indicated on the parchment paper wrapping, in—

Malcolm's
Brae Side
Creamery,
Kinloss, - Bruce Co.

I think, Mr. Editor, that this private creamery and cheese factory is a forceful object lesson to Canadian dairymen. Hard times and low prices do not seem to be affecting this creamery and cheese factory as they seem to affect most farmers, and we failed to see wherein Messrs. Malcolm had any special natural advantages over their fellows. They have a large farm and are blessed with plenty of work twelve months a year. Their success lies not in chance nor luck, but in painstaking care, economy, and thoroughness, and a determination to excel. Thousands of their fellow farmers are equally as well placed, but will never reach more than mediocrity. Let them not lay the blame upon their business.

A herd of twenty to twenty-five cows is regularly kept. Messrs. Malcolm are going into the

breeding of the black and whites, having purchased a Holstein bull to head their herd. A goodly proportion of the herd freshen in the fall, as the labor of the farm is least pressing in the winter. A large barn with basement for stabling is nearly finished and is a model of its kind. Enough corn is grown to fill the silo—12x16, x22 ft. in depth.

"OBSERVER."

Milk and Butter Trials at the Royal Show.

The class for dairy cows in milk, of any weight, breed or cross, giving the largest quantity of milk containing twelve per cent. of total solids, of which not less than three per cent. must be fat, had just four entries—three Shorthorns and one Shorthorn grade. The grade, belonging to Robert Shepherd, was awarded the only prize given. She gave forty pounds of milk in twenty-four hours, containing an average of 13.16 per cent. of solids, 4.27 of which was fat.

In the class for dairy cows giving the greatest weight of butter-fat, provided the yield of milk obtained in two milkings be not less than twenty-five pounds, there were eight entries—all Jerseys but one. The 1st award was won by Dr. Herbert Watney's Lady of the Sunny Isles (Jersey), who gave in twenty-four hours forty pounds of milk, containing 2 lbs. 2 ozs. of butter-fat. The 2nd award went to a member of the same herd, who gave 43½ pounds of milk, containing 2 lbs. 1 oz. of butter-fat. These were the only entries that gave two pounds of butter-fat in twenty-four hours. Butter contains eighty per cent. of butter-fat.

Consign to Reputable Firms.

Many new creameries and large private dairies have been started in Canada, and it would be well to exercise care in making consignments to unknown houses or commission men. The patrons of an Illinois creamery recently found the following on its closed doors:—

"NOTICE.

"We are sorry to say that the house that we have shipped the butter to has gone to the wall, with nearly \$900 of our money, and, of course, crippled us so that we are unable to pay for the June and July milk. It has been placed in the hands of our attorney, and if it is collected you shall have it. In regard to the truthfulness of this statement, we will refer you to the Mendota National Bank. We came here with the intentions of making this our home and building up this business, and would have done so if this had not come on us. We are \$500 out, besides our summer's work."

The concern in New York to which they shipped had swindled hundreds of other creameries throughout the country.

POULTRY.

Plymouth Rocks as Layers.

To the Editor FARMER'S ADVOCATE:

SIR,—I have seen and read with interest and profit a number of articles on fowls, and wish to add to your articles my experience with a few Barred Plymouth Rock hens I secured last spring. I purchased eight hens and one rooster, which were delivered to me in April. The hens began to lay the day after they arrived at my place. They laid so many eggs that I decided, on May 7th, to keep account of their product until they began to sit. In 26 days they laid 174 eggs, an average of 6.69 eggs per day, being .83 eggs per hen per day for the 26 days. The days they must have laid were 21.75 out of the 26 days. I began to experiment with setting. I set under one hen (contrary to rule) 18 eggs and only got two chickens. Under another I put 13 eggs and got 12 chickens, and now I have put 15 eggs under a hen and am awaiting the results. The hens did not get extra care. If anything, they were neglected. Not one of the chickens has died. They are very healthy. Any of my hens will dress five and six pounds for market. I believe that a good strain of Barred Plymouth Rock is the best and most profitable for the farmer. I have not gotten such results from any other breed. I do not suppose my experience would profit any one, but it is well to know what can be done if well-bred poultry are kept.

Flatbush, N. Y.

P. W. LOGAN.

Water Fountain for Poultry -- Supports for Fruit Trees.

An observant person cannot visit an expert in any line without picking up a few very practical ideas. An extremely simple and effective water fountain for fowls was noticed a few days ago by one of our staff, in the poultry yards of Mr. McNeil, the noted fancier, of London, Ont. The fountain consists of an old, bottomless, tin fruit-can, inverted upon a saucer. The can is cut squarely around, and a notch cut about a quarter of an inch up from the bottomless edge. When this is filled with water to any extent desired, and inverted upon the saucer, the water will not rise higher in the saucer than the top of the nick. This prevents the chickens or toads getting into it, and it is always ready for use so long as there is water in the can.

Mr. McNeil has wisely planted Lombard plum trees in his poultry yards, and these are now loaded to such an extent that without supports the limbs would surely split down. This has been wisely guarded against by setting a scantling or strong pole in the ground just at the base of the trunk. This extends up through the tree, and from it ropes extend, and are fastened to the laden limbs. The plan is simple and entirely effective.

and night. Wheat and oats are their favorite plants, rye and barley less. They also feed on millet and corn when young and tender, but have no inclination for peas, beans, strawberry or grape foliage, unless forced. They can be made to eat beets, carrots, lettuce, radish, and cabbage, but their favorite food is the grasses and grains. In a hayfield they will leave the clover and devour every plant of timothy.

The writer had some caterpillars in a box with green pea plants and they did not eat a single leaf for two days, and then only nibbled some. Having become fully-developed caterpillars at the end of three or four weeks from the time of being hatched, they pass into the ground, just below the surface, or under stones, boards, or other rubbish, and enter the pupa stage, which lasts about two weeks, when the moth (*imago*) appears to lay her eggs shortly after. It is fawn-colored, with a small white spot near the center of the front wings; these, when spread, measure about 1½ inches across. The moth remains hidden during the day and begins to fly about towards night. The female lays from 300 to 600 eggs, in stringlike masses, 15 to 20 in a line. These hatch in about a week after being laid. It is a matter of great surprise to many how the army worms appear and disappear so suddenly, but a little reflection upon their life history explains the cause.

Hidden in the grass by day and feeding only at night, they escape observation; but if one or more dry seasons come they multiply rapidly, and large numbers winter in the larval condition, and during the following spring the moths appear and lay a great number of eggs, which hatch and produce a countless host of caterpillars, which for the want of food are forced to march, and thus become suddenly conspicuous. These, having received full development, pass into the ground to enter the pupa stage, and thus disappear as suddenly. The moths feed on the nectar of flowers, which they are more likely to find near low ground, and hence they appear to come from such places at the outset. There seems to be three generations represented in a season, or two broods in the year, here: the first wintering in the larval condition; the second forms the "armies"; and the third larval form derived from these after the imago (moth) has been developed; the last wintering as larvae. They usually hibernate in the larval form, but sometimes as the moth, and in some cases the pupa.

This insect has many enemies to keep it under control. Nearly all insectivorous birds relish it as a sweet morsel, and are ready to pounce upon it the moment the march begins. The bobolink in some parts of the United States is known as the army-worm bird. At Guelph this season the English sparrow has done great work in destroying this worm. Tiger beetles (*Cicindela*) and ground beetles are also ready to prey upon them; one of the latter (*Calosoma*) was found very plentiful among the worms at work on the College

Farm. But probably one of the greatest insect friends is a fly, the red-tailed Tachina fly (*Nemoreva leuciniw*). It lays one or more eggs near the head of the worm, in a position not readily reached by the insect to tear it off; these soon hatch, get into the worm and develop at the expense of the worm's life. At first none of the minute white eggs could be seen upon the worms attacking the oats at the College, but in a few days some were observed by the writer, and indicated that the chief deliverer had arrived. They daily increased, and the dissection of several specimens revealed the parasitic grub was happily at work, and that the invading host was doomed to perish by the way.

This beneficial fly resembles a large house fly, but has a red tip at the end of its body. There are also some small four-winged flies that aid in keeping this enemy under. Altogether there have been found upwards of twenty insects that attack and greatly assist in destroying the army worm. It will thus be seen that the moment these worms emerge from their hiding-places in grass fields, etc., they are pursued by a host of relentless foes.

Remedies.—1. As the insects breed largely in rank grass, such as is seen bordering swamps, it is well, where practicable, to burn such in the fall or spring. Clean cultivation and cleaning up fence-corners should be followed.

2. Where the worm has appeared, its progress may be stopped by plowing a furrow with its perpendicular side next the field to be protected. Small holes dug at intervals in the furrow will be useful in catching the worms failing to climb the steep sides and wandering aimlessly along the furrows. The number of worms trapped can be readily destroyed.

3. Where Paris green may be safely used, a strong mixture (one pound to 75 gallons of water) sprayed upon the plants likely to be first attacked will be effective. Windrows of green oats sprinkled in this way in the line of march will destroy myriads as they feed upon their favorite food. At the College immense numbers were destroyed in this way in a few hours. By actual count made by me on July 18th, 2,560 dead worms lay on a single square foot beneath the windrows.

4. Scattering dry straw upon the worms, where massed together, may be fired and many destroyed.

5. Sometimes conditions are such that great numbers may be crushed under a roller.

GARDEN AND ORCHARD.

Pear and Apple Blight.

There will have been noticed in many parts of Ontario, but especially in the vicinities of Hamilton and London, a species of pear blight which threatens to wipe out the pear trees as did the black knot the cherry trees in many sections a few years ago. The services of Prof. J. H. Panton, M.A., of the Ontario Agricultural College, have been demanded in some infested sections, where he has gone and reports as follows:—

"The trouble is caused by a germ known to science as *micrococcus amylovorus*. The terms 'pear blight,' 'twig blight,' and 'fire blight' are applied to this condition in fruit trees: the first to the attack upon the pear, the others when it affects the apples. It also attacks the quince. This bacterial disease causes the foliage to turn to a uniform brown, sometimes in two or three days. The leaves do not fall, but remain on the branches, giving the parts affected the appearance of having been scorched by fire; hence the term 'fire blight,' sometimes applied to the disease. The bark of affected stems becomes brown and shrunken. The microscopic germ which causes this trouble enters the tree through the blossoms, and also through the growing tips. The injury may be confined to one or a few limbs, or it may extend to the whole tree. Slow growing trees seem less liable to injury by blight than those of rapid growth; hence the importance of a steady growth in fruit trees. After the germs gain access to the tissues of the tree they multiply rapidly and in a short time show their presence by the dark, discolored bark. Unfortunately, as yet there is no known remedy, the only way of checking the disease being to cut out affected parts, about a foot below the lowest point of injury, and burn the refuse. It is a great mistake to simply cut out the twigs, etc., and throw them aside. They are full of germs, and should be burned, or they will soon scatter about and increase the trouble. Constant watchfulness and care are now necessary to raise fruit. Insect foes and injurious fungi have become very common, so that if we wish to be successful it is necessary to follow clean culture, which deprives insects of hiding-places and fungi protection, and we must spray promptly and thoroughly. Healthy trees always resist insect and fungoid pests much more successfully than those less vigorous."

VETERINARY.

Swine Fever.

About the middle of July an outbreak of swine fever—or, as it is sometimes called, "hog cholera"—made its appearance in the County of Cornwall, Ont. The Dominion veterinary officers promptly slaughtered and burned some 200 animals; the owner, who had secured them from the western portion of the Province, being compensated therefor according to the statute. Within the last fortnight another outbreak made its appearance in a large piggery near Toronto, for which hogs are purchased on the market for fattening. Just after purchase some of the pigs began to show signs of weakness, labored breathing, death following in a few days. One veterinary who was called in said the trouble was due to too strong feed, and recommended a change of diet, but no benefit resulted. Dr. Andrew Smith, head of the Ontario Veterinary College, next made an examination, and pronounced the disorder "cholera," ordering the whole lot of 258 destroyed.

In both the above cases not only were the hogs cremated, but all portions of the buildings with which they came in contact were burned and the entire premises thoroughly disinfected.

It is thought that the above cases originated from lingering germs of the Essex Co. outbreak last fall, which was supposed in some way to have come from Michigan or the Western States, where the disorder was prevalent at that time. These instances but emphasize the necessity for effective machinery for detecting and stamping out animal disorders, and preventing their gaining access to our herds. No half-hearted measures on the part of the authorities (such as in cases of cholera—burying the dead swine and covering with lime) will answer. Persons purchasing stock for feeding or other purposes cannot be too careful that it comes from a locality out of the reach of contagion.

The man that would have sound, nicely-formed hoofs on his horses when he comes to sell them, must give attention to the hoofs of his colts.

The Abuse of Tuberculin.

Prof. Brown, the eminent British veterinary authority, has recently expressed a warning regarding the use (or, rather, abuse) of tuberculin, pointing out, in the first place, that it is a poison. Of course, it should always be borne in mind that tuberculin is not a *remedy*, but simply an aid in determining whether or not an animal is affected with tuberculosis. Another point not to be overlooked is that the injection of tuberculin has caused the distribution of the tubercle bacillus to parts of the body in which it had not been previously detected. Prof. Brown also points out that there is reason to believe that repeated injections will render an animal insusceptible to the action of tuberculin, so that an unscrupulous individual might be enabled, by repeated injections, to palm off diseased cows, that had in the first instance reacted under the test, and so defraud and inflict great injury upon the purchaser. The *ADVOCATE* takes the same ground regarding tuberculin now that it has all along, viz., that while there is evidently so much to be learned regarding the use and effects of tuberculin, its use as a diagnostic agent, except by competent, experienced hands, should not be attempted.

APIARY.

The Prevention of Swarming.

No bee-keeper wants swarms to come off after this time of year, as they cannot, as a rule, gather enough stores to support themselves during the coming winter. It is therefore well to understand how to prevent swarming, when desired, at all seasons.

Mr. C. P. Dadant gives good advice upon this subject in the "American Bee Journal," from which we glean:—

"Liberal breeding-room is necessary. No matter what method we pursue, if the queen is crowded or dissatisfied we need not look for the bees to stay. We therefore want plenty of room in the brood chamber space, and we want it all in one story. In the second place, we want plenty of room and, if possible, plenty of empty comb for the bees to lodge their crop, especially during the honey flow. Hence we want a wide ceiling that may enable us to put on a large super. Bees swarm because the circumstances do not suit them. Towards the end of the harvest, however, when the queen becomes tired of incessant egg-laying, it is of much less importance to keep them supplied with so much space, and a little crowding does them no harm.

"Drone-rearing is a factor in swarming. In nearly every instance the colonies that swarm are those that have reared quite a large number of drones, other things being equal. The drone is stupid, big, and noisy, and becomes a thorn in the side of the workers, hence their dissatisfaction

with home surroundings. It is therefore well to prevent the hatching of a lot of drones by removing the drone-comb and replacing it with worker-comb. This should be done in the spring, as a preventive, as the harm from such a cause is done for this season.

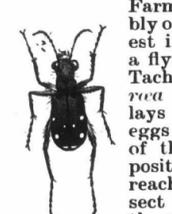
"Shade is an important factor in preventing swarming. A high temperature, increased by a pouring sun, must of necessity add to the discomfort of a swarm of bees.

"Ventilation, too, must be given. When bees come out and cluster at the bottom of the front of the hive, they are usually after fresh air. This hinders time and promotes a tendency to divide the family. A loose bottom enables the bee-keeper to raise the hive up whenever needed, and to give as much space for ventilation as may be necessary."

We are indebted to the U. S. Dept. of Agriculture for the use of the above bee illustrations. The bees represented are shown twice natural size.



Calosoma calidum—the beetle. [After Riley.]



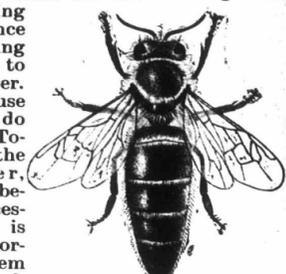
Nemoreva leuciniw. [After Riley.]



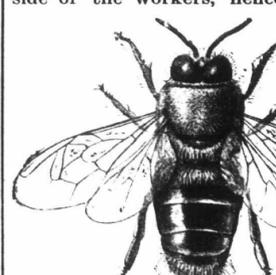
Harpalus caliginosus. [After Riley.]



[Worker—Carniolan.]



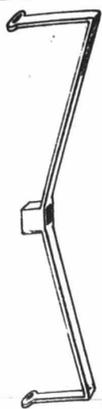
[Queen—Carniolan.]



[Drone—Carniolan.]

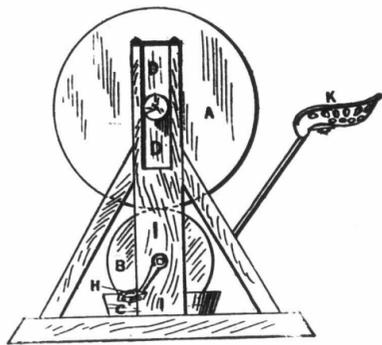
THE HELPING HAND.

A Wagon Wheel Wrench.



MENNO WEBBER, Waterloo Co., Ont.: "The casting is shaped as in the cut. The square box fits over the nut, and the crooked arms reach around the rim of the hub. At the ends are attached straps, one long and one short, both passing between the spokes and coming together on the inner side of the wheel. A buckle is then fastened to the straps. The wrench having been attached, it is only necessary to raise the axle with a jack to clear the wheel, and give the wheel a whirl. The nut is thus turned off by the motion of the wheel. The wheel is then slipped nearly off, the axle greased, and the wheel slid back in place, twirled round, and the nut is on. If the nut is inclined to stick, the wheel also acts as a lever."

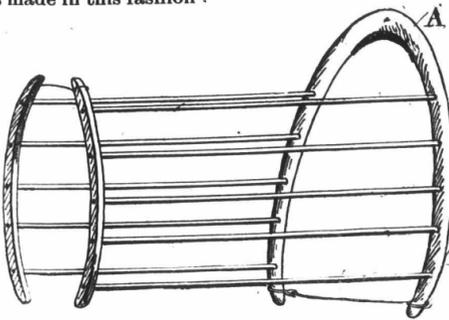
A Bicycle Grindstone.



MENNO WEBBER, Waterloo Co., Ont.: "Two solid triangular pieces of framework should be made, as shown in the cut, in each of which is a strong upright piece (1D) with a groove (DD) in which the axle of the grindstone rests. Between the triangles should be placed a pan (C) to hold water. A wheel (B) is hung between the grindstone (A) and water pan (C). The wheel should be of iron and as wide as the stone. The wheel also has pedals on the outside of the triangle, so the grinder, as he sits in the old mowing machine seat (K), turns the small wheel. The small wheel is kept wet enough to moisten the grindstone. As the wheel wears away it gradually drops in the slot."

To Prevent a Cow Sucking Herself.

E. C. T.: "I will give you my plan for stopping a cow sucking herself, although I do not claim much credit, as it is made on the plan of a cradle for a horse's neck, and had I been near any manufactory of such articles should have gotten them to make me one to fit the cow; but not having that chance, I had to try myself, and can now say I have fairly beaten her. I have tried the nose flaps, a surcingle with sticks on either side attached to the halter, then a single stick between the front legs to the same place, but found all of them wanting in some way or other, chiefly from the cow putting her legs over the sticks. The arrangement I have is made in this fashion:



"The back part (A) fits against the shoulders, and is a crotch of a tree, smoothed at the sides, with a strip of leather on the top to ease the neck, and fastened at the bottom with a strap. The crotch being in one piece I found had less give to it than if in two pieces, as the pieces of the front end are little bowed sticks with holes to receive the ends of the sticks projecting from the crotch. In the article I have on her now I have five little sticks in preference to having larger ones and not so many, as the frames had to be so heavy and cumbersome to stand a one-inch hole. The side sticks can be made long or short to suit the case. When I first tried the rigging the cow was so determined to circumvent it that I had to stretch it to the utmost, but now, after a couple of months use or thereabout, I have it much shorter, thereby giving her more freedom as she begins to accept the inevitable."

QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

Legal.

WORKING FARM ON SHARES—KEEPING BEES.

"FRONTENAC":—"I bargain with a man to operate my farm 'on shares,' each to furnish one-half the stock and implements, seed, etc. Man to do all the work, draw produce to market, etc. He (the man) is to operate my farm according to my directions in all details. Each to share one-half the products of the farm. In our agreement, nothing is said about keeping bees. Man brings several hives of bees to my farm, and thinks he has a right to keep them without my permission or giving me a share of the proceeds. He occupies part of my 'farm dwelling'; I reserving part of it so that my family can go in summer or at any time. I offer to buy one-half of the colonies and take half of risk, and receive one-half of proceeds. He demurs and thinks he has a right to keep them in spite of me. I think not. Who is right?"

[The tenant, under this agreement, has no right, without the consent of the owner, to keep bees for profit on the farm. The keeping of bees might easily be conducted on so large a scale as materially to affect the general farming business, and so greatly prejudice the owner. Strictly, we think the tenant could not keep any bees at all if the owner objects.]

Veterinary.

"STRAINING" IN OX.

F. C. L., Napinka, Man.:—"I have a working ox; a change in the weather will bring on an attack, and an extra feed and drink of water will sometimes stop it. The symptoms are: Constant straining; back arched; passing small quantities of thick, watery matter; when anus is open the rectum appears red and inflamed; almost constant noise from passing gas or wind; sometimes coat dry and staring. The feed all winter was oat straw, hay, and oat sheaves; now he gets oat sheaves and grass."

[The condition you have mentioned is difficult to treat successfully, and if the animal is old the chance of recovery is very much lessened. Give, morning and evening, in chop mash, for two weeks: Bicarbonate of potass., two drams; powdered nux vomica, one and a half drams; powdered gentian and anise, of each three drams. When the straining is violent give an injection of water, in which hops have been boiled, two quarts; tincture of opium, two ounces. Do not work the ox. W. A. DUNBAR, V. S., Winnipeg.]

MALFORMATION OF TEATS.

J. B. BOWELL, Kissina, Assa.:—"I have two grade Jersey heifers with two teats (a front and a hind one) grown together. Can they be split? I notice there is an opening in each teat. Would there be any danger in cutting the two apart?"

[The operation might be successfully performed, but it should only be undertaken by a competent veterinary surgeon. W. A. DUNBAR, V. S.]

INDIFFERENT OLD BULL.

"LANSDOWN," Bagot:—"I have a Shorthorn bull, six years old, too lazy for service. He is running in same pasture with cows. Can you advise anything to make him more active?"

[Give the bull a purgative as follows: Epsom salts, one and a half pounds; nitrate of potass. and powdered ginger, of each six drams; dissolve in one quart of hot water, add half a pint of treacle, and give in one dose. When the purgative has ceased to operate, give morning and evening, in mash, for eight days: sulphate of iron, two drams; powdered fenugreek, four drams; powdered capsicum, one dram. Put the animal in small field or paddock by himself, and when a cow comes in season put her in beside him. You may find it expedient to get another and younger bull. W. A. DUNBAR, V. S.]

MARE WITH WORMS.

SAMUEL W. BISHOP, Sinaluta:—"Mare four years old; low in flesh all summer, and last spring and winter; had foal which was dead last May; is troubled with large worms; have given for worms two tablespoonfuls of spirits of turpentine on an empty stomach twice, about a week apart. Did not see her pass any worms after turpentine, except one. Last time I gave her turpentine, fed her bran mash for two days beforehand. Could you prescribe something that would help her? She works all right, but seems dull. I think the cause of death of foal was suffocation, as when I went out to the stable in the morning the foal had not got out of bed, but was dead."

[Give on an empty stomach the following drench: Raw linseed oil, one pint; oil of male fern, one dram; sulphuric ether, one and a half ounces. Repeat in one week. W. A. DUNBAR, V. S.]

Miscellaneous.

SQUASH BUGS.

Mrs. S. J. C., Lambton Co., Ont.:—"Kindly tell me how I can successfully combat the little striped beetle and the larger squash bug which threaten to destroy my squashes. Is kerosene emulsion a specific?"

[A great many remedies and preventives have been suggested for the little striped beetle (*Diabrotica vittata*). Good success has been obtained by applying liberal quantities of refuse tobacco powder to the hills. The application should be repeated occasionally. Perhaps the best remedy is to prevent the access of the beetle by covering the vines with gauze or very open muslin. Sprinkling the vines with a mixture of Paris green and flour, in proportion of one part of the former to 20 parts of the latter, has also been recommended. The rusty black, flattened squash bug is best treated by hand-picking. This can best be done in the morning and evening, when the bugs are sluggish. Kerosene emulsion is not effective in destroying bugs with hard wing-covers. It is useful to spray upon soft-bodied insects which suck the sap of leaves or branches.]

PERMANENT WALK.

P. G. ROBSON, York Co., Ont.:—"What could be mixed with coarse sand that would make a good permanent walk suitable for around the house? Do you know of any other material that could be used that is not too expensive? What would it cost?"

[An excellent and cheap walk can be made of cement concrete, the same as is used for stable floors, as well as for city and town sidewalks. The first consideration must be adequate drainage. Then excavate a few inches so that the finished walk will be the desired depth. Cover the ground with two or more inches of gravel, well rammed—especially if the ground is not very solid—before putting down concrete. Cover this with, say, two or three inches of rough concrete, gauged six parts of coarse gravel to one of cement. Ram this solid and put on a finishing coat, half an inch thick, of three parts clean, sharp sand to one part of cement. The cement and sand must be well mixed dry before adding water, and the concrete must not be made sloppy. A barrel will lay from fifty to seventy square feet of such walk, and the cost would probably run about two cents per square foot, varying according to thickness, cost of cement, etc. The work can be best done by setting a scantling on edge along the borders of the walk. Ram the rough concrete approximately level within a half-inch of the top of the scantling, then spread on fine concrete level with the top of the scantling. The walk should be covered with boards for a few days after being finished, to avoid injury by animals, etc. It should be occasionally sprinkled for a few weeks after finishing, to cause it to harden properly.]

TUSSOCK MOTH.

R. O'T., York Co., Ont.:—"In portions of this county, notably in Toronto, many of the shade trees are threatened with destruction by the larvae of the Tussock moth (*Orgyia leucostigma*), which are stripping the limbs of foliage and destroying the young wood. All kinds of deciduous shade trees are attacked, but the horse-chestnut has suffered to perhaps the greatest extent. Can you give us a means of successfully combating this destructive pest?"

[At this late stage little can be done to destroy this year's worms, because they are now entering the pupa or dormant stage. The only thing to do is to spray thoroughly with a solution of three-quarters of a pound of Paris green to 60 gallons of water. This strength seems necessary, and will prevent further defoliation. As the female is unable to fly, future attacks can be prevented by placing bands of tarred canvas or inverted, funnel-shaped collars around the trunks to prevent the female ascending to lay her eggs. These also prevent the ascent of great numbers of worms which are blown off by the wind. Dr. Mole, V. S., Toronto, has compounded a tenacious mixture which has proved a great success for painting upon the trees, as it does not become dry. From its description, we decide it is much like that used upon sticky flypaper. The Doctor paints it on with a brush, and has saved his trees from defoliation. We find that nature has already come to the rescue, as there is a parasite upon the track of the enemy which lays eggs on the outer covering of the caterpillar, and when the cocoon stage is reached the parasite develops and the moth succumbs. No doubt great numbers will be destroyed in this way. The females that escape will soon after maturing lay great numbers of eggs within or near cocoon from which she emerges. These cocoons are gray in color, and are easily seen on the trunk and limbs in the fall and winter, and can be easily destroyed along with the numerous eggs. The eggs when deposited on the trunk or limbs are in clusters, and covered with yellowish-white hairs from the body of the female. These egg-clusters are usually found in sheltered places on the bark, under the branches, or in cavities and crevices of trees, stumps, and the like. These can be destroyed during the fall and winter months, as they do not hatch before spring.]

SOW THISTLE.

HUGH BLAIR, Russell Co., Ont.:—"Kindly publish in your valuable paper if 'sow thistle' will grow from the root, and the best way of getting rid of it?"

[Sow thistle (Sonchus arvensis) is a creeping perennial, growing from the root year after year, while it extends in all directions in the soil if not carefully attended to. The FARMER'S ADVOCATE of July 1st, page 270, contained an article upon its eradication which covers the ground fairly well. It has also been dealt with in previous numbers. The thing to do is to give frequent shallow cultivation from the time harvest is off until winter; then summer-fallow or grow a hoed crop the following season, and seed down after the first grain crop. If the field can be hoed two years in succession, all the better. It will pay to interrupt the rotation a little and be very thorough in wiping out such a pest.]

A MANURE FORK WANTED.

JOHN O'RIELLY, Portage la Prairie:—"Would you be good enough to inform me where I can get a manure horse fork for loading or turning manure? By giving me the information you will greatly oblige."

[An excellent implement for turning manure is made like an ordinary earth scraper having six or seven long strong teeth instead of a flat steel scoop. The one we will attempt to describe has been in use for several years on the farm of the Hon. John Dryden, Ontario Minister of Agriculture. The fork has six or seven steel teeth or prongs about four feet long and each about 1 1/2 inches in diameter. These are almost straight, curving up slightly towards the points. These pass through, at the back ends, a five-inch hardwood head, and are held firmly by means of nuts. The teeth turn down at right angles in front of the head until they are even with the ground, then they turn out in front. The fork is about four feet wide and has two strong handles about five feet long. The horse is attached by means of a short logging chain to the ends of the head, which project about nine or ten inches farther out than the outside teeth. To use this tool, a powerful, steady horse, and a strong, patient man are necessary. It is handled in the manure like an earth scraper is handled in soil. We do not know of any horse power fork for loading manure.]

HOW TO SEED SANDY SOIL.

F. S. Middlesex Co., Ont.:—"I have a piece of very sandy soil which I have made several fruitless attempts at seeding down for a lawn. I have sown oats on part and buckwheat on part, with the hope of getting a green crop to plow down, but even these have failed to give more than a very slim covering. Would some reader of the FARMER'S ADVOCATE, who can, furnish its readers with the description of a method of adding vegetable matter so that a catch of grass may be obtained?"

LIVE STOCK MARKETS.

Toronto Horse Market.

The shipment of horses to all ports from Montreal reached the number of 1,018, the largest quantity ever shipped in one week from this country, which beats the record hitherto. Mr. W. Cudmore, of Kippen, passed through the Toronto yards with a load of horses for the S. S. Numidian. Mr. Flanigan lost two horses out of his shipment to London per S. S. Ormiston. The sales during the past two weeks at Grand's Repository, Toronto, have been well attended. Messrs. MacAdam, of Glasgow, purchased two carloads for that city. Mr. Jackson, of Liverpool, also purchased a carload (mixed class).

Dr. C. S. Starr, of this city (Toronto), purchased a nice pair of horses for carriage purposes, paying \$100 for them. A handsome chestnut gelding, by Disturbance, fetched \$150; a bay pacer sold for \$170; good chunks are making \$75 to \$90; heavy draughts all the way from \$100 to \$150. Good drivers are in demand, but are hard to get. Three pairs of matched carriage wanted at from \$300 to \$400. The sales at Grand's Repository this last week have been very good and attracted large numbers of buyers. Two pairs of matched cobs, full of quality, and showing fine action, were purchased for export. The principal buyers were Jas. Cockburn, Barrie; Isaac Watson, Niagara Falls; Mr. F. W. Godson, Liverpool; England; F. Parker, Port Credit; Geo. Decker, Montreal. Mr. Edmunds' consignment of twenty head were all sold. A pair of bay cobs, five and six years old, sold for \$200. A fast driver, that could show a mile better than 2.40, sold for \$175 to Mr. W. Davies. Messrs. John Marr and MacAdam have just arrived from Glasgow, and will commence to purchase about fifty head for their next shipment. Draft horses, 1,300 to 1,500 lbs., \$75 to \$100. Ordinary drivers, in good condition, 15 to 15.2, \$50. Good drivers, with speed and style, 15 to 15.3, \$75 to \$150.

The U. S. Vice-Consul at Belfast, Ireland, reports large and successful sales there of horses from Canada and the U. S., the majority from the former. The buyers are both town and country folk. Referring to a shipment from Chicago, he reports the entire cost for transportation, feeding and care per animal from Chicago to Belfast as \$37.

Toronto Markets.

Stagnation is still the feature of the cattle trade, and, with the exception of the hog trade, the tone is dull. The market was pretty well cleared up, owing to light supplies. Receipts have fallen off somewhat. For week ending July 15th: Cattle, 1,545; sheep and lambs, 1,377; hogs, 5,270.

Export Cattle.—All the principal operators were on the market and purchased, but the prices did not improve. Cables from the Old Country are a trifle better, and lighter receipts caused a better feeling; yet the market cannot be termed good or encouraging. Prices were low; ruled from 3 1/2c. to 3 3/4c. per lb. for the general run. Owing to the lighter run, about all the cattle on offer were sold. Towards the close a shade higher was paid, \$3.50 being the top price. One carload of cattle, 1,200 lbs. average, sold at 3 1/2c. The shippers at this market are very greatly pleased at the action of the C. P. R., who have fitted up their cattle trains with the vacuum airbrake on all Montreal trains. It is found that the cattle travel better, as there is no jolting at the stops and the cattle are not thrown. They have accelerated their speed, and some trains last week

did the journey in seventeen hours. Private cable advices are discouraging at present. There is more space offered on the steamships, which is very unusual.

Butchers' Cattle.—In butchers' cattle there was no change; 2 1/2c. per lb. and 3c. purchased the picked lots. Really good cattle are scarce, such as are wanted to kill for local and high-class trade. Quite a few deals were made at 2 1/2c. per lb. Small cattle of good quality will sell. Inferior sell at 2c. and 2 1/2c. per lb. One bunch, 1,063 lbs. average, sold for \$28 per head; one carload, 1,000 lbs. average, \$22 per head. Twenty-one cattle, 990 lbs. average, 2 1/2c. per lb.

Bulls.—There is some demand for good fat bulls for export, at 2 1/2c. to 3 1/2c. per lb. But for the general run of bulls, prices rule at about 2 1/2c. per lb., with hardly any sales. Some good bulls are wanted.

Sheep.—Sheep for shipping and butchers' use sold to-day at from 2 1/2c. to 3 1/2c. per lb. Mr. J. Dann bought a carload in the vicinity of this price. There were 1,200 sheep and lambs on the market. Export ewes and wethers are firmer, at 3 1/2c. per lb. Rams at 2 1/2c. per lb. Butchers' sheep are dull, at from 2 1/2c. to 2 3/4c. per lb.

Lambs.—Spring lambs are rather weak, at from \$2.25 to \$3 per head. A nice lot of 12 grain-fed lambs sold for \$35, the top price for the day. Some lambs that averaged in weight 92 lbs. sold for \$3.50 per head.

Cattle.—Steady, but prices low. Only choice veals bring more than \$1 per head, ruling prices being from \$2 to \$4 per head. There were about 80 head on sale. Choice veals sell more readily than ordinary calves.

Milk Cows.—Offerings were not heavy, but they were quite sufficient for the demand. The range was from \$15 to \$30 per head. A very good cow was sold for \$22. About 12 on sale and all sold at close of day.

Hogs.—In spite of the fact that offerings were not heavy, prices sagged a quarter. Choice sold for 4 1/2c. per lb. weighed off cars; thick fat, 3 1/2c. per lb.; stores sold for 3 1/2c. per lb. The indications are still for lower prices. Thick fat hogs are going at 3 1/2c. per lb.; stores not wanted at present, and stags sell at from 1 1/2c. to 2c. per lb.

Butter.—The demand holds slow, and only the choice lines show any movement. Any stuff the least off in flavor has to be sold at reduced prices. Choice dairy, 11c. to 12 1/2c.; fresh-made creamery, 14c. to 15c. per lb.

Eggs.—Unchanged and fairly steady, at 9c. per doz. for large orders.

Hay.—No change; dealers are selling new at 7c. per lb. and old at 8c.

Wheat.—The receipts are small; market steady, fifteen loads selling at \$12.50 to \$14.50 for old and \$9 to \$10 per ton for new. Many farmers are in buying feed, as a great shortage is experienced in many sections, which makes the market steady.

Straw.—Only a very few loads on the market, at \$10. A load of loose straw changed hands at \$6.

Grain.—The receipts of grain on the street market show some improvement. Wheat—Two loads of white selling at 65c.; goose, 51c. Oats—600 bushels selling at 22c. to 23c.

Fruit.—The fruit market is busy at present. New varieties of apples are coming in quite freely. They sell at from 25c. a basket upwards, and from \$1 to \$1.50 per barrel.

Dressed Hogs.—A few loads of dressed hogs were in to-day, and changed hands at \$5.50.

Hides.—The demand for hides is slow and the market is unchanged, but some export orders are on hand.

Buffalo Markets.

Hogs.—Choice to prime heavy shipping grades, \$3.25 to \$3.30; mixed loads, mediums and Yorkers, 180 to 210 lbs. average, \$3.50 to \$3.60; pigs, good to choice, 100 to 120 lbs. average, \$3.90 to \$4.

Cattle.—Receipts last Monday about 160 cars. Heavy cattle sold slow to a shade lower; all other kinds of stock sold steady to strong. Good light butcher stuff of all kinds sold at full strong prices, and in some instances a shade higher. This market was by far the best. Good cows and heifers are in demand. Prime to fancy steers, \$4.10 to \$4.50; good to choice, \$4.25 to \$4.35; good, ripe, 1,100 to 1,250 lb. steers, \$4.20 to \$4.35; good, ripe, 950 to 1,050 lb. steers, \$4.15 to \$4.25. Prime to fancy heifers, \$3.90 to \$4.10; good to choice, \$3.50 to \$3.75. Prime to fat cows, \$3.10 to \$3.75; fair to good, \$2.75 to \$3.25. Bulls, prime to fancy, \$3.15 to \$3.35; good, \$2.85 to \$3. Milksters and springers, extra, \$4 to \$5; choice, \$3 to \$3.60; good, \$2.80 to \$3.1. Veal calves, fancy, \$4.75 to \$5; good to choice, \$4.50 to \$4.75.

Sheep and Lambs.—Receipts on Monday were heavy—about 80 cars—and the market consequently in bad shape. Lambs which sold last week at 6 1/2c. a pound have declined a dollar a hundred and will not bring over 5c. to-day. Choice to prime spring lambs, fat and good quality, 50 to 65 lbs., \$1.50 to \$1.75; good to choice, \$1.50 to \$1.75; culls, common and fair grades, \$3.25 to \$3.75. Choice heavy dry-fed sheep, for export, 110 lbs. and up, wethers, \$3.75 to \$4; choice heavy dry-fed sheep, for export, 110 lbs. and up, ewes, \$3.50 to \$3.75; good to choice butcher weights, dry-fed, 80 to 100 lbs., \$3.35 to \$3.65. East Buffalo, July 22nd. ERICK BROS.

Montreal Markets.

The high prices quoted in our last report for export cattle (4 1/2c. per lb.) have not been maintained, the highest that has been paid since being 3 3/4c. per cwt., and this being an outside figure. The reason for this is not far to seek in the extreme depression in foreign markets. What is perhaps a rather peculiar circumstance is the way the local wants have been maintained; prices for butchers' cattle ruling very high in proportion to the condition of the balance of the markets. This is accounted for particularly by a demand from butchers for a better grade of meat, and a lighter supply of really good butchers' cattle. The best butcher stock made from 3 1/2c. and even 3c. per lb.; medium to good, 2 1/2c. to 3c.; inferior in proportion; export cattle, \$3.40 to \$3.75 per cwt.

Sheep and Lambs.—Good fat sheep, suitable for shipping, meet an active demand, but at not very high prices; as yet, however, there are not very many suitable being offered, but the receipts are gradually increasing. Lambs also meet with a fair enquiry and are rather short of the demand. Butchers' sheep, 2 1/2c. to 2 3/4c.; shippers, 3c. to 3 1/2c. per lb.; lambs, \$1.50 to \$3.25 each, as to size.

Cattle.—Light supplies, with fair demand, at from \$2 to \$6 each.

Live Hogs.—Hogs have been hammered down until 3 1/2c. per lb. is about the best that can be made for the best hogs brought into the yards, and we heard of one car being contracted for delivery next week at 1 1/2c. off cars here. The result of the poor prices paid to drovers has been quite a falling off in receipts, but from all accounts brought in by drovers, there are plenty of them in the country to come forward.

Hides and Skins.—Market quiet, with steady jobbing trade; prices unchanged.

The British Markets.—It is a question if these last few markets in Great Britain have not established an unbreakable record. It is at any rate hoped so, for they have been the worst in the history of the Canadian cattle trade. The fact of our best steers and maiden heifers only making from 8c. to 8 1/2c. per lb. of dressed meat is ridiculous, to say the least; but that is all they have brought. One bunch figured out by the writer, which cost \$55 each, sold for \$18 in Liverpool and they were good cattle. However, the last cables received have been of a more encouraging nature, the market being up to 9c. and 9 1/2c. per lb.; not a very big gain, but a gain.

The space market continues strong, at from 4 shillings to 4 1/2 shillings.

The total shipments to date were: Cattle, 4,300; sheep, 11,943; horses, 5,960.

Chatty Stock Letter from Chicago.

(BY OUR SPECIAL CORRESPONDENT.)

Top prices for different grades of live stock, with comparisons:—

Table with columns: CATTLE, Present Prices, Two weeks ago, 1895, 1894. Rows include various grades of cattle, sheep, and hogs.

All kinds of hog products have been close to or below the lowest notch on record, and grain is very low, with fine crop prospects.

The same old cry about no demand for heavy cattle is getting louder and louder. On a recent market day, when the pens contained a goodly share of big show cattle, buyers could hardly be induced to bid on weights above 1,400 pounds.

There has lately sprung up a demand here from Guatemala for a few choice carriage teams and good drivers. There is quite a trade in the United States with Mexico. We are sending them some good horses in return for their very poor cattle.

Our people are in the midst of one of the most heated political campaigns since the one of 1860. The issue is on the question of the money standard, and the issue is already having a far-reaching effect upon the business of the country. Aside from the fact that many people expect to talk politics instead of attend to ordinary business in Presidential years, the agitation of the free-silver idea is having the effect of curtailing the amount of money in general circulation.

The Western range cattle are not nearly as good as last year. Receipts are not as large so far, and promise to be considerably smaller for the season.

The sheep market is being flooded with Utah, Idaho, Montana, Wyoming, and Colorado wild-grass sheep, which are being largely below \$3 per 100 lbs. Dealers fear they will have to sell much lower, and predict an unusually light competition on feeding account.

The corn crop of the country is now well assured, except for severe and general early frosts, and it is nearly as large as last year's enormous crop. Farmers in Kansas and Nebraska will have corn to eat, fatten stock, and to burn.

The oat crop is not nearly so good as expected. The growth was too rapid, and, besides falling and tangling, it has been hurt by rust a great deal.

Farmers are not worrying much about the oat crop, as it is about on a "sixteen-to-one basis"—16 bushels for a dollar—in many parts of the West, and the demand for the grain is apparently not increasing. The bikes and trolley cars don't have to consume oats to put them on their mettle.

Cause and Cure of Cough in Young Pigs.

Cough may come from sore throat or bronchitis in young pigs as in other animals, and may be chargeable to exposure to cold and damp. With sore throat the open mouth may show the throat red, inflamed and swollen. With bronchitis the cough is at first hard and barking, and later soft and gurgling. Both may be treated by a clean, warm, dry, well-littered pen; in the case of weaned pigs, by warm, soft food, and by five-grain doses of muriate of ammonia four or five times a day. A woollen rag tied round the throat or chest, as the case may demand, will often do good, and a teaspoonful of strong ammonia inside this cloth will usually prove valuable as a counter-irritant. In other cases the cough is due to worms in the bronchial tubes of the lungs, and in such a case the affection is likely to attack successive litters in the same pen, irrespective of weather or exposure. The temperature of the body, too, rarely rises above the normal (103 degrees F.). The cough is wheezing or rattling, and masses of mucus are sometimes expelled by the mouth. These masses should be carefully examined for the worms, one to two inches long and the thickness of a fine white thread, which will give the certainty of their presence in the lungs. These cases should be treated by fumigations with burning sulphur in a close building, the administrator staying with the animals and letting the air in or the pigs out whenever he finds it too concentrated for his own breathing. This should be done daily for half an hour for a week, and repeated again for the same length of time after an interval of a week. Advantage may also be had from fifteen drops spirits of turpentine in one-half ounce sweet oil for a few days.—Prof. Law, before N. Y. Institute.

In reference to the excellent paper, entitled "Keeping Dairy Cows for Profit," published in our July 15th issue, we should add (as it was overlooked at the time) that it was given by Mr. McIntyre, the writer, before several Ontario (Province) Farmers' Institutes.



A GHOSTLY COUNSELOR.

It was a pleasant evening late in May, two years ago. Bess and I had been out in California all winter, sunning ourselves on the sands at Santa Monica and driving through the cypress woods at Monterey; so even the chill of a May evening on the lower Mississippi felt cold to us.

We had excited a little laugh among the Northerners who were making their dilatory ways home after wintering in Cuba and Florida. There were only half a dozen or so of them. The captain of the boat asked us if it was our first trip on "the river," and regretted much that we had not been so lucky as to be passengers on his boat along with a brass band and a party of excursionists; but we had found the present conditions just to our liking. Although the Northerners laughed at us for wearing wraps in Mississippi in May, it was very good-natured ridicule, and we had grown almost intimate in our two days' journey.

We seemed almost like one party as we sat on the upper deck in the brilliant moonlight and talked. There was Miss Vallian, from New York, a brilliant young creature, who had evidently completely captivated Mr. Francis, the quite too-English Bostonian. Miss Vallian was in the rather loose charge of young Mrs. Bemmis and her giddy husband. We all wondered at Miss Vallian fancying Mr. Francis, when there was a gallant, black-eyed, army lieutenant with us, whose every glance was a challenge for a desperate flirtation. But, poor boy! he was uneasily attired in the garments of a "cit," and his halo was gone with his buttons and sword; or there is no doubt that Mr. Francis's talk about his horses and his travels would not have been so interesting to the maiden. (Who was that philanthropist who suggested giving to young girls dolls dressed in army uniforms, that they might become accustomed to the article?) Mrs. Grace, from St. Louis, and her fourteen-year-old daughter made up the party.

The captain of the "City of Natchez" (our boat) was the "Mr. B." of Mark Twain's "Life on the Mississippi," and he had been sitting with us telling over for the thousandth time the stories of the great humorist's first attempts at "larnin' the river"; but he was called into the pilot-house, and a silence fell upon us. I hugged a little closer into the depths of my steamer chair and my furs, and rather hoped that nobody would speak. It was a perfect night. We were plowing up the center of the stream, between dense forests that looked to us as though the eye of man had never before rested upon their serene majesty. Suddenly Mr. Francis, who was sitting on the deck-railing, gave an audible snort.

"What is that delicious fragrance from the forest? Do you notice it? Something spicy?"

"Pennyroyal, I guess," little Alice Grace said, dryly. "I've got the oil on my hands to keep off mosquitoes."

We all laughed, and then Miss Vallian turned to Mr. Francis and begged him prettily to tell us a story. I hoped he would refuse. Lieutenant Thornecroft had told me an excellent story that afternoon about an adventure he had had in South America, and I meant to call that out; but Mr. Francis was too sure of his accomplishments to hesitate over anything, so, almost at once, he began:

"Are any of you familiar with the suburbs of Boston? Well, if you were, you could not fail to remember the old Marston place on the Cambridge road. It is about three hundred years old and bears the colonial stamp in every stone. Young Jack Marston was manager of the Marston Manufacturing Works a few years ago, and as I was a large stockholder in the concern, we became very good friends. He lived out at the old place, with three charming sisters, and the fact of the matter is, that had something to do with my great friendship for Jack. I was head; over ears in love with Priscilla Marston."

We all looked at Miss Vallian, but she was smiling more brilliantly than usual.

"I used to plan and contrive to get Jack to ask me out to the old place to stay for a day or two, and once in a while I succeeded. It was almost my only chance of seeing Priscilla intimately. She was the youngest and prettiest of the sisters, and the others watched her like a pair of hawks. I couldn't suddenly begin to go to getmans and club man, and nobody thought of asking me, for one thing, and I should have been out of my element, anyway. But the quiet life that the sisters led in their own home exactly suited me. I played billiards in the morning, and rode in the afternoon; or, if it happened to be Sunday, went to church in the morning, and walked in the afternoon, always with Priscilla by my side.

"That ought to be satisfied me; but it didn't. I never was so miserable as when I had Priscilla to myself, and listened to her talk. She evidently regarded me as a safe confidant, and told me all her love affairs with the young fellows of the town. I think that almost every man in a certain set at Harvard had asked her to marry him. She was not only a very pretty girl, but of a fine old family of large fortune. But she had been in love with poor old father, and I'd have fallen in love with her. There was something about the girl that was intensely fascinating. Some people think that that peculiar charm is the atmosphere of a noble soul. I'm sure I don't know. I gave her credit for possessing everything; and the more I wanted her, the more unreasonable it seemed that she would ever care for me.

"One Thanksgiving day—it was three years ago—Jack asked me but to his home to stay until the following Monday. I had promised Bertie Halloren to go over to New York for a week at the theatres; but I sent him an excuse and went with Jack. Priscilla was standing on the steps feeding the one peacock that was left of the great flock that once screamed through their gardens, and I believe I actually blushed with joy at her beauty. She had put on an old Puritan dress in honor of the day, and a close little cap almost hid her pretty dark hair, and let her ear peep out,—well! it was prettier than any shell, or rose-leaf, or any of the old comparisons, and I am not poetic enough to make a new one.

"They had brought out all the old family china and spinning-wheels and embroidery-frames, to give the old festival its proper setting. I admire that sort of thing very much. I suppose my grandfathers can be reckoned as far back as anybody's, but they never had the money or the fancy for collecting heirlooms; so I probably admired the Marston collection in a very flattering way. Miss Annette, the eldest sister, finally turned to Jack and said:

"I am going to have the old pink chamber arranged for Mr. Francis. I think he will enjoy sleeping in a tapestried room."

"That I should, Miss Annette," I said, and it gave me a genuine feeling of delight to think that I was really to be taken into the family sanctuaries; for I knew how they regarded their old rooms.

"But before night I was in the depths of despair. The Marstons gave a little dance in the evening, and when I saw Priscilla in her airy evening-dress, walking about with those slim university men, I felt that I was a fool ever to have dreamed of asking her to marry me. I went upstairs before the party was over; but first I went into the library and hunted up a volume of Faust. I always had a fancy for reading that when I was depressed,—a principle of the Hahnemann theory, I suppose.

"I called a servant to show me the way to the tapestried room where I was to sleep. It was decidedly a curious old place. The bed, a four-poster, was hung with faded pink damask, and the walls were covered with dim-figured tapestry. I couldn't help but feel that the place ought to have a guard-chain about it to keep relic-hunters' hands off."

"Like Mary Queen of Scots' bed,—I know," little Alice Grace interrupted.

"Exactly. I was thinking of that myself. After I had entered and closed the door, I found that I didn't know where it was; the door was covered like the rest of the wall. It really did not make much difference, but I thought I had better find it then: it would be very awkward if there should happen to be a fire in the night. I felt all about in the numerous folds of the tapestry, and, to my relief, suddenly felt the handle of a door. I opened it, but my disgust, found that it was the opening to a shallow, empty closet. I shut it with a bang, and went on around the room. Presently I found the handle of the door opening out into the corridor, and felt relieved. I put on my slippers, drew up an odd old chair, and sat down by the table to read. I could hear the distant beat of the dancers' feet keeping time to the waltz music. It made me utterly miserable, and I even settled myself to being wretched with Goethe; and I sat there basking my face in the fire-glow, and wondering if Faust found it all worth while. I was just in that uncanny mood that I suppose spirits, if they do come, choose as the one in which to be received.

"Suddenly there was a sound behind me. It came from that shallow, empty closet behind the tapestry. I looked around, half-startled even as my common sense told me that it must be rats, and saw—certainly no animal. There was an old wrinkled, white hand plucking at the tapestry, pulling it aside. Then the door slowly opened, and an old, old man, dressed in clothes of the last century, stood in the closet door. He held his three-cornered hat in his hand, and as he saw me he pressed it against his breast, and made me a stately bow. If I had been a woman, I should have screamed and fainted. The fact of the matter is, I was nervous and frightened enough to do both; but they were not habits of mine, so I sat still instead.

"The old creature walked slowly forward, bowing and smiling, until he came to the chair opposite mine, when he slowly sat down. It seemed to me that I could hear his dry bones creak as he bent. He never ceased his smiles, and the contortion of his thin lips, and the cold twinkle from his gray eye-sockets, made me shiver.

"Finally his voice came, like the jangled, broken notes of an old musical instrument, and he said the most surprising thing possible:

"And so you are another suitor for the hand of the youngest of the house. Are you a good man?"

"I said, modestly, that I thought I was.

"I have my property to join with hers?"

"I told him that I thought my fortune exceeded hers.

"Well," he said, philosophically, "maids must wed. It might as well be you as another. You may have her."

"But," I said, desperately, "she won't have me!"

"Ask her, man, ask her. Te—he—he—he. And with senile chuckles and giggles he hobbled over to the closet, fumbled at the tapestry until he found the closet door, turned it out with an unholy grin, and—disappeared! I sat staring at the place for as much as five minutes, and then I walked over to that closet door and opened it. The place was perfectly empty!

"There was no possible doubt about it,—I had seen a ghost. I had heard of these old family spooks who take an interest in the welfare of their descendants, but I had never believed in them. Now anything else was out of the question. My hesitating frame of mind had been understood by the family guardian-spirit, and the old gentleman had materialized himself and appeared with advice—and his blessing! I had a great notion to put on my shoes and go down and have it out with Priscilla then and there; but the music had ceased, and the house was settling into quiet. It was a light here and there under the faded pink damask, and I closed my eyes wondering at the unreasoning terror people have of ghosts.

"The next morning the rain was pouring, and after breakfast Jack proposed that we should all go into the billiard-room and play. The sisters were enthusiastic over the idea, and we all made up our minds to go. It was rather a disappointment to me, as I had hoped to have the morning with Priscilla; but I knew I was safe now, and I could afford to wait a little. Family ghosts do not appear and give important advice that means nothing. She—there was only one 'she' to me—played the game not only skillfully, but gracefully. It was a delight to all eyes to see her take the back stroke, leaning her graceful shoulders against the table. She was just in the act of making over to me a ball, when the billiard-room door opened, and a tall young fellow lounged familiarly in.

"Hello, Martin!" Jack cried, "what cloud rained you down?"

"Miss Annette and Miss Maria each came up and graciously welcomed the visitor. Priscilla did not look up, but she missed her stroke.

"Aren't you going to speak to your old friends?"

"The young man left Miss Annette and Miss Maria, went around the table, and took forcible possession of Priscilla's hands.

"My blood fairly boiled at his impudence; but the rest of the family seemed to think it was a sight. Jack turned and presented him to me, and he left Priscilla, who had disengaged her hands and greeted him with a very formal 'How do you do?' Mr. Dalhousie, which would have made any other man than this assured fellow sink into his boots. He seemed very much at home. Before he had hardly given the 'account of himself' which Jack demanded, he had offered to beat anybody at billiards with twenty marks against himself.

"Play with him, Priscilla," said Mr. Francis, "and I will go out and look at the horses and see what the chances are for going out this afternoon."

"There seemed to be no thought of the game Mr. Dalhousie had interrupted. I must confess that I was cross. As we walked down the hall, I saw Miss Maria and Miss Annette come out of the billiard-room door, leaving Priscilla alone with the new guest.

"It had stopped raining by this time, but the stable yard was full of puddles. As we zigzagged around these, Jack said: 'Priscilla is a queer girl. When I come to marry, I hope I'll fall in love with somebody who isn't so full of tempers.'"

"My heart gave a bound. Did Jack Marston mean to give me an opening to ask him for his sister's hand? Whether he did or not, I'd take it. I cleared my throat to begin, but he went on:

"It's a lucky thing she's struck such a good-natured fellow as Dalhousie. He goes his peaceful way, and pretends he don't notice."

"Is your sister engaged to Mr. Dalhousie?" I asked, as soon as I could speak. Here was a thimble in air-castles!

"Eh? Didn't you know that? They have been engaged ever since Priscilla put on long dresses. He is a distant cousin of ours. She is as jealous of him as an old man of a young bride, and he has probably spoken pleasantly to some pretty girl lately, which accounts for the young lady's airiness this morning."

"We spent as much time as possible looking at the horses and commenting on the weather, and by the time we returned, whatever had been the cause of Miss Priscilla's 'airiness' was evidently removed; for she and Mr. Dalhousie were as merry as a pair of grigs.

"I found it necessary to go into Boston that afternoon. The Marston place didn't seem as attractive as usual. There was a dullness about the old house, and I didn't exactly banker after another interview with the ghostly ancestor. I had an absolute contempt for his advice."

"Young Mrs. Bemmis could hold her tongue no longer.

"And do you mean to tell us, Mr. Francis, that you did not ask that girl to marry you, anyway?"

"I certainly do."

She gave a perfectly feminine expression of disgust. "Of course, the ghost meant for you to follow his advice. I'd have been afraid not to."

"Let me finish my story. I suppose it must have been six months before I saw the Marston place again. I went over to New York and had that week at the theatres with Halloren, and then only came back to Boston long enough to get my affairs in shape to take a long trip to California. A week or two after I returned, Jack Marston came around one day and asked me to go out to their place to attend the funeral of an old uncle. It was a beautiful May afternoon, and as I hadn't seen much of Jack for a long time, I consented. We drove out in his road wagon that he kept in the city.

"How does your uncle's funeral happen to be from your place?" I asked.

"Oh, he has always lived there, although visitors have not seen him the last few years. He was my grandfather's brother, and has been an imbecile for a long time. The girls let him roam around as he liked when there was no one there, with an attendant, of course; but he has had such a queer fancy ever since Priscilla grew up, that we never let him see visitors." Jack laughed under his breath. "He imagined every man was in love with her, and advised him to propose. He was never married himself, and family tradition says he never plucked up courage enough to ask a woman to marry him."

"It must have been very embarrassing, sometimes," I said, vaguely.

"It was, indeed. Dalhousie teased Priscilla about it to this day; says the old maid advised him to propose to her, or the idea never would have struck him. By the way, we had a letter from them to-day. They are going to spend the summer in Norway and Sweden."

"I do not usually look at a dead person, but one glimpse at old Mr. Marston I must have. There he lay, the ghostly white hands peacefully folded, and the thin lips calmly closed. I couldn't help it, but there was a strong tug at my heartstrings as I looked."

"After the funeral was over, and we came back to the house, I asked Jack to let me see the tapestried chamber where I had slept."

"That old lumber! If you really care for that sort of thing, I'll show you uncle's rooms."

"They were certainly a sight, piled as they were with the collections of generations of rich and cultured men. After we had finished the coin cabinet, Jack said:

"By the way, this cabinet stands before a door leading into the pink room; and moving it aside, he opened a panel, and I found myself in the closet of the tapestried chamber."

We gave a sigh as he finished.

It was ten o'clock, and we began to go one by one down into the cabin. I had left my nuba, I discovered, and started back after it. Miss Vallian and Mr. Francis were at the head of the steps.

"I thought you said that you had never—been in love—before," she said, reproachfully.

"But you asked me for a story," he said. —A. S. Duane.

THE CHILDREN'S CORNER.

A "Proverb Hunt" will now begin this column. A prize is offered for correct solutions of the first three pictures. Only children of subscribers may compete, and competitors must be under sixteen years of age. Answers should be sent in for each group, e. g., 1-3, 4-6, 7-9, etc. A prize is offered for each group of three pictures, and a better one at the end of the year for the largest number of correct answers. Letters marked "Proverb Hunt" will not be opened until ten days after the third picture of each group is issued. The first letter opened, containing correct answers, will be prize winner; all others will receive honorable mention. Address your letters to Cousin Dorothy, FARMER'S ADVOCATE, London, Ont., and mark them "Proverb Hunt"—outside the envelope.



HIDDEN PROVERB—No. 20.

DEAR CHILDREN,— Our Historical Competition has been a great success. Indeed, although only one prize was offered, in justice to the competitors three have been awarded. Many of the other MSS. are also very good indeed. The first prize will be sent to Blanche Boyd, Mount Pleasant, Glanworth, Ont.; the second, to Edith Newstead, Marieton, Regina, Assa.; the third, to Kathleen Webster, Landsdowne, Ont. The following deserve very honorable mention: Ethel Pottery, St. Peterboro, Ont.; Caroline Busch, St. Clements, Ont. (although her story was dated too late); and Lizzie Hayward, Upper Goshen, N. B. These names are given in order of merit, and their MSS. show that they know something at least about those heroes of the Christian faith who gladly faced death rather than deny their Lord.

The Proverb Hunt prize is, as usual, won by the boys, who have proved themselves very capable of hunting out any proverb. G. B. Rothwell is again the successful man, and John Sheehan, Pakenham, Ont., is worthy of honorable mention. Edna Anger has answered No. 16 correctly. The answers are: No. 16, "Make hay while the sun shines"; No. 17, "One good turn deserves another"; No. 18, "She stoops to conquer." Thanking my young correspondents for their many nice letters and good wishes, believe me, Ever your loving friend—

COUSIN DOROTHY.

P. S.—Possibly you think I can't be a "loving friend" to people I have never seen. But that idea is a very mistaken one. I am very fond of "paper cousins," and know many of you very well indeed. I am very much afraid that I like children—old and young children—better than grown-up people; but don't tell anybody I said so. They would soon be read our column; so if you don't tell tales my secret is safe.—D.

Help One Another.

A thimble, a needle, and a piece of thread were all lying on a lady's work-table together. Now, the needle had rather a hasty temper, and could give sharp pricks when it pleased; and this morning it was out of sorts; so it tried to pick a quarrel with the thimble, and said spitefully, "You gave me some hard knocks yesterday, and I wish that you would be more gentle in future." "It is true I do push you hard sometimes," answered the thimble, "but you know it is only when you do not do your

work properly, and our mistress makes me keep you up to it." "Pray don't you two quarrel," said the thread, wishing to be peacemaker. "You mind your own business!" retorted the needle. "My business is your business," said the thread, "for you are no use without me, and I am none without you." "That's just it," said the thimble. "A great deal of nonsense is talked in this world about being independent; but my own opinion is that people should try to help one another, for from the highest to the lowest we are all very dependent on the good services of our neighbors for something or other every day of our lives."

Learning to Sew.

My grandmamma says that the
Right way to sew
Is to put little stitches
Along in a row.
That sounds very easy,—
I almost know
That some spectacles and things would
Help me to sew.

I try very hard now, but
Isn't it slow?
The stitches won't half of them
Stay in a row.
I'm sure as can be that the
People don't know
What very hard work 'tis to
Learn how to sew.

I'll do like my grandma; I'll
Sing soft and low—
Put my foot on a stool—make
My rocking-chair go—
And put on her spectacles—then
Stitch, stitch,—oh, oh!
I think I've found out how to
Learn how to sew.

||| |||

If every boy and every girl,
Arising with the sun,
Should plan this day to do alone
The good deeds to be done;

Should scatter smiles and kindly words,
Strong, helpful hands should lend,
And to each other's wants and cries
Attentive ears should lend;

How many homes would sunny be
Which now are filled with care!
And joyous, smiling faces, too,
Would greet us everywhere.

I do believe the very sun
Would shine more clear and bright,
And every little twinkling star
Would shed a softer light.

"The Cat's-paw."

BY LANDSEER.

Landseer, the greatest animal painter the English school has yet produced, holds a very strong place in the esteem of the English people. The feeling with which he is regarded is almost one of affection. The more nearly an Englishman approaches the ideal John Bull the more probable it is that he cherishes some dog or horse with grave fondness. The British partiality for an animal companion is common to all classes, from Bill Sykes up to royalty. The literature on the subject of ordinary pets is quite extensive, and the number of periodical publications devoted exclusively to one or other of the species held in most regard is surprising. The crowded advertising columns of any of these papers bear striking evidence to the amount of capital invested, and the enthusiastic thought and care bestowed upon their breeding and favorite points.

Landseer's genius was mostly devoted to an ever-varying representation of the horse, the dog, or the stag, in combination with scenes which appeal strongly to English taste and sympathy. It is, therefore, natural enough that of all English painters he should have received the evident popular appreciation. If a census were taken of the most frequent pictures hung in English homes, we fancy that Landseer's would head the list.

The painting which we here reproduce is one little known, and not very characteristic of the best-known type of Landseer picture. It is one of his very earliest works, and gives strong promise of the eminence he was afterwards to attain in his chosen line of art. Landseer was twenty-three when "The Cat's-paw" was produced. It was the second picture of his that gave any indication of his genius, and was sold for five hundred dollars—not a sixth part of the sum at which it was valued some thirty years later. The studies which Landseer made for the different parts of this picture have been eagerly fought over in auction-rooms whenever chance has brought them before the public.

Good as this picture is in many points, exhibiting powers of drawing, and characterization of

animal intelligence approaching the line of human reasoning, without violation of truth, it shows the artist in his progressing stage, his powers still not quite matured. The action of the animals is full of strenuous energy. The spectator feels the muscular grip of the monkey, and hears the wild shriek of the cat; but the painter has indulged in some exaggeration of fancy in endowing his monkey with the reasoning intelligence of wrapping poor puss in a shawl. A further criticism may be made on the picture, that the kittens are made too old in shape. One has but to compare them with any of the wonderfully faithful and sympathetic productions of Madame Bonheur, the famous Belgian cat painter, to perceive that Landseer had yet much to learn when he painted "The Cat's-paw." There is a good deal too much middle-aged grimalkin in the kittens, both in the expression of the little heads and proportions of the small frames. It is a strange failing in early art, and in youthful artists still, that the power of faithful rendering of childhood should be lacking. The early painter's children are mostly little grown-up people, and Greek sculpture renders youth and infancy more by size than expression; their little ones are but miniature men and women in their proportions. Landseer's kittens show some of the action of this curious fact in art. But we do not expect of a genius in his twenties the mature fruits of the eye and hand of forty.



"THE CAT'S-PAW."

A Woman's Shopping.

When a woman's bent on shopping
Every other care she's dropping
And soon on a car she's hopping,
For she has no time to spare.
Yes, her errand is most pressing,
Slight delay would be distressing,
And while riding she is guessing
If she'll find the right goods there.

The conductor nods to warn her
That at last she's reached the corner
Where they sell things to adorn her,
And she speedily alights.
But the thought of haste now fails her,
For an old acquaintance hails her,
With the latest news regales her
On the fashions, fads and sights.

And the waste of time is shocking,
For they go on with their talking,
And the sidewalk they are blocking
As the hours fast roll away.
Every time they think of parting
Some new subject one is starting,
Then again their tongues go darting,
While more secrets they betray.

But at last there's termination
Of the flow of conversation,
And each seeks her destination
After telling her delight.
Then the shopper's trepidation
Finds a ready explanation,
For she learns, with consternation,
That the store's closed for the night.

UNCLE TOM'S DEPARTMENT.

MY DEAR NEPHEWS AND NIECES,—

Last month we chatted about the Temple of Knowledge, and we discovered that it was not built upon a mountain, as many people erroneously supposed. Now I would call your attention to the Fountain of Happiness, and together we shall strive to find where it lies hidden. The well-spring that feeds this beautiful fountain is Contentment, so when we learn how to be content we shall have discovered the secret.

To many of those who are not blessed with a large share of this world's goods, the possession of wealth is the synonym of happiness, and so, spending their days in a ferment of discontented longing for that possession, the sunlight fades away, the darkness comes, and they have nought but a cheerless hearth around which to spend life's evening. Unfortunately, they cannot retrace their steps and gather the neglected sunbeams, for they have vanished. Let us, then, profit by this sad and too common experience, and gather the sunbeams all along the way, and when twilight shades in fold us we shall have such a reserve fund that we shall scarcely detect the absence of the noonday light.

But is the possession of wealth (by wealth, in this case, I mean money and things purchasable by money) the true criterion of happiness? Never was there a greater fallacy. The moneyed man is often a greater slave than the beggar, and observation teaches me that the most contented of the poor than in the palaces of the rich.

Mr. Andrew Carnegie, the Pittsburg millionaire, who commenced to earn his own living at the age of twelve years, says: "As a rule there is more happiness, more genuine satisfaction, and a truer life, and more obtained from life, in the humble cottages of the poor than in the palaces of the rich."

Speaking of his first earnings, he says: "I have had to deal with great sums—many millions of dollars have since passed through my hands . . . but I tell you that one dollar and twenty cents outweighs all. It was the direct reward of honest manual labor."

He believes that manual labor is one of the greatest pleasures. (We don't like too much of it, do we?) He began in a factory as "bobbin boy." His work confined him to a heated, ill-smelling room, but he was content with the knowledge that he was of use in the world. And we hear country boys and girls, who have heaven's blue dome for a canopy, and who are surrounded by the fairest works of nature, complain of labor. There is a difference between you and him, and your bright eyes will be quick to notice it: he received remuneration for his work—you say you do not. But what supports you?

I don't blame you, either, for wishing to be independent, and nothing makes one feel more so than having the means—self-earned—of purchasing what is necessary for one's support. This is a matter you can all talk over with your parents, and, if

possible, induce them to allow you to spend (under their guidance, of course) a part of the value of your labor.

But this is a digression from my subject. While searching for happiness, keep doing the little everyday duties, for "There is only one stimulant that never fails and yet never intoxicates—Duty. Duty puts a blue sky over every man (up in his heart, maybe), into which the skylark, Happiness, always goes singing." And, lastly, if you would find the joy-giving fountain, open eyes, ears, and heart to the blessings that surround you (for God's best gifts are always within reach), drink in the sunshine, the perfume of the flowers, and the beauty of everything. Even the commonest plants are fraught with a quaint, sweet history. Look it up and learn it well, and in days to come it will prove a veritable sun-ray to yourself and a pleasant and instructive tale to impart to the young.

To begin with, I shall tell you some stories of the clover, whose name is derived from the Latin word *clava*—a club, as the clover leaf was supposed to resemble a three-headed club in use long ago. In olden times red clover was considered proof against the power of witches, and superstitious people wore a leaf of it as a protection. In the East the trefoil is held sacred, and among the Druids it was revered as a religious symbol. A child standing on tiptoe and holding in its hand a clover leaf was used as the emblem of hope.

Even in this advanced age, when almost all old superstitions are abolished, many believe the finding of four-leaf clovers a token of good fortune, and many a myth and pretty poem has been written about them. Here is one, the author of which I do not know:—

"I know a place where the sun is like gold,
And the cherry blooms burst with snow;
And underneath is the loveliest nook,
Where the four-leaf clovers grow."

"One leaf is for Hope, and one is for Faith,
And one is for Love, you know;
And God put another one in for Luck;—
If you look you will find where they grow."

"But you must have hope and you must have faith—
You must love and be strong, and so
If you work, if you wait, you shall find the place
Where the four-leaf clovers grow."

Of clover generally, James Whitcomb Riley, that poet of the people and of the country, who prefers the latter to being "up thar in the city," writes:—

"Some sing of the lily and daisy and rose
And the pansies and pinks that the summertime throws
In the green, grassy lap of the meadow that lays
Blinkin' up at the sun through the sunny days;
But what is the lily and all of the rest
Of the flowers to a man with a heart in his breast
That has dipped brimmin' full of the honey and dew
Of the sweet clover blossoms his boyhood knew."

Look for the lucky clovers, then (literally, if you wish, but at least figuratively), and you will find your powers of observation grow more keen, and with the finding of them you will surely find both health and happiness. Your loving—
UNCLE TOM.

Puzzles.

1—STAIRS.

Diagram.

- 1. My first is "equal."
- My second is "at all."
- My third is "Possession."
- My fourth is in "Rome."

&c.

- 2. My first is "mischievous."
- My second is "Past."
- My third is "what children dislike."
- My fourth is in "Mexico."

- 3. My first is "a temple."
- My second is "Bustle."
- My third is "not so."
- My fourth is in "Syracuse."

- 4. My first is "floating ice."
- My second is "a household god."
- My third is "marking distribution."
- My fourth is in "Palermo."

- 5. My first is "mistress of a family."
- My second is "a beverage."
- My third is "one."
- My fourth is in "America."

CLARA ROBINSON.

2—SQUARE WORD.

- 1st—A narrow strip of board.
- 2nd—To regard with affection.
- 3rd—River in England.
- 4th—A roll of lint.

A. P. HAMPTON.

3—SQUARE WORD.

- My first is a conversation short;
- My next a creature timid, small;
- My third ground inclosed for sport;
- My fourth in joy and grief doth fall.

RICHARD JOHNSTON.

4—SQUARE WORD.

- My first is a cool and leafy shade;
- My next is a tree from which oil is made;
- Third is a metal string;
- Fourth is a happening;
- My fifth when you're weary will come to your aid.

5—CHARADE.

To C. S. Edwards.
In May the fifteenth ADVOCATE,
I your puzzle there did spy,
And it filled my heart with FIRST
To know the girls had a position high.
I've been a solver since I began,
To find a place in the "Dom,"
But now I'll try to SECOND a place
Of a COMPLETE puzzler that's gone.

JOHN S. CRERAR.

Answers to July 1st Puzzles.

- 1—Dominion Election (Do-men-yawn elect-shun).
- 2—Adder—dread—dared.
- 3— H E A R T
- 4—D-aniel
- A-baalom
- V-ashil
- Y-ahmael
- D-orcas
- David.
- E N T E R
- A T O N E
- 5— C R E S T
- R E N T S
- T R E S S
- R O V E R
- E V E R Y
- S E R E S
- T R Y S T

SOLVERS OF JULY 1ST PUZZLES.

Clara Robinson, John S. Crerar. Also, J. S. Crerar and A. P. Hampton, for June 15th

Fishing in a Cornfield.

In Colorado is a ten-acre field which is simply a subterranean lake covered with soil about eighteen inches deep. On the soil is cultivated a field of corn, which produces thirty bushels to the acre. If any one will take the trouble to dig a hole to the depth of a spade-handle, he will find that it will fill with water, and by using a hook and line, fish four or five inches long may be caught. The fish have neither scales nor eyes, and are perch-like in shape. The ground is a black marl in nature, and in all probability was at one time an open body of water, on which accumulated vegetable matter which has increased from time to time until now it has a crust sufficiently strong and rich to produce fine corn, although it has to be cultivated by hand, as it is not strong enough to bear the weight of a horse. While harvesting, the hands catch great strings of fish by making a hole through the earth. A person rising on his heel and coming down suddenly can see the growing corn shake all around him.

THE QUIET HOUR.

A Song for Every Day.

The weary world's a cheery place
For those with hearts to win it;
Thank God, there's not a human face
But has some laughter in it!
The soul that comes with honest mirth,
Though health and fortune vary,
Brings back the childhood of the earth,
And keeps it sound and merry.

The plodding world's an eager place
For those with wit to use it;
Where all are bidden to the race,
Let him who dares retune it!
The simplest task the hand can try,
The dullest round of duty,
Knowledge can amply glorify
And art can crown with beauty.

A busy, bonny, kindly place
Is this rough world of ours,
For those who love and work apace,
And fill their hands with flowers.
To kind and just and grateful hearts
The present grace is given
To find a heaven in themselves,
And find themselves in heaven.

Each Has a Mission.

There's never a rose in all the world
But makes some green sprays sweeter;
There's never a wind in all the sky
But makes some bird's wing fleetier;
There's never a star but brings to heaven
Some silver radiance tender;
And never a rosy cloud but helps
To crown the sunset splendor;
No robin but may thrill some heart,
His dawnlight gladly voicing,
God gives us all some small, sweet way
To set the world rejoicing.

The Power of Cheerfulness.

Have you ever noticed the power of one cheerful Christian life? Have you never seen a girl in a household who, having given her heart to God, goes through the family a joyous epistle of religion, until the father comes to believe, and the mother comes to believe, and all the brothers and sisters come to believe? Have you never seen the power of one Christian man in a village, going from house to house, and from shop to shop, and from store to store, living out the brighter phases of the Christian life, by his manner recommending the gladdest religion that the world ever saw? I do not think that any of us have fully tested the power of a Christian sun-bath, of a beaming face, of exhilarant Christian behavior.

Comfort One Another.

Comfort one another;
For the way is growing dreary,
The feet are often weary,
And the heart is very sad.
There is heavy burden-bearing,
When it seems that none are caring,
And we half forget that ever we were glad.

Comfort one another;
With the hand-clasp close and tender,
With the sweetness love can render,
And the looks of friendly eyes.
Do not wait with grace unspoken,
While life's daily bread is broken;
Gentle speech is oft like manna from the skies.

Comfort one another;
There are words of music ringing
Down the ages, sweet as singing
Of the happy choirs above.
Ransomed saints and mighty angel,
Lift the grand, deep-voiced ev'ning,
Where forever they are praising the eternal love.

Comfort one another;
By the hope of Him who sought us,
In our peril, Him who bought us,
Paying with His precious blood;
By the faith that will not falter,
Trusting strength that shall not falter,
Leaning on the One divinely good.

Comfort one another;
Let the grave-gloom lie behind you
While the Spirit's words remind you
Of the home beyond the tomb,
Where no more is pain or parting,
Fever's flush or tear-drop starting,
But the presence of the Lord, and for His people room.
—Margaret E. Sangster.

Fretting.

There is one sin which seems to me is everywhere and by everybody underestimated, and quite too much overlooked in valuations of character. It is the sin of fretting. It is as common as air, as speech; so common that unless it rises above its usual monotone we do not even observe it. Watch any ordinary coming together of people, and see how many minutes it will be before somebody frets—that is, makes more or less complaining statement of something or other, which most probably every one in the room, or in the car, or on the street-corner, it may be, knew before, and which probably nobody can help. Why say anything about it? It is cold, it is hot, it is wet, it is dry; somebody has broken an appointment, ill-cooked a meal; stupidity or bad faith somewhere has resulted in discomfort. There are plenty of things to fret about. It is simply astonishing how much annoyance may be found in the course of every day's living, even at the simplest, if one only keeps a sharp eye out on that side of things. Even Holy Writ says we are prone to trouble as sparks to fly upward. But even to the sparks flying upward, in the blackest of smoke, there is blue sky above, and the less time they waste on the road the sooner they will reach it. Fretting is all time wasted on the road.

Gen. Lew Wallace, the author of "Ben Hur," says he can cure rheumatism in one night without fail by a poultice of mustard and garlic applied to the feet.

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Rock Salt
Cheaper to use, and better for your stock than common salt. We ship to all parts of Canada. 50c. per 100 lbs. for 400 lb. lots and over. Cash with the order.
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15-y-o

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EARLY GENESEE GIANT
has become extremely popular wherever grown during the last few years. The Ontario Agricultural and Experimental Union have proved it to be one of the very hardiest, stiffest-strawed and most productive sorts grown over the Province.
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MRS. H. H. SPENCER,
BROOKLIN, ONT.

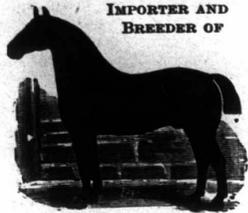
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No. 143

THE reputation for building up-to-date light and serviceable vehicles is being maintained. Our processes in the manufacturing of all the parts ourselves ensure durability in long satisfactory use. Catalogue on application.
J. B. ARMSTRONG MFG. CO., Ltd.,
GUELPH, CANADA.

The Provincial (Ont.) Government
Tent for Breeders.
Mr. F. W. Hodson, Guelph, Supt. of Farmers' Institutes for Ontario, and Secretary of the Sheep, Swine, and Cattle Breeders' Associations, advises us that he will be in attendance representing these organizations at the Provincial Government tent referred to on page 323 of this issue. The tent will be at the Toronto Show from August 31st to Sept. 12th; London, Sept. 14th to 19th; and Ottawa, Sept. 22nd to 26th.
NOTICE.
See what Mr. C. A. Zavitz says in this issue about Early Genesee Giant fall wheat before purchasing seed. Mrs. H. H. Spencer offers that sort, in clean, good seed, for sale in this issue.
IT PAYS TO ADVERTISE
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— AND —
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Shires, Clydes, Percheron, Royal Belgian, German Coach, French Coach, Hackney, Cleveland Bay, Yorkshire Coach, and Thoroughbred Stallions and Mares, and Shetland Ponies for sale.

He has the largest assortment of imported horses of any firm in America. Canadian distributing point, Woodstock, Ontario. Write

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GREENLEY (Iowa),
3-m-o or WOODSTOCK (Ont.).

THE GLEN STOCK FARM

Our stock comprises Clydesdales, Ayrshires, and Shropshires. High-class Ayrshires a specialty. We are making a special offering of ten very promising young bulls, and a number of very choice cows and heifers of the heaviest and richest milking strains, any of which will be sold at very moderate prices. We also have Rough-coated Scotch Collies for sale, eligible for registry.

7-y-om **WHITESIDE BROS.,** INNERKIP, ONT.

Arthur Johnston

NOW OFFERS



SHORT-LEGGED, DEEP-BODIED, THICK-SET YOUNG SHORTHORN BULLS

ALSO A VERY CHOICE LOT OF YOUNG COWS AND HEIFERS.

We are breeding registered **BERKSHIRES** of the best English strains. All the Shorthorns or Berkshires shipped to order. Send for our 1895 catalogue.
GREENWOOD P. O. AND TELEGRAPH OFFICE.
Claremont Stn. C.P.R. or Pickering Stn. G.T.R.
Parties met on shortest notice at either station.
5-1-y-om

Glenburn Stock Farm.

Three young Shorthorn bulls and several Berkshire boars and sows for sale, at very low figures; also a splendid lot of spring pigs.

John Racey, Jr.,
LENOXVILLE, QUE. 17-1-y-om

MAPLE LODGE STOCK FARM.

We have for sale now, one very handsome young bull and a few choice heifers, all of the best breeding. **JAS. S. SMITH,** Maple Lodge P. O., Ontario. 9-1-y-om

THE GRAND VALLEY STOCK FARM

G. & W. GIER, Props., Grand Valley, Ont., Breeders of Short-horns and Imp. Yorkshires. We offer for sale young bulls, cows and heifers of choice breeding and good quality at very low prices; also choice young Yorkshires of both sex. 13-y-0

F. BIRDSALL & SON,

BIRDSALL P. O., ONTARIO, Breeders of SHORTHORN and A. J. C. C. JERSEY CATTLE; also of OXFORD DOWN SHEEP, CARRIAGE and SADDLE HORSES of the best type. Correspondence solicited. 11-1-y-0

A. & D. BROWN, BREEDERS OF **Scotch Shorthorns**

IONA, ONTARIO. Three very choice young roan bulls, and also a number of good heifers for sale at very reasonable prices; bred from the noted stock bull Warfare (imp.). 21-1-y-0

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IN THE CASE OF ANY OF OUR OLD SUBSCRIBERS FAILING TO SECURE THE NECESSARY NUMBER OF NEW SUBSCRIBERS, A PORTRAIT WILL BE FURNISHED FOR \$1.50.

WE have made arrangements with the leading Portrait Company in Canada, and are in a position to give our subscribers a rare opportunity of securing a magnificent portrait, size 16x20.

Any subscriber to the "Farmer's Advocate" can obtain one of these crayon pictures by securing for us four new subscribers to the "Farmer's Advocate" and forwarding same to us together with \$4.00 in cash.

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GREAT DISPERSION SALE!

The Celebrated St. Anne's Herd of Pure

St. Lambert Jerseys

WILL BE SOLD BY AUCTION on AUGUST 19th and 20th.

NO RESERVE WHATEVER. Every animal will be sold. Nearly one hundred head of the finest Jerseys ever offered for sale in Canada, comprising thirty-two milk cows (fifteen of which will be fresh by time of sale), four two-year-old heifers in calf, fifteen yearling heifers, and a number of heifer calves. Also the famous breeding bulls and a number of their sons out of the noted prize-winning cows. This will be a rare opportunity for obtaining prize stock whose breeding cannot be duplicated in Canada. Sale will commence each day at 10.30 a.m. Send for Catalogues.

Address, **GEO. W. A. REBURN,** Manager.

St. ANNE'S is 20 miles west of Montreal, on the Toronto main line of the Grand Trunk and Canadian Pacific railways. All trains stop.

Shorthorn Bull

FIT FOR SERVICE; WON FIRST PRIZE AT MARKHAM FALL FAIR; HAVE ALSO SEVERAL HEIFERS. Write, or come and see.

JOHN MILLER, Markham, Ontario.

A Splendid Lot

of young Shorthorn females, in calf to the grand young Scotch pedigreed Shorthorn bull, Perfection's Hero = 20381 =, a grandson of Old Lovely 19th (Imp.), at extremely low prices.

Wm. Rivers, WALKERTON, ONT.

Springhill Farm,

SIMMONS & QUIRIE.

Shorthorn Cattle, Berkshire Swine—Money-making Sorts.

The matchless bull, ROYAL SAXON = 10537 = (by Imp. Excelsior), 1st at Toronto, 1894, heads the herd, with BARMPTON M. = 18240 =, 1st, Toronto, 1895, by Barmpton Hero = 324 =, in reserve. Female representatives of the celebrated Mins, Strathallan, Golden Drop and Mysie families.

The Berkshires are choice prize-winning stock. Easy to feed, quick to sell.

Stock for Sale. C. M. SIMMONS, Ivan P.O., Ont. 1-1-y-om

JAMES QUIRIE, Delaware, Ont.

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Breeder of Scotch Shorthorns and Southdown Sheep.

For Sale. Shorthorns

A fine 18-months old Bull; Heifers giving milk and younger ones. Also Fruit Farm, at Clarkson, 16 miles west of Toronto. Fifty acres of land, good house and outbuildings, 425 apple trees, 500 pear trees and other fruit. Possession immediately. Apply to

C. G. Davis,

17-1-y-om FREEMAN P. O., ONTARIO.

Shorthorns, Shropshires, and Berkshires.

Six young Bulls from 10 to 14 months old; 25 Shropshire Ewes, one, two and three years old, due to lamb in March; 15 ram and 20 sows lambs. Twenty Berkshire Sows, from 5 to 12 months old, several of them due to farrow in March, April, and May. The above choice stock are all registered, and FOR SALE at GREAT BARGAINS. 15-y-om

W. G. Pettit, Freeman P. O., Burlington Stn., G.T.R.

CARGILL HERD OF SHORTHORNS.

Have some good show material in Heifer Calves, also some grand Canadian-bred Cows and Heifers for sale. Write for catalogue. **H. CARGILL & SON,** CARGILL, ONT. 11-y-om

Ten Shorthorn Bulls

FOR SALE.

Of good quality and breeding. Prices to suit the times. **W. R. BOWMAN,** Mt. Forest. 13-1-y-om

HAWTHORN HERD OF DEEP MILKING SHORTHORNS.

FOR SALE—Several Heifers, got by the Golden Drop bull, Golden Nugget = 17548 =, by imported General Booth, and from AI dairy cows. **WILLIAM GRANGER & SON,** 13-y-om Londesboro, Ont.

AMPLE SHADE STOCK FARM.

FOR SALE THIS MONTH:

LEICESTERS—Three two-shear rams, two shearing rams; registered and fitted ready for the show-ring. Also a number of excellent Shorthorn bull and heifer calves in good form. **E. GAUNT & SONS,** St. Helen's, Ont. 13-1-y-om

"Gem Holstein Herd."

NAP! \$75.00 CASH

Sir Archibald Mascot, No. 353, C.H.F. H. B., 4 years old 8th of October, 1895; was never sick a day; is very active, and a splendid stock getter, and is in every respect a first quality bull. We have used him as our stock bull with the very best results. Only part with him to change breeding. He was a prize winner three years in succession at Toronto Industrial Exhibition.

HILLIS BROTHERS, BEDFORD PARK P.O., ONT.

Shipping Station, Toronto. 7-y-om

HOLSTEINS!

WE now offer young stock that have won prizes, and calves from our show herd, from one month to one year old, whose dams have large records—any age or sex—FOR SALE at very low prices to quick buyers. Also some Poland-China Pigs, 1 and 6 months old; same quality (the best).

A. & G. RICE,

Brookbank Stock Farms, CURRIE'S CROSSING, Oxford Co., Ont. 18-y-om

MAPLE HILL HOLSTEIN-FRIESIANS.

FOR SALE—Yearling Bull, Sir Aaggie Barrington; fine dairy form, good color, and in good condition. His grandam, imp. Kastje DeBoer, is now making, in my herd, from 2 1/2 to 3 lbs. of butter per day, at 12 years old. The bull resembles her very much in form and markings. Price, \$40.00. 11-y-om

G. W. CLEMONS, St. George, Ont.

HOLSTEINS

None but the best are kept at

BROCKHOLME FARM, ANCASTER, ONT.

Write me for prices if you want first-class stock at moderate figures. Holsteins in the advanced registry. Yorkshires all recorded. 12-y-om

R. S. STEVENSON, Prop.

Springbrook Stock Farm.

HOLSTEIN-FRIESIAN CATTLE and TAMWORTH SWINE. Four extra choice, rich-bred bulls ready for service. Write at once for bargains. Other stock for sale of best quality. A heavy stock of Tamworths on hand, bred from imported stock. 7-1-j-om

A. C. HALLMAN, New Dundee, Ont.

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Four good two-year-olds, four yearlings, and a few good bull calves. The above stock are descended from imported cows, and will be sold at a bargain. Write for prices. 5-1-f-0

JNO. McCULLOUGH, Deseronto, Ont.

HOLSTEIN-FRIESIANS FOR SALE.

A few good young Bulls and Heifers of choicest breeding, being from imp. Cows from the famous herd of B. B. Lord & Son, N. Y., or directly descended therefrom. Address

JNO. TREMAIN, Forest, Ont. 3-1-yo

The Western Fair

LONDON, ONTARIO.

SEPTEMBER
10th TO 19th
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Canada's Favorite Live Stock and Agricultural Exhibition. Oldest Fair in Canada. Established 1868. Buyers and sellers find this the Live Stock Market of the Dominion. Exhibitors find it pays them to show here. Entries close September 9th.

OUR NEW BUILDINGS are the best on the Continent. The entire exhibition under cover, and will accommodate the crowd, rain or shine. Come and see them. Every pure breed in Canada will be represented. There will be between 400 and 500 horses in our barns. Cattle, Sheep, and Swine building perfect, light and ventilation being particularly good; accommodate about 2,000 animals. Poultry building new, improved, enlarged; none better.

Carriage building is a beauty, large, no posts, splendid light. Machinery and Agricultural Implement buildings "A 1." Exhibitors suited to a dot. Centrally located, and enlarged. Water, feed, and sleeping bunks perfectly arranged. Special invitation to all, especially the farmers and those interested in live stock, machinery, and agricultural pursuits. A sight of the new buildings will well repay a visit to the Fair. Send for Prize List and make your entries.

CAPT. A. W. PORTE,
President.

THOS. A. BROWNE,
Secretary.

Central Canada Exhibition Association

NINTH ANNUAL EXHIBITION AT **OTTAWA,**
September 17th to 26th
ENTRIES CLOSE MONDAY, 14TH SEPT.

\$14,500 offered in prizes, besides a list of "specials," including twenty-seven gold medals, silver and bronze medals, and special cash prizes.

Grounds and Buildings.
Over \$40,000 expended since last Exhibition in the erection of new buildings for all classes of live stock.

The new stables for horses, cattle, sheep, and swine are constructed on the latest and most modern principles. New half-mile track; new and enlarged carriage building; grandstand seating accommodation increased to 8,000, and arranged to load from rear with turnstile system; machinery hall capacity doubled; new art gallery; main building enlarged, with new addition for stove exhibit in connection. All the buildings have been overhauled, enlarged, and made more attractive. The live stock prizes, including poultry, have all been increased. Special attractions will be of the very best, and excel all previous efforts in this direction.

EVENING ENTERTAINMENTS.—Magnificent Spectacular Drama, "Siege of Algiers," and fireworks display each evening from 19th Sept. till close of the Exhibition.

For prize lists and all information, apply to **WM. HUTCHISON,** 14-d-o President, or **E. McMAHON,** Sec., Ottawa, Ont.

FAIR OR EXHIBITION OF FAIR CHROMOS in striking colors—attractionive stock designs. They cost but little more than cheap printed bills, and draw the crowd. Fair Diplomas cost but little, and are more highly appreciated than cash prizes. Orders filled by return Express.

THE LONDON PRINTING AND LITHO. CO. (Ltd.)
LITHOGRAPHERS AND PRINTERS, LONDON, ONT.

WM. WYLIE, 223 Beury St., MONTREAL, or Howick, P.Q.

Breeder of high-class **AYRSHIRES.** Young stock always for sale; bred from the choicest strains procurable. Breeding stock selected from the most fashionable strains and prize-winning stock of the day. Farm located at Howick, Que. 5-1-y-o



Ayrshires!

PURE-BRED, of different ages, and both sex. No inferior animals. Write for particulars.

A. McCallum & Son,
Spruce Hill Dairy Farm, DANVILLE, QUE. 22-y-o

J. YUILL & SONS,
MEADOWSIDE FARM, CARLETON PLACE, ONT.

We have a few young Ayrshire bulls left—2 two-year-olds, 1 yearling, and a fine lot of calves of both sex; also Shropshire sheep and Berkshire pigs; pairs not akin for sale. Visitors met at Queen's Hotel. Give us a call before buying. 20-y-o



OUR COUNTRY'S PRIDE.
UP-TO-DATE — ALWAYS ATTRACTIVE.

CANADA'S GREAT Industrial Fair

Toronto,

August 31st to September 12th,
1896.

THE LARGEST PRIZE LIST IN THE DOMINION.
CLASSES TO SUIT EVERYONE.

ENTRIES CLOSE AUGUST 8th.

BIG ATTRACTIONS. NEW FEATURES. FINE RACES. GRAND SPECTACULAR PRODUCTIONS. THE NEWEST INVENTIONS. SOMETHING TO INTEREST EVERYONE. MAGNIFICENT FIREWORKS DISPLAY, ETC., ETC., ETC.

The Greatest Holiday Event of the Year.

FOR PRIZE LISTS, ETC., ADDRESS:

J. J. WITHROW,
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H. J. HILL,
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Dominion Prize Herd of Ayrshires

We have the oldest established, largest and best herd of Ayrshires in Canada. Choice young stock for sale at liberal prices. Satisfaction guaranteed.

JAMES DRUMMOND & SONS,
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DRS. ANDERSON & BATES, Surgeons of the Eye, Ear, Throat & Nose, 34 North James St., Hamilton, and 5 College St., Toronto. Sole agents for Prof. North's Earphone for the incurable deaf. A large assortment of artificial eyes on hand. 16-2-y-o



AYRSHIRE CATTLE

The bull **TOM BROWN** and the heifer **White Floss**, winners of sweepstakes at World's Fair, were bred from this herd. Young stock for sale. Also Leicester Sheep and Berkshire Swine. 5-1-y-o



DAVID BENNING,
Glenhurst Farm, WILLIAMSTOWN, ONT.

WM. STEWART & SON,

Breeders of high-class Ayrshire cattle; choice young stock of either sex and any age always on hand. Our herd contains a number of Columbian winners. 21-1-y-o

NOTICES.

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

The Tie Co., Unadilla, N. Y., have forwarded us a specimen of their ingenious and simple contrivance (advertised in this issue) for use in binding corn. It is a piece of steel wire attached to the end of a strong cord, so bent that when the cord is drawn around the shock or any other article to be bound, and slipped into a groove, it is automatically fastened, while a jerk will untie it. It is furnished very cheaply. We commend it to the notice of our readers.

A WHEEL, CHEAP.

Persons waiting for the price of bicycles to drop before buying need wait no longer, as the time is fully ripe to invest in order to get prime value, as a strictly high-grade wheel can now be purchased at the price of a cheap article. Mr. Hyslop, sen. member of the firm of Hyslop, Son & McBurney, Toronto, is retiring from business, and as a consequence it has become necessary to dispose of the balance of their stock at the following low prices:—High-grade Fleets, original price \$75, now \$49; High-grade Regents, original price \$85, now \$59; Highest of High-grade Hyslops, original price \$100, now \$79. We should strongly recommend our many friends who may be in need of a good bicycle to correspond with this firm. Several members of the Farmer's Advocate staff have used wheels from this establishment, and in heavy road work found them most serviceable.

BOOK TABLE.

The Horticultural Society of Missouri have in their 1895 report issued a valuable work upon horticulture—valuable because it contains many practical hints and papers by specialists from which amateur or professional can learn valuable lessons. The work is illustrated, well printed and bound. The Secretary of the Society is Mr. T. A. Goodman, of Westport, Mo., who is an able-looking man, as is shown by his photograph, published in the report.

Vol. 40 of the American Shorthorn Herd Book is ready for delivery. It is the largest number since Vol. 35; 1,035 pages of pedigrees, 1,154 pages in all. It contains the pedigrees of 3,694 bulls and 8,315 cows, a total of 12,212, bringing the number of recorded bulls in A. H. B. up to 121,683, and of females up to 208,726, a grand total of 330,409; being very much the largest number in any herd book ever published. It will be sent by Sec'y J. H. Pickrell, Springfield, Ill., to stockholders free, to others at \$3. The postage or express is 32 cents, which must be sent if ordered by mail.



HAVE NOW **3 Young Ayrshire Bulls,** ON HAND 1, 2 and 3 years old, respectively; all prize-winners; the 3-year-old having won 1st at leading exhibitions. Write: 19-y-o
MESSRS. ROBERTSON & NESS, Howick, Que.

Maple Cliff Stock & Dairy Farm

Ayrshire Cattle, Berkshire and Tamworth Swine.

FOR SALE.—Four Ayrshire bulls of different ages, sons of such noted animals as Nellie Osborne 5358, and Gold King 1382. They are good ones. Write for prices.

R. REID & CO., Hintonburg, Ont.
One mile from Ottawa.

DANIEL DRUMMOND

BURNSIDE FARM, PETITE COTE, Montreal, Quebec.
BREEDER OF AYRSHIRE CATTLE.
16-2-y-o

A Good Furnace.

For the benefit of any of our subscribers who are contemplating placing a furnace in their homes, we give below a description of the Famous Magnet wood furnace, made by the McClary Mfg. Co., of London, Ont., and shown in our advertising columns. This company have now had an experience of over fifty years in stove and furnace making, so that any stove or furnace made by them can be relied upon to embody every feature that is up-to-date and give satisfactory results. As a proof of the merits of the Famous Magnet, they were first made three years ago in two sizes, but are now made in eight sizes, suitable for any size building. During the first season 300 were sold, and their popularity became so widely known that the sales increased to nearly 1,000 furnaces last season, an increase of nearly 700 in two seasons.

A condensed description of the furnace is as follows:—

"The fire box is made in two sections, with grooved joints bolted together, every 5 1/2 inches, combining great strength, and forming a large radiating surface, corrugated in form, and thus brought in closest contact with the fire at all points, giving ample provision for expansion and contraction without danger of cracking. The Radiator tubes are made of 14 gauge sheet steel with heavy cast heads and elbows; all bolts are on outside, thus avoiding all possibility of burning out or interfering with draft by the lodging of deposits around them, as in various old forms of radiators. A brush supplied with each furnace admits of the instant cleaning of any flue, the deposit dropping into the fire box without trouble or chance of dust. A heavy Cast-Iron Damper is so arranged as to instantly give a direct or indirect draft. The indispensable features in the good working of a wood furnace, viz., the changing of the draft and cleaning of the flues, are all done from the front. These advantages are inestimable, as anyone who has handled the old style of furnace will at once admit. Heavy Horizontal Grates are used, made in sections, and can be easily set in position through the front door. The Elbows and Direct Flue of Radiator are made in parts (bolted together on the outside) so as to prevent danger of cracking from expansion. Has very large feed door with lining and swivel slide, obviating any danger from sparks. Capacious ash pit. Damper of ash pit door is hinged to raise by chain from floor above. The low setting that may be had with this furnace makes it specially valuable in shallow excavations."

A catalogue giving valuable information will be gladly mailed to any who desire it; or, particulars can be had from their agents in every town or city in Canada.

Prince of Wales' Stock at Auction.

The sale of Shorthorn cattle and Southdown sheep bred by the Prince of Wales at Sandringham was a brilliant success. The average for forty-nine Shorthorns was £70 2s. 10d., as compared with £32 10s. 6d. in 1893, £42 6s. 2d. in 1891, and £51 8s. 8d. in 1889, the last having been the highest average previously obtained at any of the Sandringham sales of Shorthorns. The bidding throughout was most spirited. The highest price for cows or heifers was 900 gs., given by Lord Crews for Fair Maid; Mr. C. J. Bates paid 175 gs. for York Rose; while high prices were also given by Sir Jacob Wilson (purchasing for Mr. Hooley) and Sir Oswald Mosley. The bulls were in great demand for South America, for which the "Royal" winner, had been sold at 1,000 gs. at Leicester. Mr. MacLennan gave 170 gs. for Filibuster, and 155 gs. for Avalanche, one of the best of the bulls; very thick-fleshed, and, except for his color, as good as Celt. He won the Shorthorn Society's prize at the Norfolk County Show. Lord Feversham retained Scottish Duke in this country at 150 gs., and Lord Crews secured Cupbearer for 110 gs. Mr. Bossio bought several bulls for South America at good prices. The Southdowns also sold well, Mr. Garrett Taylor (for Mr. J. J. Colman) giving £10 each for a pen of ewes, while Sir James Blyth purchased a shearing ram for 92 gs.

GOSSIP.

Mr. F. E. Dowley, of Syracuse, N.Y., has been appointed State Director of Farmers' Institutes.

Incensed at the continuance of toll gates, parties in Essex and Frontenac Counties, Ont., recently unwisely took the law into their own hands. On the night of July 21st, three were burned down in the former county.

The Scottish Farmer of a recent date announces the death of Mr. James Galbraith, the youngest son of the late Mr. Alex. Galbraith, of Croy-Cunningham, Killarn, who passed away at the early age of thirty-nine years, from Bright's disease. In partnership with his brother Archie (composing the firm of Galbraith Bros., Janesville, Wis.), a large business was done in the exportation of horses from Scotland to America in the palmy days of horse breeding.

It has been announced in the British House of Commons that Sir Herbert Maxwell, Bart., M. P. for Wigan, will preside over the Royal Commission to inquire into the question of tuberculosis in cattle, and that the other Commissioners will be Professor Browne, of the Veterinary Department of the Board of Trade; Dr. Thorne, Local Government Board; Dr. Shirley Murphy, medical officer of the London County Council; Mr. H. E. Clare, the town clerk of Liverpool; Mr. T. C. French; and Mr. John Spier.

MEADOWBROOK JERSEYS.

EDGAR SILCOX, Shedden, Ont. Two grand young BULLS FOR SALE. Foundation stock from the herds of Mrs. E. M. Jones, George Smith & Son, and Reburne, of St. Anne's. 21-1-y-o

A.J.C.C. FOR SALE. Heifer calf, 21 months old, solid light fawn. Bull calf, 3 months old, dark fawn, little white on switch and hind legs. Price, \$60 for pair. Express prepaid. H. E. WILLIAMS, Sunny Lea Farm, 17-1-y-o KNOWLTON, P.Q.

Champion Hackney Stallion, "Royal Standard." Champion Clydesdale Stallion, "The Royal Standard."



We have a number of first-class mares and fillies, of both breeds, in foal to the above stallions. We also have for sale a number of other choice Clydesdale stallions, Standard-bred and Thoroughbreds.

GRAHAM BROS.,

Claremont, Ontario. 25 miles east of Toronto, on C. P. R. 4-11-0m

ISALEIGH GRANGE STOCK FARM, DANVILLE, QUEBEC.



A CHOICE assortment of the following pure-bred stock always on hand: Ayrshire and Guernsey Cattle of the choicest breeding and most fashionable type and color. High-class Improved Large Yorkshires of all ages, "Sanders Spencer stock." Shropshires of the finest quality. Our breeding stock has been selected, at great cost, from the choicest herds and flocks of both England and Canada, and have been very successful winners in all leading show rings, or in car lots, at the lowest prices. Prompt attention given to all correspondence. 9-y-om

J. N. GREENSHIELDS, Proprietor. T. D. McALLUM, Manager, Danville, Que.

For Sale Cheap, That grand Ayrshire "HEATHER JOCK" — 1212 —



Stock Bull, Bred by D. Morton & Son, Hamilton; sire Royal Chief (Imp.) — 75 — (1647), dam Primrose (Imp.) — 1205 — (5507). This bull has proven a sure stock getter and can be purchased at a bargain if taken at once. Having a number of his progeny at breeding age, we cannot use him. Speak quick if you want a bargain. We have also some choice young Yorkshire Sows of breeding age from the stock of J. E. Brethour. Correspondence a pleasure. 9-y-om

A. & H. FOREMAN, Collingwood, Ont.

Alex. Hume & Co., Importers and Breeders.

Ayrshire Bull Calves, from three to five months old, fit to go into any show-ring. Yorkshire Pigs—March litters, June litters, July litters; all are extra ones—lengthy, smooth, and choice breeding. We offer this stock cheaper than ever. If you don't believe it, write us. N. B.—Will give time on good security. See stock notes. 5-1-y-o Telephone and Station—Hoard's, G.T.R. Burnbrae P.O.

LAST CHANCE

To obtain a young JERSEY BULL from the famous Belvedere herd. As my whole herd now goes to Prince Edward Island, I have reserved for my customers

Six Splendid Young Bulls

Four months to eighteen months old. Sure prize-winners. Reasonable prices to immediate buyers. These are the best I have ever offered.

MRS. E. M. JONES, Box 324, BROCKVILLE, Ont., CAN.

W. F. BACON, Orillia, - Ontario, - BREEDER OF -

CHOICE REGISTERED JERSEYS. Young bulls and heifers of the best blood for sale. Write me for prices and particulars. 19-1-y-om

MAPLE CITY HERD JERSEYS.

For Sale.—Bull dropped July 20th, 1895; solid color, black points; sire Massena's Son 17608, dam Lady Lill 66164. Bull dropped Aug. 23rd, 1895; solid color, black points; sire Massena's Son 17608 (whose dam made 902 lbs. 3 ozs. of butter in one year), dam Forest Fern. 3-1-y-o WM. W. EVERETT, Box 552, Chatham, Ont

The Don Herd of Jerseys

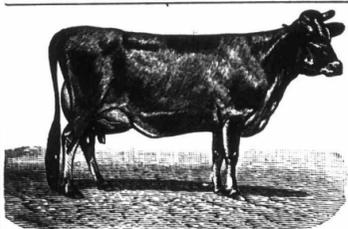
Comprise the choicest strains obtainable, including St. Lambert, Tennessee and combination blood. Am now offering a few very choice bull calves from imp. and home-bred dams, and sires of best breeding obtainable. Address: DAVID DUNCAN, 9-1-y-om DON P. O., ONT.

Jersey Sale!

The entire herd of A. J. C. C. H. R. Lee Farm Jerseys. Forty head of reg. bulls, cows, heifers, and calves; same number of high-grade cows and heifers. Excellent chance to start a herd cheap, as they must be sold within the next 90 days. Come and see, or write E. PHELPS BALL, Lee Farm, Rock Island, P. Q. 17-y-o

The Etrick Herd of Jerseys.

MESSRS. HUMPIDGE & LAIDLAW, LONDON, ONT. Proprietors, Herd comprises 35 head of High-class Stock. We are now offering several exceptionally fine young bulls, including grand bull calves and yearlings out of Prince Frank 33972; also a very fine two-year-old bull, and choice heifers. Nothing but choicest quality kept. Can supply show stock. Prices right. Write for particulars. 13-1-y-om



JERSEYS FOR SALE.—Young Cows and Heifers in calf, Heifer Calves and Bull Calves, richly bred, best testing strains, and good color. Also first-class Berkshire Boars and Sows, bred straight from imported stock. Come and see or write for prices. J. C. SNELL, - Snelgrove P.O., Ont. R. R. Station, Brampton, G. T. R., and C. P. R. 8-y-om

JERSEYS!

A NUMBER OF CHOICE YOUNG COWS FROM TWO TO FIVE YEARS OLD—PURE-BREDS AND GRADES, GOOD COLORS, AND ARE VERY RICH, DEEP MILKERS; QUIET AND DOCLIE. FOR DESCRIPTION AND PRICES, WRITE TO W. C. SHEARER, Bright, Ontario.

GLEN ROUGE JERSEYS.

WILLIAM ROLPH, Markham, Ont., offers twelve Jersey Bulls and Heifers (pure St. Lambert), out of tested cows. Grand individuals. Prices right. 21-y-om

GUERNSEYS

This is the Dairy breed for ordinary farmers. Large, vigorous and hardy, giving plenty of rich milk. Several fine yearling bulls and bull calves for sale at farmers' prices. A few heifers can be spared. Address: SYDNEY FISHER, Alva Farm, Knowlton, P.Q.

Ingleside Herefords. UP-TO-DATE HERD OF CANADA!

Bull Calves OF THE RIGHT SORT For Sale.

Address—H. D. Smith, INGLESIDE FARM, Compton, Que. 17-y-om



Dana's Ear Labels for sheep, cattle, etc. Stamped with any name or address and consecutive numbers. This is the genuine label, used by all the leading record associations and breeders. Samples free. Agents wanted. C. H. DANA, 6-1-0m West Lebanon, N. Hamp.

HILL HOME SHROPSHIRE

We have for sale shearing rams of exceptional merit; ram and ewe lambs of choicest quality and covering, sired by Tinker, a winner at New York and London and now heading our exhibition flock of '96, and an imp. Parker ram. Can also furnish grand show pens, right. Lambs from this flock won all specials offered at Toronto, London, New York, Guelph, and ten county fairs in 1895. Parties wishing stock of extra quality should visit this flock before purchasing elsewhere. 14-L-0 D. C. Manmer & Sons, Mt. Vernon, Ont.

"Best Quality with Greatest Quantity"

STILL THE MOTTO AT MAPLE SHADE.

OUR Shropshire lambs are not numerous, but they are of good quality and good size. We still have left also a few strong, smooth, home-bred yearlings of good breeding and character. Our

Shorthorn Calves are developing finely, asteric quality and thick flesh of the typical Cruickshank Shorthorn. Prices moderate; if you doubt it, write and believe. Address—JOHN DRYDEN, Brooklin. (30 miles east of Toronto.) 16-2-g-om

Henry Arkell, ARKELL P. O., ONT.

Pioneer importer and breeder of registered Oxford-Down sheep. Won many honors at World's Fair. Animals of all ages and sexes for sale reasonable at all times. 9-y-om

To Stockmen & Breeders.

LITTLE'S PATENT FLUID NON-POISONOUS SHEEP DIP AND CATTLE WASH.

For the destruction of Ticks, 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. JOHN DRYDEN.

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 WIGHTMAN, DRUGGIST, OWEN SOUND, Ont. Sole Agent for the Dominion. 7-1-y-om

SHEEP BREEDERS' ASSOCIATIONS.

American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER LEVERING, Sec., Lafayette, Indiana. 3-1-y-om



YORKSHIRE PIGS Of the best type and breeding. Pairs not taken for sale at all seasons. J. M. HURLEY & SON, Belleville, Ont. Box 448.

ADVERTISE IN THE ADVOCATE

GOSSIP.

ST. ANNE DE BELLEVUE JERSEYS.
As the readers of the FARMER'S ADVOCATE will notice, by an advertisement elsewhere, the celebrated St. Anne's herd is to be sold without reserve. In 1871 Mr. Reburn laid its foundation with stock purchased from Mr. Romeo Stephen, the founder of that world-renowned family of Jerseys, the St. Lamberts. Lady Fawn was his first purchase. She turned out to be a wonderful cow, testing in her fifteenth year over sixteen pounds of butter per week. "But could it be otherwise," writes Mr. Reburn, "when her sire was the noted Victor Hugo, and her dam Lisette—animals whose names appear in nearly every pedigree of the great St. Lamberts?" A later purchase was Jolie of St. Lambert, a phenomenal cow; she was purchased just before the St. Lambert boom started, and when testing her on feed that would be now called "starvation rations," she milked 48 lbs. milk per day, making over 17 lbs. butter per week. Fifteen hundred dollars was refused for her. When public tests were started, Jolie was amongst the first to compete for winning laurels to the Jerseys. At Toronto, in 1888, she won first as best milk, butter, and cheese cow, beating one of the celebrated cows from "Oaklawn" that had just won a similar test at London. Jolie gave twenty per cent. more butter and 33 per cent. more cheese curd in the twenty-four hours than the second prize cow. She was not again exhibited until 1888, when she competed for this prize at Kingston. Fourteen cows entered. Among them were some that had several times won similar prizes; one, a Devon—Rose of Cobourg—had for two years previous taken every dairy prize offered. Still Jolie came out victorious. Not only did she lead, but her score—113 points—was the highest ever reached in a like test. At this show she swept everything before her, winning two silver medals, a diploma, and first prize (in four separate classes); she was ably seconded by her daughter, Jolie of St. Lambert 3rd, who had the year before, at Quebec, won this prize over cows from the Ayrshire herds of Messrs. Brown and Drummond. But it was through her daughters—when they competed for the special prize offered by the FARMER'S ADVOCATE for the three best cows, of any breed, showing the greatest profit from food consumed—that Jolie proved her wonderful dairy qualities and her rare ability of transmitting them to her offspring. Jolies of St. Lambert 3rd, 4th, 5th, all by different sires, won with a profit of 132 per cent. This was far ahead of the like test in 1889, which the Jerseys won with 47 per cent. profit; the Ayrshires showing 14. Unfortunately, Jolie of St. Lambert 3rd died a few years ago, of milk fever, but Jolie 4th has for a number of years stood first whenever exhibited, and holds more 1st prizes, diplomas, and medals than any other Canadian cow. Jolie 3rd had only one daughter, and she bids fair to uphold her dam's great reputation. Three times shown and each time she won the red ticket. Among the old breeding cows may be found Dora and Juliet of St. Anne's, granddaughters of Lady Fawn; Queen Bess and Gypsy Hugo, bred by Victor Hugo's Pet of St. Lambert, 3rd and 4th daughters of Pet of St. Lambert, who, with her two sisters, were dams of the greatest St. Lambert cows, viz.: Ida of St. Lambert, 30 lbs.; Allie of St. Lambert, 26 lbs.; Oakland's Nora, 25 lbs., who, by the way, was sold out of this herd. All the females are descended from these famous cows: Jolie of St. Lambert, Lady Fawn of St. Anne, Pet of St. Lambert, and Hebe of St. Lambert; and are sired by such bulls as Romeo of St. Lambert, 50 per cent. Stoke Pogis 3rd and almost full brother to Mary Ann of St. Lambert; Orloff's Stoke Pogis, by that great son of Lord Lisgar Orloff, and out of Cheerful of St. Lambert, one of Stoke Pogis 3rd's best daughters, who tested over 20 lbs. and her daughter over 22 lbs. Hebe's Victor Hugo, a pure Victor Hugo, was also used for a number of years; his sire, Lorne, was purchased by T. S. Cooper, who bred his great cow, Marjoram 2nd, to him, which turned out successfully, as she produced daughters that tested over 25 lbs. Among the leading bulls to be sold are Jolie of St. Lambert's 3rd son, by Lord Lisgar of St. Anne's, full brother to Jolie 4th. This bull has produced some wonderful dairy stock, his daughters having won first prizes at all the principal fairs. Lady Fawn of St. Anne's son is another great bull; his full brother was sold by Mr. Reburn at a high figure, and for a great number of years headed the herd of Sheriff Tappen, Troy. Victor Hugo of St. Anne's and Hebe's Victor Hugo 2nd, two full brothers, are also in service in this herd; they have several times won first prizes and diplomas for the best Jersey bull of any age, and are the only bulls living having 50 per cent. Victor Hugo blood. It is needless to add that in the show-ring this herd has always stood in the front rank. The number of gold and silver medals, diplomas, and hundreds of prizes won by them is sufficient proof of this, but the greatest honor of all is that Mr. Reburn was not only the owner of the successful winners, but the breeder also—an honor that could seldom be claimed by the other exhibitors.

Canadian Fairs.

| PLACE. | DATE. |
|---|--------------------------|
| Stanstead, Que. | Aug. 19th and 20th. |
| Sherbrooke, Que. | Aug. 31st to Sept. 5th. |
| Toronto, Ont. | Aug. 31st to Sept. 12th. |
| London, Ont. | Sept. 10th to 19th. |
| Montreal, Que. | Sept. 10th to 19th. |
| Guelph, Ont. | Sept. 15th to 17th. |
| Owen Sound, Ont. | Sept. 15th to 17th. |
| Belleville, Ont. | Sept. 15th to 18th. |
| Renfrew, Ont. | Sept. 17th and 18th. |
| Ottawa, Ont. | Sept. 17th to 26th. |
| Peterborough, Ont. | Sept. 21st to 23rd. |
| Goderich, Ont. | Sept. 22nd to 24th. |
| Strathroy, Ont. | Sept. 23rd to 25th. |
| Woodstock, Ont. | Sept. 24th and 25th. |
| Whitby, Ont. | Sept. 28th to 30th. |
| Tilsonburg, Ont. | Sept. 29th and 30th. |
| Chatham, Ont. | Sept. 29th to Oct. 1st. |
| Markham, Ont. | Sept. 30th to Oct. 2nd. |
| Stratford, Ont. | Oct. 1st and 2nd. |
| Walkerton, Ont. | Oct. 1st to 3rd. |
| Paris, Ont. | Oct. 6th and 7th. |
| St. Thomas, Ont. | Oct. 6th to 8th. |
| Truro, N. S. (Eastern Division), | Sept. 21 to 25. |
| New Westminster, B. C. (Oct. 6th to 10th. | |
| Yarmouth, N. S. (Western Division), | Sept. 30, Oct. 1 and 2. |

THE "WHITE" PORTABLE AND TRACTION ENGINES.

Geo. White & Sons, LONDON, ONTARIO,

INVITE the most thorough and severe inspection, comparison, and test of their Traction and Portable Engines, both of which have proved in actual work that they are unequalled. We simply ask you to judge by their record, and actual facts.



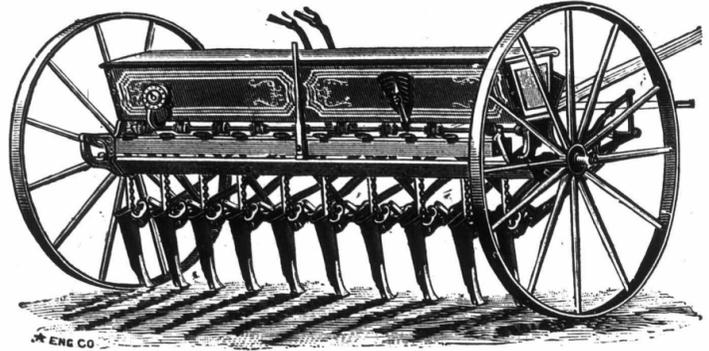
A COMPLETE STOCK OF ENGINES AT LOW FIGURES, SUITABLE FOR FARMER'S OWN USE, ALWAYS ON HAND.

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The Ontario Agricultural College will reopen on the 1st OCTOBER. Full courses of Lectures, with practical instruction in Agriculture, Live Stock, Dairying, Horticulture, Poultry, Bee-keeping, Veterinary Science, Chemistry, Geology, Botany, Entomology, Bacteriology, English, Mathematics, Book-keeping, and Political Economy.

Send for Circular, giving terms of admission, course of study, cost, etc. JAS. MILLS, M. A., President, Guelph, Ont.

STEEL HOOSIER DRILL!



There is a best in everything. In Drills, it is the Hoosier. NOXON BROS. MFG. CO., Ltd., INGERSOLL, ONTARIO.

USE Queenston Cement

FOR BUILDING... STABLE, SILO, AND OTHER WALLS, CISTERNS, STABLE FLOORS, HOG TROUGH, ETC.

As the building season has commenced, all parties using our cement, and where its use is not understood, kindly give us about ten days' notice and we will come or send an expert at our own expense. We shall be behind our orders this year; on this account order cement two or three weeks before you want to use it.

SEND FOR OUR NEW PAMPHLET CONTAINING FULL INSTRUCTIONS, FREE. For prices of Cement and other particulars, apply, ISAAC USHER & SON, Thorold, Ont.



A Perfect Wood Furnace

OUR "Famous Magnet"

Made in 8 sizes, using 3, 4 and 5 feet wood. Will heat from 10,000 to 100,000 cubic feet. Very strong fire box. Large feed door. Extra heavy steel flues with cast heads, which are very easily cleaned. Instant direct or indirect draft. ALL OPERATIONS FROM FRONT OF FURNACE.

You can keep your house warm from cellar to garret, and do it cheaply.

HIGHEST TESTIMONIALS FROM ALL DEALERS AND USERS.

The McClary Mfg. Co., (London, Toronto, Montreal, Winnipeg, and Vancouver.) If your local dealer cannot supply, write our nearest house.

Summit Farm DUROC-JERSEY SWINE

Herd of . I have a few choice young sows still for sale, which I am offering cheap. Orders taken for spring pigs. Write for particulars to F. W. TERHUNE, Brantford, Ont.

DUROC-JERSEYS Choice young pigs bred from prize sows and imported boars now on hand at \$5.00 each with pedigrees. NUCH McCUTCHEON, Glencoe, Ont.

DUROC-JERSEY SWINE We have the best and greatest prize-winning herd in Canada. Write for what you want. We have everything. TAPE BROS., Ridgetown, Ont. 20-y-om

GIDEON SNYDER, Jr.

Jarvis, Ontario, Breeder and Importer of Ohio Improved Chester and Berkshire Swine. Also Brick and Tile manufacturer. Junction of Air Line and Hamilton & North-western Railway.

IMP. CHESTER WHITE and TAMWORTH SWINE. Having won the sweepstakes for the best boar and two sows at Toronto Exhibition of 1895, we are booking orders for spring pigs from imp. stock in pairs not akin. Stock for exhibition purposes a specialty. Pedigrees furnished. Reduced rates by express. Drop a card for prices before buying elsewhere. H. GEORGE & SONS, Crampton, Ont., Middlesex County, 7-y-om

SPECIAL OFFERING of Chester Whites. FOR APRIL. A large quantity to dispose of to make room. \$1.00 each. Male or female. Remember, this only lasts during April. JOS. CALINE, 3-1-y-0 CAMLACHIE, ONT.

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ILLUSTRATED CATALOGUE FREE
METALLIC ROOFING CO.
MANUFACTURERS, TORONTO

Eggs for Hatching
FROM SILVER WYANDOTTES (winners of silver medal at Toronto last fall) at \$1.25 per 13, and Pekin ducks, headed by 2nd prize drake at Toronto, \$1 per 11. J. E. MEYER, Kossuth, Ont.

Jacob B. Snider, German Mills, Ont., Breeder of choice Light and Dark Brahmas, Black Langshans, Plymouth Rocks, Golden Wyandottes, Black Minorcas, Red Cap and Indian Game. Eggs, \$1.25 per 13. Correspondence solicited. "Poultry Almanac" tells all about raising chickens, 10 cents. C. C. SHOEMAKER, Pub., Freeport, Ill.

ROCK FACED STONE SIDING
MADE OF STEEL
CHEAP AS WOOD
WRITE FOR CATALOGUE
THE PEDLAR METAL ROOFING CO
OSHAWA ONT.

THE EXCELSIOR LIFE INS. CO. Issues the best policies for PROTECTION AND INVESTMENT. The Company is foremost in features essential to success, and the security is unsurpassed. Agents wanted. E. F. CLARKE, President. 9-y-0

FARMERS
you can make money by selling and using **HOLDFAST Corn Binders**, used on every shock. Pull and it's fast. Ties itself. Costs less than string. Never wears out. Thousands and easily sold in a town. Good profits. Get your town agency now. Outfit 50c, stamps. TIE CO., 60 Yonge TORONTO, ONT.

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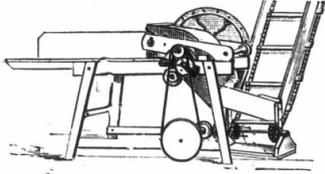


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Evaporates all kinds of fruits and vegetables. Made substantially of galvanized iron, and is fireproof. The best and most economical Evaporator on the market. A profitable investment for every farmer growing fruit. It bakes bread, pies, etc., and roasts meat, turkey, chicken, and game. Prices reasonable. Illustrated circular and full particulars on application to
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 84 Wellington St. 13-d-o MONTREAL, QUE.

THE RIPPER Feed and Ensilage Cutter

STOCK FEEDERS' FAVORITE MACHINE. As an ensilage and dry fodder cutter, away ahead of any other style of machine.



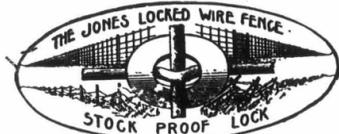
Hundreds of these Machines Sold.

SEND FOR TESTIMONIALS. Full information is yours for the asking. Manufacture also CONCAVE and CONVEX KNIFE MACHINES, TREAD POWERS, Etc. We aim to lead the trade in our special lines.

Thom's Implement Works
 WATFORD, ONT.
 Established 1875. 13-1-tf-o



The Improved **KNITTER** Family..... Will knit 15 pairs of socks a day. Will do all Knitting required in a family, homespun or factory yarn. **SIMPLEST KNITTER** on the Market. This is the one to use. A child can operate it. We guarantee every machine to do good work. We can furnish ribbing attachments. Agents wanted. Write for particulars. **Dundas Knitting Machine Co.,** Dundas, Ont. Price, \$8.00. 17-y-om



Read Its Advantages!

Our Fence contains all the claims made by other companies, besides having the following exclusive points:— Highest award at the World's Fair; more weight; more strength; heaviest stay; greatest supporting qualities; the only diagonal brace (secured in the lock); no remnants; repairing of old fences; equal strain on all wires over grades; requires less capital; can build high or low, close or open; accommodates itself to any condition. The "Missing Link," the Jones Flexible Clamp. Write for Catalogue. Agents wanted in unrepresented districts.

The LOCKED-WIRE FENCE CO. (Ltd.),
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CENTRAL PRISON... Binder Twine

PURE MANILLA, about 650 feet per lb., in lots of 50 lbs. . 8c.
 IMPERIAL, " 550 " " " 50 " . 7 1-2c.

Or in carloads, delivered to any point in Ontario south or east of Owen Sound:

PURE MANILLA, 7 1-2c.
 IMPERIAL, 7c.

In less than carloads (not less than 2,000 pounds), carload price, with car freight deducted from invoice. These twines are made from the best stock obtainable, and the process of manufacture has been so improved during the three years since the factory was established that it can be safely said there is no more profitable twine for the farmer in the market than the Central Prison Brands.

Apply **JOHN HALLAM,** 85 Front St. E., Toronto, SELLING AGENT, to... OR TO THE CONTRACTOR AT THE PRISON. 12-c-o

THE "WATERLOO" ENGINE

(LOCOMOTIVE AND RETURN FLUE BOILERS)

For Threshing and General Farm Use.



UNEXCELLED IN SIMPLICITY, DURABILITY AND FINISH.

POSITIVELY NO EQUAL IN POWER.

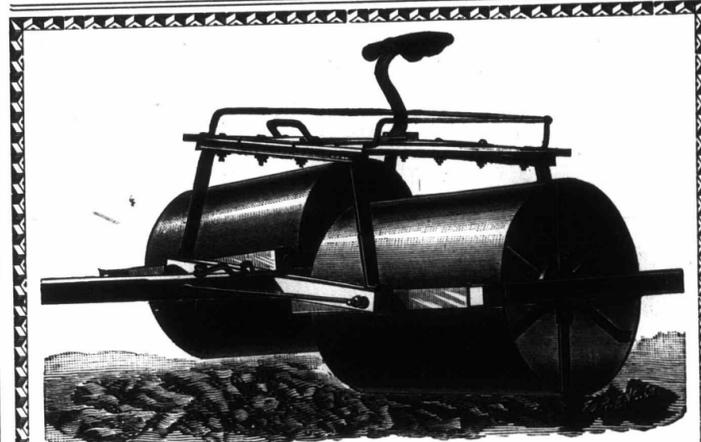
VERY ECONOMICAL IN FUEL AND WATER.

THE "CHAMPION" SEPARATOR

STEEL STRAW DECK. PERFECTLY COUNTERBALANCED. SIMPLE AND EASY RUNNING. WRITE FOR CATALOGUES AND PRICES.



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"The Dale Steel Land Roller is the strongest, heaviest, most durable and most economical roller for farming purposes at present made in the world." SEAFORTH, ONTARIO.

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FREEMAN BONE FERTILIZERS.

Wide-awake farmers and fruit growers make money by using Fertilizer.

It is a complete plant food. It is soluble in water and feeds the plant from start to finish. It will increase the yield of your crops and improve their quality. Ask for and use only Freeman's High Grade Bone Fertilizers.

The W. A. Freeman Co.,
 Limited,
 HAMILTON, ONTARIO.

(Send for Catalogue.) 3-n-o



ADVERTISE IN THE FARMER'S ADVOCATE.

Beet Sugar Notes.

Claus Spreckles, the millionaire sugar refiner of the Pacific coast, has decided that the manufacture of beetroot sugar can be established on a profitable basis. He proposes to establish a plant capable of manufacturing about 400 tons a day. He thinks that with irrigation, enough beet sugar can be produced on the Pacific Coast to supply the United States. His factory at Watsonville last year turned out 12,070 tons, and it was a bad year, too, the crop of beets on 12,000 acres being damaged by rain and warm weather in October to the extent of 150,000. Prof. Wickson, of the Government Station on Union Island, has produced 40 tons of beets to the acre, with a sugar content equal to that of Chino and Watsonville—one ton to 6 1/2 to 9 tons of beets. On an average, California beets produce one ton granulated sugar to 7.69 tons beets; Nebraska, one to 11.37; Utah, one to 13.07; Virginia, one to 13.88. A Watsonville paper reports that the beet tonnage handled in the season just closed was 142,000. The average yield was 16 tons per acre (25 to 35 in some cases). Contracts have been signed for 3,500 acres in Pajaro Valley, and it is expected that 3,000 acres will be planted in that and Salinas Valley and San Benito County.

The Demand for Shorthorns.

The report of the Council of the English Shorthorn Society is one of the most cheering documents which has emanated from that body for some years. The great demand for bulls in the early 'eighties was followed by a quiescent period. Of late there have been abundant signs of a sharpening enquiry for good bulls from South America, which hopes to enter into competition more keenly with North America in the future for the meat trade of Great Britain. The South Americans are finding it imperative, however, to improve the breeding of their stock, and are liberally patronizing British pure-bred herds therefor, paying high prices for bulls. The report referred to states that 435 pedigreed Shorthorns have been exported chiefly to Buenos Ayres. On a very much smaller scale, Sweden, Germany, France, and Africa have dipped into British breeding herds.

A Tent for Breeders at the Fairs.

Mr. Hy. Wade, Toronto, Registrar of Live Stock, writes us that he will have an office in the Provincial (Ont.) Government tent on the Fair Grounds at Toronto, London, and Ottawa, to accommodate breeders of pure-bred live stock in making registrations, etc.; a convenience that will doubtless be appreciated.

GOSSIP.

It is estimated that in South America about 600,000 head of beef cattle will be slaughtered this season than last.

Mr. Allan Pringle, the well-known bee-keeper, farmer, and writer, died at his home, Richmond Tp., Lennox County, Ont., on July 22nd, after a week's illness, resulting from sunstroke. He was born in Richmond Tp., 45 years ago, and studied medicine for a time, but abandoned it for bee-keeping and farming. He was prominently identified with the Ontario Bee-keepers Association, and had charge of the Provincial honey exhibit at the World's Fair. He had been a frequent contributor to the Apriary Department of the FARMER'S ADVOCATE.

THE BELVEDERE JERSEYS. Readers of the FARMER'S ADVOCATE throughout Canada and other countries regard the name of Mrs. E. M. Jones, of Brockville, as a household word in dairying. The herd of "Belvedere" Jerseys brought her continuing distinction, and justly so; while her admirable little volume, "Dairying for Profit; or, the Poor Man's Cow," attained a world-wide circulation. Her contributions to the FARMER'S ADVOCATE during recent years have been greatly prized. Her work has been a powerful aid to successful dairying. A few months ago we announced her intention to dispose of at least one-half of her herd, and the ADVOCATE for April 15th contained particulars of the sale of fourteen head to Mr. Benjamin Hartz, of Charlottetown, P. E. I., which Mrs. Jones herself fitly referred to as probably the most important sale of Jerseys ever made in Canada. A few months experience so well pleased Mr. Hartz that he recently returned and purchased the remaining thirty head, and made arrangements for their shipment to the Island. We are glad to know that the splendid Belvedere herd of Jerseys has not left Canada. Mr. Hartz is to be congratulated on his purchase, and if he but emulates the splendid success of the late distinguished lady owner, he will have done well. Handled as they doubtless will be, they should prove a boon and an immense stimulus to the dairy cattle breeding interests of the Maritime Provinces. Mrs. Jones has retained a few young animals as a small home herd to supply her own family; and a few choice young bulls, which she offers elsewhere.

NOTICE.

DRYING FRUIT.

The enormous amount of fruit to be disposed of this season will necessitate the drying of a great deal, especially apples. The old method of stringing or evaporating in screens above the kitchen stove is no longer profitable, as dark dried apples cannot be sold. Within the last few years fruit-evaporators have been brought to great perfection, and many are being used by farmers and fruit growers as well as fruit dealers. A most excellent sort of evaporator now before the public is the Champion Fruit Evaporator or Dryer manufactured by the G. H. Grimm Mfg. Co., 84 Wellington St., Montreal, P. Q. It is made in several dimensions, having capacities for drying from three to five bushels up to thirty bushels per day. All kinds of fruit is dried equally well. The Champion is easily portable, economical of fuel, fireproof, easily operated, and well put up of first-class material. They can be successfully used for baking bread, pies, or the like, or for roasting fowls or meats. They may also be used as a mouse and fly proof cupboard for bread, pies, meat, milk, and other provisions. The Grimm Co. also manufacture the Champion Evaporator for making maple and sorghum syrup, cider, and fruit syrups and jellies. See their advertisement.

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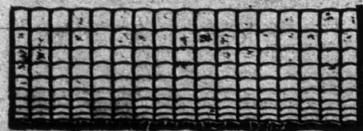
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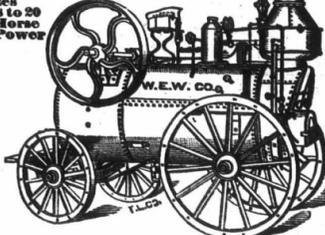
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