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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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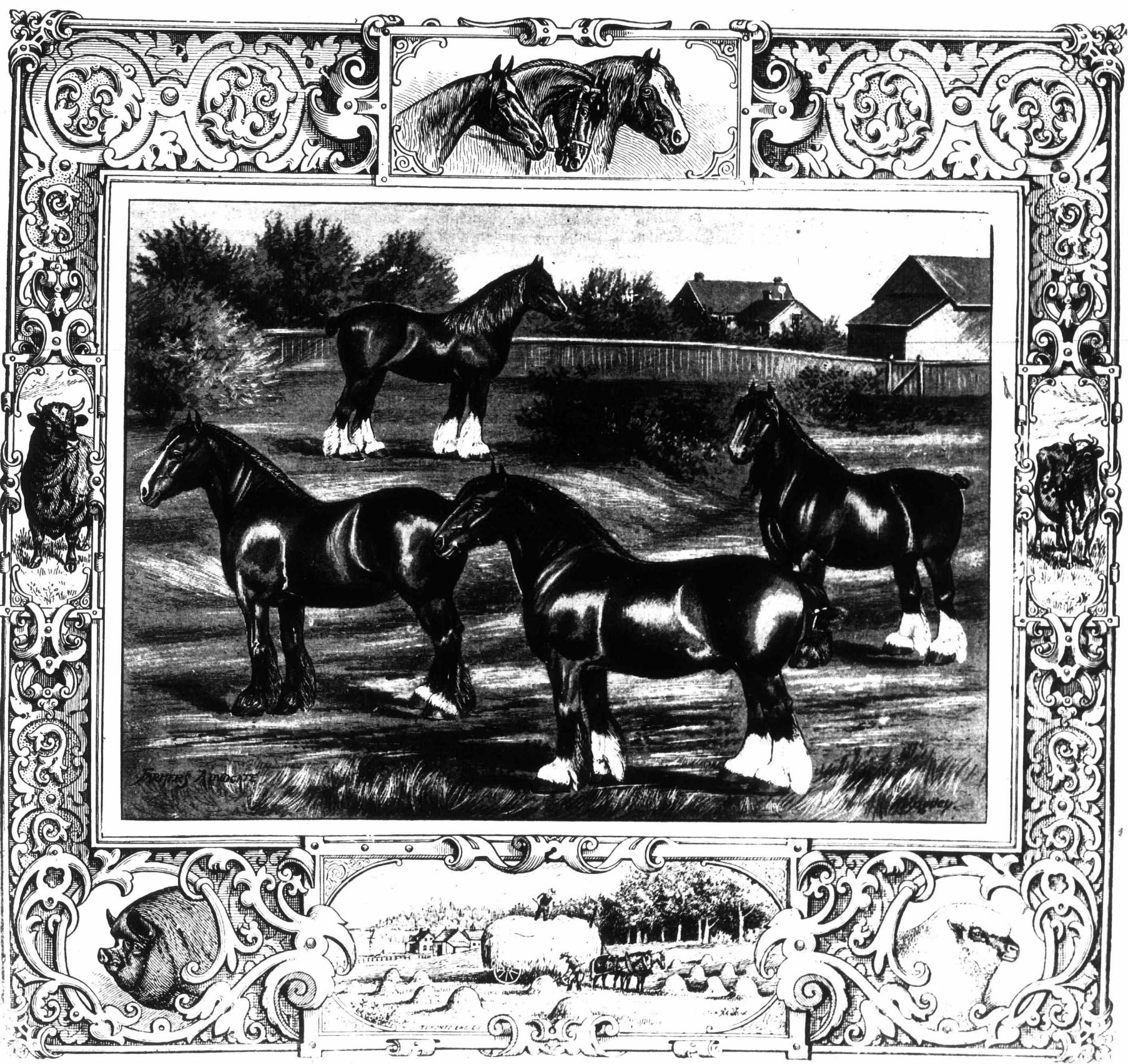
AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.

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VOL. XXVIII.

LONDON, ONT., AND WINNIPEG, MAN., SEPTEMBER 1, 1893.

No. 341.



A GROUP OF CLYDESDALE HORSES.
THE PROPERTY OF MESSRS. DEWITT & SONS, FLORADALE, ONTARIO.

EDITORIAL.

A great deal of supplementary feeding will have to be done this fall. In changing from one food to another some cows require a little coaxing and patience in case of refusing to eat any particular ration the first time it is given them. It is usually better not to give a full feed the first time or two.

Currants should have a yearly pruning, and the best time to do it is in the fall as soon as the leaves have dropped. Prune them up into bush or tree shape. Better start them right by allowing one shoot to grow, and then removing the lower branches from this. The wood of the present year's growth which is removed may be used as cuttings.

The attempt to hold lectures on practical dairy work at the World's Fair appears to have been a failure. People were there for sightseeing, and could hardly be expected to settle down to study the details of butter-making. The travelling dairy, as conducted in Ontario so successfully, and the Farmer's Institute afford the best opportunity for imparting instruction along that line.

Corn for the silo, like all the grain crops, is considerably advanced in maturity this year as compared with former seasons, owing to the long, dry and hot spell. Farmers would do well to see that their silos and cutters are in shape to commence work, and keep an eye to the field so as to not allow maturity to go on too far, else a lot of mouldy ensilage will be the result.

The effort now being made by or on behalf of British farmers to get back the home market for butter will unquestionably have a marked influence on the future of cattle breeding in that country. There is already a decided reaction in favor of dairy cattle as distinct from those that practically produce nothing but beef. A class had to be provided for Jerseys at the Highland Show this season for the first time in its history.

"Canada's fruit exhibit at the World's Fair; Ontario makes the finest showing; superior exhibits. To most visitors at the World's Fair it is a perfect surprise to find that Canada has one of the largest fruit exhibits in the Horticultural building. It is situated in the rear curtain, north of the Dome, and occupies nearly one-sixth of the whole space devoted to pomology. In variety of fruits Canada also excels."—Orange Judd Farmer.

The Clydesdales, Hackneys, and the various breeds of cattle from Ontario to be shown in Chicago, made a short stay in London on the way through, which gave our staff an excellent opportunity of inspecting them. By their appearance at that time they would do credit to their owners, and uphold the honor of Canadian live stock in competition with the world as practically as all our exhibits have more than done in their respective classes.

The exhibit of sheep and swine commences on September 25th. The entries from Ontario are as follows:

- Cotswolds—J. C. Snell & Bro., Edmonton, 20; Robt. Miller, Brougham, 14; H. Crawford & Sons, Canboro, 15.
Leicesters—Jas. Snell, Clinton, 19; John Kelly, Shakespeare, 21.
Lincolns—Gibson & Walker, Denfield and Ilderton, 21; Wm. Walker, Ilderton, 11; Wm. Oliver, Avonbank, 16; D. A. Campbell, Mayfield, 18.
Southdowns—Geo. Baker & Sons, Simcoe, 16; John Jackson & Sons, Abingdon, 30; J. A. Jackson, Abingdon, 11; A. Telfer & Sons, Paris, 10; T. C. Douglas, Galt, 32.
Shropshires—W. H. Beattie, Wilton Grove, 13; John Campbell, Woodville, 34; D. G. Hammer & Sons, Mount Vernon, 18; Robt. Davies, Toronto, 12; C. W. Gurney, Paris, 17.
Oxfords—Henry Arkell, Arkell, 17; Peter Arkell, Teeswater, 28.
Hampshires—John Kelly, Shakespeare, 5.
Dorset Horns—J. A. McGillivray, Uxbridge, 13; T. W. Hector, Springfield-on-the-Credit, 21; R. H. Harding, Thorndale, 2.
Chester White Swine—H. George & Sons, Crampton, 7; R. H. Harding, Thorndale, 1.
Essex—Jos. Featherstone, Springfield-on-the-Credit, 21.
Tamworth—Jas. Calvert, Thedford, 6; John Bell, Amber, 16.
Yorkshire—J. E. Brethour, Burford, 29; Jos. Featherstone, Springfield-on-the-Credit, 22.

A Few of the Reasons Why Farmers Fail.

In these days when rigid economy and an understanding of the work is necessary to insure success in agriculture, it is not surprising that so many out of the great class of tillers of the soil fail to get either pleasure or profit from farming. Every neighborhood, whether good or bad, has a few farmers who are always in debt, always struggling to meet their obligations when due, and unable to make necessary improvements. In fact, their lives are made miserable by what they seem to think is a misfortune. But is the trouble the result of misfortune or mismanagement? It may be the former, but we cannot help thinking the latter has much more to do with it. We all know of numerous instances where farmers, often laboring under a disadvantage, have succeeded in raising and educating large families, besides laying by a modest sum for old age.

Many failures that we see cannot be attributed to lack of industry, as many unsuccessful farmers work late and early, and seldom, if ever, take a holiday. It can truthfully be said in almost all instances that failure is caused by the head not guiding the hands. The work is not done systematically as in other business, but managed haphazard, trusting to luck. The farm and markets are not studied; on hilly farms where sheep would do well, this animal is never seen, and grain is grown at a disadvantage and loss. Many similar everyday mistakes may be pointed out which are the result of bad judgment in the line followed. Very often \$20 or \$30 worth of draining put in a flat field would return the whole outlay, and a joy to the owner, in two or three years.

Undertaking to do too much is a common cause of failure. Too many attempt more than can be properly done, and when hindered by bad weather the work is piled up and not done in season, which always becomes much worse to do and therefore less well accomplished. Short crops are the result both in quality and quantity, which means a light purse. Again, the farmer who attempts too much work neglects the small sources of income and comfort which a well-kept garden and poultry-yard can produce. A very common mistake is the injudicious management of the stock. The feeding and breeding are very carelessly done, which with a caution and judgment would produce results very different from those so often realized. The farmer has no right to complain that his business is not remunerative when he leaves his stock, especially the milking cows, exposed to the inclemencies of winter weather. The farmer should have a conscience that would not allow him to rest when he knows that his stock is not comfortable. A wise management in feeding is of great importance. To this end it is necessary to understand something of the constituent elements of food, and their office in the system. He will see then the folly of stuffing growing colts, which are raised for muscle and endurance, with corn or other fat-producing foods, and not allow cattle to lose half the flesh they have gained in summer by insufficient food and shelter in winter.

We will point to one more of the causes of failure, namely, allowing the soil to become impoverished. An intelligent rotation is one of the best methods of getting all that can be produced, together with a wise use of fertilizers at a farmer's disposal. The stock should be managed so as to save all the manure, both liquid and solid, using straw as an absorbent, as well as to make a comfortable bed, and then use this manure wisely so as to get the greatest profit from it. No source of fertility should be neglected. The grass and clover acreage and the amount of stock should be increased, and acreage under plow decreased, in a great many instances. Commercial fertilizers may be used to advantage on grass or clover as well as grain, so as to have two crops benefited thereby, and one of them a cleansing and renovating crop. Many more causes might be cited, but these enumerated will suffice for the present, and they are directly within the farmer's own control, which, of course, may not be said of all circumstances that militate against the farmer's success.

Do not neglect the local exhibitions—the county and township fairs. They are great incentives to improvement. See that all the classes provided are well-filled. Do not neglect fitting up stock or arranging other exhibits till the day before the fair. Take pains to select only the very choicest fruits, vegetables, grains, etc., and have everything arranged in the neatest possible package. Make your entries early and thus aid the secretary in getting through his work without hurry or confusion. In case they should be required, have pedigree certificates of stock at hand.

Messrs. Devitt & Sons' Clydesdales.

The group of draft horses which are portrayed on the front page of this issue are representatives of the stud of Clydesdale horses owned by Messrs. Isaac Devitt & Sons, Floradale, Ont., which is situated about four miles from Elmira, the terminus of a branch of the G. T. R., and is in one of the most fertile and best farmed sections of the County of Waterloo, where fine horses, choice cattle and improved stock of all descriptions have for many years been in demand.

The stallion in the foreground of the illustration is Douglas McPherson, sired by the Macgregor horse Macpherson, always considered to be among the best breeding horses of his day in Scotland. Douglas McPherson is a massively built horse, with a nicely turned top and equally good at the ground, as he stands upon the best of wearing feet. He has had the honor of winning in the best company. After carrying first prize at local shows and Toronto Industrial as a foal he was not again exhibited until he came to his three-year-old form, at which time he won first at a number of shows in the adjoining counties, also winning first in his class as a three-year-old at the Industrial, Toronto. His dam, Bell, who appears to the right in the illustration, was sired by the Darnley horse, Good Hope, her dam being Mall (6267), by Lochiel (450). Bell is not only a well-bred, but is a wonderfully good mare. She is built on the largest scale and is very smooth and handsome, and is doubtless one of the best mares now breeding in Ontario, which is borne out by the very successful show yard career she has gone through, never having taken second place except once in Scotland, at which time she was beaten by that noted mare Moss Rose. Since coming to Canada she won first in a team in 1888, also winning the Clydesdale Association prize for the best draft mare any breed or age. In 1889 she won first as a mare with foal by her side.

The next standing to the left is Isabella (451). She is a Canadian-bred mare, and belongs to that admirable class that has furnished so many prize winners at our shows. Isabella was sired by Ontario Chief and has six imported crosses, but as one of them is a Shire horse she is only entitled to register in the Canadian Draft Horse Stud Book. This mare won second in her class in 1880 at the Toronto Industrial, and again won second as a brood mare at the same show in 1892, and has also beaten a number of the best imported mares at local shows.

The yearling filly in the background was sired by Douglas McPherson, and is one of a number of good ones sired by this horse. Her dam is Lady MacArthur, sired by the Macgregor horse MacArthur, and is decidedly one of the most promising things on the farm, proving that Douglas McPherson may be accounted a great success in the stud, which we would expect by analyzing his blood lines.

There are at present thirteen Clydesdales in the stud, and it has evidently been the aim of the proprietors to breed for size, in which particular all their horses excel, they very properly contending that this is the most necessary qualification in the draft horse; and while they have kept this point pre-eminently in view, they have not lost sight of such essentials as beauty of form and quality, while, at the same time, good feet and clean, dense bone, and other useful characteristics, have always received due consideration. The Messrs. Devitt have paid every attention to breeding in popular lines, and have spared neither trouble nor expense in placing the most desirable crosses upon their brood mares. In scanning the pedigrees we find a host of familiar names of the most noted prize-winning stallions in past years, and such good ones as Boydston Boy, Lord Lyon, Duke of Flemington, MacArthur, MacClay, and others of this class, have been freely used.

A small herd of Herefords has lately been added to the live stock on the farm, and although these are not pushed to the front by the proprietors, we shall expect to hear from them in the near future, as whatever this firm undertakes to do they do well.

Many farmers report finding fish oil, with a few drops of carbolic acid added, the most satisfactory remedy for the horn fly.

The Jersey breeders are receiving congratulations from all quarters over their success in the cheese contest at the World's Fair, as announced in last month's ADVOCATE. The results of other tests will be given as completed from time to time.

Frauds in Seed Grain.

Farmers should be careful that the seedsmen and others from whom they purchase grain are thoroughly reliable. During the past few years we have heard of several disgraceful incidents where farmers have been imposed upon by salesmen who sold them common varieties, representing such to be a new and highly praised sort. In other words, the salesman substituted one sort for another. The farmer ordered a high-priced kind, the salesman supplied him an old and cheap variety, knowing it to be such. Not long ago Mr. Frank Shore ordered a new white wheat from a certain house, paying a high price therefor. In a few days he received what was represented to be the sort he ordered, but what was in reality an entirely different kind, not a new wheat nor a high-priced one, but simply a substitute which was represented to be the high-priced variety ordered. Mr. Shore, being an expert, detected the fraud at once, but he failed to get the sort ordered nor was his money returned. Another case which came under our notice was that of Mr. G. W. Monk, M. P. P., Carleton Co., who ordered three or four promising wheats. All were sown in one field. The next year one of our staff visited his farm and found but one variety true to name, and it was badly mixed. We believe this dishonorable method of doing business is practised to a considerable extent, not alone with fall wheats, but more largely with other grains and seeds. Farmers are thus victimized every year. If this treachery was only the theft of the cash which represents the difference in the value of the sort ordered and the one sent, the loss to the farmer would not be so great, but the trouble does not end there. The value of the test which the buyer wished to conduct is entirely lost, and if an undesirable sort was substituted, the crop is lost also. A great many farmers in Ontario during the last two or three years have lost their rape crop, because a worthless variety was sold to them for the true sort. The crops thus lost varied in area from a few acres up to twenty or more. Not only did these men lose two crops, but their land was filled with the seeds of a weed little better than wild mustard. The following letters bearing on this point have just been received by us:

DEAR SIRS,—I do not know of any new varieties of fall wheat, but I believe purchasers and farmers are duped by seedsmen and sharpers placing old varieties on the market under assumed names. The time has come when a means to prevent it should be sought for. I think your plan a desirable one of publishing all such information as you can obtain from reliable sources.

G. R. BRADLEY, Manotick, Ont.

DEAR SIRS,—Very little fall wheat is sown and only of old varieties in this vicinity. The few patches that are sown promise fairly well. I am beginning to think that some of our seedsmen are not doing the right thing in other seeds, as I order a great deal every spring for farmers and find old varieties sent under new names, some of them worthless. I think if Patrons take this matter up they can force just conditions. I am glad to see you speak favorably of the Patrons, and if they only wield it well, this movement will be one of their best weapons for defence. Hay is a good crop here. Other crops look fair all through.

Yours very truly,

JAMES H. ESDTON, Curry Hill, Ont.

Before ordering new sorts of grain or other seeds the buyer should study the appearance of the variety, so as to know it at sight when this is possible. Demand the sort ordered and accept no other. We have a number of reliable seedsmen in Canada, whose description of varieties can be relied upon. In all cases, deal with a reliable house, and remember the men who deal in good and honest seed cannot and will not compete in price with the sharpers who make their money by fleecing their customers, nor can men who deal only in good goods well cleaned, sell as cheaply as the men who buy and sell only cheap and inferior stuff. At the request of a reader, we shall be pleased to carefully describe any sort of seed grain at any time. We desire our readers promptly to report to us any cases of substitution or other frauds in supplying seed grain, stock or other goods.

A first-class turnip harvester can be made by taking an old iron plow, remove the mouldboard, and put two five-eighth-inch iron rods in its place, about the same slant as the mouldboard was. The rods can be bolted to the sole almost together, and spread till they are four or five inches apart at the outer ends. Get a knife eight inches long welded to the wing of the share, having the outer end inclining forward. To use this implement top two rows into one with hand hoes, and run the plow along close to the row, so as to cut off the larger roots, while the two iron rods will tip the turnip into the row without tops, thus throwing two rows of clean turnips into one. Four acres a day can be taken up in this way.

Toronto Industrial Fair.

Toronto's Great Industrial Exhibition, September 4th to 16th, is universally conceded to be the greatest of all annual fairs on the continent. To the farmer, stock breeder, manufacturer and artisan of the Dominion, what great possibilities have been developed through the medium of this great annual fair—what hitherto undreamed of resources have presented themselves! Few realize the immense value and importance of these annual events to the Province and Canada at large. The grounds, containing over one hundred acres, are most beautifully situated on the shore of Lake Ontario, on the western outskirts of the city. The Exhibition buildings are commodious and complete in every respect. The near presence of the waters of the lake adds a charm to the surroundings. From almost every point of view some glimpse is gained of this wide, restful expanse of unsalted sea. One hundred thousand dollars have been expended this year in making vast improvements. New roadways have been laid out, buildings enlarged, and new buildings erected on the latest and most improved plans. The new horse stables and cattle sheds are models of comfort and perfect arrangement. Outside doors admit the animals to their stalls; a passageway twenty feet wide extends through the centre of the sheds under a covered archway, which connects the buildings, and thus enables visitors to view the animals without discomfort even in inclement weather. These stables will also be lighted with electric light. Improved changes have also been made in the carriage hall, agricultural building, dairy and apiary building, and in fact all have received due attention. The grandstand, seven hundred feet in length, is the finest to be found anywhere in this or any other country. The approach to the stand has been improved, the walks inside and out are laid with granolithic pavement, while the lawns thereabout have been re-sodded and present a most refreshing appearance. Many important features have been introduced by the management during the past few weeks. Chief among these has been the provision of seats placed throughout the grounds for those who become tired and worn out by sightseeing. The supplying of electric light to all parts of the grounds is another matter for congratulation. The entries this year are larger than ever before, and everything points to the grandest and most elaborate display of the wonderful resources of the Dominion of Canada that has ever been seen. The electrical exhibit will display apparatus for cooking and the heating of houses by electricity, also of flat-irons which may be used continuously without being placed upon the stove.

The horse and cattle exhibit will be larger and finer than ever, a result largely due to the increased and improved stabling accommodation. The prize list for stock has been extended in several classes, and a new and full class made for standard-bred horses. The cheese exhibit will eclipse all previous displays. The prominence and excellence accorded to Canada's big cheese at the World's Fair has tended to awaken a lively interest in this special product amongst the cheese-makers throughout the Dominion. There are 300 entries, representing 900 cheese of 40 pounds each, equal to eighteen tons of solid cheese. These entries are from every quarter of the Dominion, including Prince Edward Island. This monster exhibit clearly indicates that competition will be exceedingly keen and spirited. Other dairy products of butter, etc., will be largely exhibited, and promise to excel in test of quality and fineness anything hitherto seen.

Words of highest praise are due Manager Hill for the tireless energy, keen foresight and sound judgment displayed, as well as the consummate skill in arranging the vast details of Canada's Great Fair. It has ever been his aim to make the Toronto Exhibition the greatest annual show on the continent. How well he has succeeded we need only point to what has already been accomplished. Farmers, stock breeders and everybody in general should take the time to visit the fair, and see the marvellous evidences of Canada's agricultural and industrial growth.

Commendation.

To the Editor FARMER'S ADVOCATE.

DEAR SIR, The writer reads somewhat carefully all of the best agricultural papers in the States and Canada, and cannot refrain from sending you a few lines in appreciation of your most interesting and reliable journal. We feel especially interested in agriculture in the Dominion, and it is a great satisfaction to keep in touch with the progress of affairs there by reading your paper.

We write thus, not that our commendation is of any special value to you, but because it is a pleasure to record our opinion of your most trustworthy paper.

There are many hundred agricultural papers in America, and yet out of this number there are not over twenty really deserving the name, and in this list yours rank among the foremost.

Yours very sincerely,

AMERICAN FARMER CO.,

A. S. Porter, Editor,

Springfield, O., Aug. 22, 1893.

The Western Fair.

In less than two weeks from the date of our September issue, the Western Fair, one of Canada's leading live stock, agricultural, horticultural and fine art exhibitions, will have opened its gates to the public, extending a hearty welcome to all of its old patrons, as well as to those who may never have had the pleasure of visiting it before. Since the incorporation of the Western Fair Association in 1888, they, the Board of Directors and management, have at all times worked hard and studiously to gratify exhibitors and visitors. Each year the receipts have increased and each succeeding fair has surpassed its predecessor, a convincing proof of the popularity attained. Entries in every class are fast coming in, which is an indication that each department will contain a full and elegant display. The exhibit of live stock will be materially increased this year, owing to the fact that there are no other exhibitions on the same dates. This will enable all the eastern exhibitors and others who used to divide their attention among such fairs as Hamilton, Montreal and Ottawa to visit London. A word of warning might be well in passing to those who purpose exhibiting in this department to secure their stabling and space by making their entries at once. A large number of the stalls have already been taken, and many will want location which perhaps they will be unable to get on account of their own negligence. There is sufficient time from the closing of this exhibition until the opening of the Ottawa exhibition for breeders to tranship their stock from one to the other. As the closing date for cattle and horses at the Chicago fair is Sept. 9th, this gives a clear week until the opening of the Western Fair live stock department. All of the other World's Fair live stock classes do not commence there until the week following the close of our exhibition, so that this is another reason that the Western Fair of 1893 will outstrip all its predecessors.

The Apiary Department. The information necessary to intending exhibitors as gleaned from the association prize list will be of interest. Therefore we append a summary as follows: Entries close Sept. 7th, and the fee is 25 cts. for each entry. The honey shown must be the product of the exhibitor, and arrangements can be made whereby the honey can be sold after the judges have made their award, provided the exhibit is maintained. The Ontario Beekeepers' Association have donated their usual amount of \$10.00 and the prizes have been slightly increased, but the alterations in the wording of the sections, as requested by the representative of the Ontario Beekeepers' Association, will greatly increase the display over that of last year, although it was a very creditable exhibit indeed. Each exhibitor is required to show 200 lbs. of comb and also extracted honey in sections two and three, section three being the best general display, with prizes \$20.00, \$10.00, and \$5.00. A special prize of \$20.00, section three, is offered for the newest and most practical invention for the use of apiarists. This should bring out some new ideas. Honey shown at the Western Fair finds ready market at highest prices, so little trouble is experienced by those who exhibit there. Mr. Martin Emough, a respected past officer of the Ontario association, and a man thoroughly capable and worthy in every respect, has been selected as judge in this department, so that competitors will doubtless receive their proper order of merit. The poultry department has been in the past very large and exceedingly attractive. The attention given to the appearance of the building deserves a word of praise, and is something it would be well for other exhibitions to follow. The exhibit this year promises to eclipse that of former shows. The chairman of this department is making preparations to have additional coops in readiness to accommodate the extra entries. Intending exhibitors should not fail to make their entries just as soon as they are in a position to do so, and not wait until the very last moment and then be the loudest with their complaints that sufficient or suitable space had not been reserved for them. Sept. 14th is the last day entries will be received. London has been definitely settled as the collecting and selecting point for Western Ontario exhibits for the Columbian Exposition, Chicago.

Various special attractions have been secured, and those of our readers who have not received a prize list or programme should at once call for one or drop a card to the Secretary, Thos. A. Browne, London, Ont.

Nine years' tests made at the Ohio Experimental Station show that the greatest quantity of fall wheat may be grown by sowing from five to seven pecks of seed per acre, and that beyond these limits fewer bushels are produced.

STOCK.

Our Scottish Letter.

The leading feature of the female Clydesdale classes at Aberdeen was the superiority of the stock got by Messrs. P. & W. Crawford's solid big horse, Darmey's Hero. He was sire of the first prize brood mare, and the first two-year-old filly, both of them really first class animals. The brood mare is owned by Mr. John Sleigh, jr., Mains of Strichen, and was bred by Mr. James Lockhart, Mains of Airies, out of the dam of the Balmedie Royalist, Darnley's Last, and Sir James Duke's Winetti. The Strichen mare, Queen of Hearts, as she is named, will take a position among the best of them, being wonderfully sweet and evenly balanced. The first two-year-old filly is a mare of rare quality, owned by Messrs. Cocker, Hill of Petty, Fyvie. She has since been purchased by Mr. W. Park, Brunstane, Portobello, and is one that promises well for the future. The Balmedie stud furnished the first three-year-old and the first yearling filly in Queenie Flashwood and My Lady respectively. Both are mares which should do good service in the future as breeding stock. Mr. George Bean has an excellent stud at Balquhain Mains, Pitcaple, which provides some of the best prize-winners at the Aberdeen shows. Mr. Bean is one of the best judges of Clydesdales in Aberdeen, and he has always something better than the average to be reckoned with in the show-ring. This season was no exception; Balquhain furnished as many good exhibits at Aberdeen Jubilee show as any other stud in the north, with the possible exception of Balmedie.

The Edinburgh show of the H. and A. Society has now been held, and it is undoubted that no such collection of stock peculiar to North Britain has been seen in the show-ring for a long time. The show has been a great success financially, the attendance having been greater than at any show held for a number of years—indeed since the centenary show of 1881. The great trophy of the exhibition was the three cups presented by His Royal Highness, the Duke of York, K. G., for the exhibitors gaining the greatest number of points for horses, cattle and sheep respectively. The cup for cattle was won by Mr. Leonard Pilkington, Cavens, Kirkbean; that for horses by Mr. John Gilmour, of Montrave, Leven, Fifeshire, and that for sheep by Mr. David Buttar, Corston, Coupar-Angus. Mr. Pilkington's cattle exhibits were wholly Ayrshires and Galloways. The exhibitor who ran him closest was Mr. Thomas Valentine Smith, Ardtornish, Morvern, Argyleshire, whose exhibits were wholly West Highlanders. He had actually as many points as Mr. Pilkington, but the latter gained most first prizes, hence he was declared the winner. Mr. Gilmour's chief opponent was the Marquis of Londonderry, who gained numerous prizes for Shetland ponies, of which he is the most extensive breeder in Great Britain. He also gained first prize for a two-year-old Clydesdale colt named Holyrood, got by Gallant Prince out of the prize mare, Jeanie Darnley. Mr. Buttar is a leading breeder of Shropshire sheep in Scotland, but not the first. He has, however, been their keenest exhibitor and all his exhibits this year were Shropshires. There was heavier competition than we have ever seen at a show of the Highland, but it was nothing like so keen as in the classes for native breeds, such as the Blackfaced and Border Leicesters. Mr. Howatson, of Elenbuck, the well-known breeder of Blackfaced sheep, ran a neck-and-neck race with Mr. Buttar, but he had not as many first prizes as the latter gentleman, having more formidable opponents to face.

Shorthorns were generally admitted to be the best show of the breed seen at the Highland for many years. There was pretty keen rivalry between the patrons of the Aberdeen-bred cattle and the Booth cattle, and it was understood that of the two judges one favored the former and the other the latter. However, on the whole the northern-bred cattle came best through the conflict, although for the Tweeddale gold medal championship it was a tie between the famous "New Year's Gift," owned by the Earl of Feversham, and bred by Lord Lovat, and Mr. W. Graham's "Fairy King" from Edengrove, a Booth bull bred by the Duke of Northumberland at Alnwick castle. Mr. John Crau, Kirkton, Bumbrew, a well-known patron of Aberdeen-Angus cattle, was called in to decide and made the award in favor of New Year's Gift. The second prize aged bull, Her Majesty's Fairfax, was only a very little behind New Year's Gift. He also is what is generally known as an Aberdeen-bred one. Lord Boycott, a Booth bull, was third.

The English-bred bulls had the best of it in the two-year-old class, with Fairy King as their leader, the third and fourth being Aberdeen bulls; but in yearling class the north again was at the top, the Earl Rosebery being first with Sittyton Seal, the highest-priced youngster at the Collynie sale last year. In the female classes for aged cows Lord Brougham and Van got first and second prizes with Booth-bred ones; but in the class of two-year-old heifers was found what was regarded as the best female exhibited. Mr. George Harrison's Warfare, bred by Mr. S. Campbell, Kinellar, Blackburn. She was first at Newcastle, and is capable of doing signal warfare for the northern cattle on many a battlefield. Her Majesty was second with Bouquet, a daughter of New Year's Gift, the latter having been in Her Majesty's pos-

session, and sold at her sale in 1892 for 1,000 gs. Booth blood, as represented in the herds of Lord Polwarth and Mr. Thompson, Inglewood, had the best of the prizes in the yearling class. Mr. Thompson's herd, however, is not recognized as so distinctively composed of Booth blood as Lord Polwarth's.

In the classes for Aberdeen-Angus cattle the Ballindalloch representatives were in great force. Mr. Bolden was first in the aged bull class with Esmond of Ballindalloch, but Sir Macpherson Grant's own bull Eltham, the two-year-old, beat him for the championship. Mr. Grant, Mains of Advie, showed some excellent stock, got from other than blood usually identified with Ballindalloch. His fourth aged bull, Rustler, is an animal of grand scale, and was well brought out. The Earl of Rosebery also exhibited some admirable stock, and got second prize in the two-year-old class with Marquis of Moray 1887. Mr. Whyte, Spott, Kirriemuir, showed superior stock, and in the cow classes Mr. Arthur Egginton, South Ella, Hull, was first, and secured the championship with Equality, a beautiful cow—indeed a model. She was bred at Ballindalloch, and is a choice animal if not very big. Mr. John Grant was second with his famous prize-winning cow Ladybird. Mr. Geo. Smith Grant, of Anchorachan, with Legend, Miss Morrison Duncan, of Naughton, with Elena of Naughton, and Sir George Macpherson Grant, Bart., with Gentian of Ballindalloch, were first prize winners in the various classes.

The leading prizes in the Galloway section were gained by Mr. Leonard Pilkington, with the bulls Henry of Tarbreoch and Cedric 2nd of Tarbreoch, and Mr. W. Parkin-Moore, Whitehall, Mealsgate, with Macdougall 3rd of Tarbreoch—a wonderful record for animals bred by Mr. James Cunningham, and possibly never surpassed. In the female classes Mr. Pilkington was first with Tidy 5th of Drumlaurig; and Sir Robert Jardine, Bart., both with Lady Vaudeville of Castlemilk and Mable of Castlemilk. The premiums for the Highlanders, as I have already stated, went chiefly to Mr. Valentine Smith, of Ardtornish, but Mr. I. R. Campbell, Shinniss Laig, secured a very fair share of the money also.

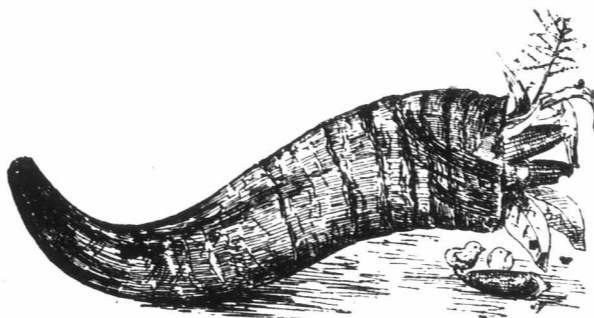
Ayrshires were a better show than has been seen at the Highland for many years. The owner and breeder of the champion bull, Duke of Mauchline, was Mr. Hugh Drummond, Craighead, Mauchline; and of the champion cow Mayflower 3rd, Mr. Robert Wilson, Mansurals, Bridge of Weir. Other winners of first prizes were Messrs. R. Osborne, Wynholm, Lockerbie, with the aged bull Cockie Leekie; and Mr. Pilkington, with the yearling Field Marshal. Mr. Alex. Cross, of Knockrod, had the first prize cow in calf, Beauty of Holehouse 6376; Mr. Robert Wardrop, Garlaff, New Cumnock, the first two-year-old, Lady Diana; Mr. Pilkington, the first yearling, Braw Lass.

For the first time in its history there was a really good display of Jersey cattle at the Highland. The prize money was chiefly subscribed by Major Wardlaw Ramsay, of Whitehill, and some friends.

The salient features of the sheep classes, in addition to the supremacy of Glenbuck amongst the Blackfaces, and Mr. Buttar with the Shropshires, were the success of Mr. Jack's flock at Crichton Mains in the Border Leicester section, and the Hindthrope flocks with the Cheviots. Messrs. Cadzow, Borland, Biggar, had great credit in the Blackfaced classes with some of their young animals, which were undoubtedly exceptionally good representatives. The Duke of Argyle has also a choice flock at Ballymenach, largely drawn from Overshiels stock, a famous fountain-head of much, if not, indeed, all the meritorious Blackfaced flocks. Our notes on the horses must be reserved until next issue.

SCOTLAND YET.

Dehorning.



Prof. I. P. Roberts, of Cornell University Experiment Station, ornaments the cover of his last bulletin with the above illustration, the idea of which is that the farmer by dispensing with the horns of his cattle will come into possession of a "horn of plenty." This bulletin says:

"The practice of removing the horns from cattle was first publicly advocated by H. H. Haaf, of Illinois, about 1885 or 1886, and since that time has come to be extensively practiced in all parts of the country. It has been found to be of great practical utility in rendering animals more docile and quiet, in rendering them much less capable of injuring each other or mankind, and in reducing the space necessary for safe housing and shipping. The operation, though somewhat severe, has been found to be a very safe one, usually leading to little or no functional derangement, and not followed by severe pain or profuse hemorrhage."

The result of the Ontario Commission is given, and a recital of litigation on account of alleged cruelty, of which the following is a summary:—

"In the United States, so far as we have been able to learn, all trials upon charges of cruelty to animals by dehorning have resulted in the acquittal of the accused parties."

"In Canada at least two trials resulted in the acquittal of the accused, but in a third trial the conviction of the parties resulted in the appointment of a Government Commission which made a report strongly recommending the practice and urging the passage of the necessary legislation to give it effect."

"In Great Britain there have been decisions on both sides, those in Ireland and Scotland being in favor of the legality of the practice, and those in England, notably that of Lord Chief Justice Coleridge and Mr. Justice Hawkins, against. Of twenty judges of higher courts who have passed upon the subject, sixteen declared the practice to be legal, while four pronounced it illegal."

As many prefer to prevent the horns from growing to sawing them off, experiments with chemical dehorning were conducted under the direction of James Law, Professor of Veterinary Science, five calves being selected for the purpose. Caustic potash was found the most effectual means, and was used exclusively in subsequent experiments. Since the first trials the horns on seven other calves were successfully prevented by a single application to each horn, but in no case was the application made when the calves were more than one month old.



FIG. 1.

Fig. 1 is the head of calf No. 1; growth of horns destroyed by caustic potash paste.

Fig. 2 is the head of calf No. 2; left horn destroyed by sulphuric acid mixed with sulphur.

Fig. 3 is the head of a calf with horns destroyed by stick caustic potash applied in small quantity to the embryo horn early in life.

The results of all the experiments made at this station lead us to believe that the use of caustic potash is by far the easiest, most humane and most certain method of securing hornless cattle. The best time to apply preventive reagents is early in the life of the animal, just as soon as the



FIG. 2.

little horns can be distinguished by the touch. The manner of applying caustic potash is as follows:—

The hair should be closely clipped from the skin and the little horn moistened with water to which soap or a few drops of ammonia have been added to dissolve

the oily secretion of the skin, so that the potash will more readily adhere to the surface of the horn. Care must be taken not to moisten the skin except on the horn where the potash is to be applied. One end of a stick of caustic potash is dipped in water, until it is slightly softened. It is then rubbed on the moistened surface of the little horn. This operation is repeated from five to eight times, until the surface of the horn becomes slightly sensitive. The whole operation need take only a few minutes, and the calf is apparently insensible to it. A slight scab forms over the surface of the budding horn and drops off in the course of a month or six weeks, leaving a perfectly smooth poll. No inflammation or suppuration has taken place in any of the trials we have made. The results of these experiments warrant the following recommendations:

1. That for efficiency, cheapness, and ease of application, stick caustic potash can be safely recommended for preventing the growth of horns.

2. The earlier the application is made in the life of the calf, the better.

As a great many patented chemical dehorning are now being sold, one of them, sold at \$1 per bottle, was analyzed, and proved to be a solution of caustic soda and water, costing in all about 1 cent per bottle. It would prevent the horns from growing, but the price was outrageous.

Caustic potash comes in the form of round sticks about the size of a pencil. It may be had at any drug store, and should be kept from exposure to the air, as it rapidly absorbs moisture.

THE FARMER'S ADVOCATE & HOME MAGAZINE

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

PUBLISHED BY THE WILLIAM WELD COMPANY (LIMITED), LONDON, ONT., and WINNIPEG, MAN.

JOHN WELD, Manager. F. W. HODSON, Editor.

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THE FARMER'S ADVOCATE, or THE WILLIAM WELD CO., LONDON, ONTARIO, CANADA.

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Everyone interested in dairying should not only read, but study that instructive little book, "Dairying for Profit or the Poor Man's Cow," which may be obtained from the author, Mrs. E. M. Jones, Brockville, Ont. Price, 30 cents. Over 62,000 copies have been sold, and in order to further stimulate its circulation, we will give two copies to every old subscriber sending in his own name (renewal) and that of one new yearly subscriber accompanied by two dollars.

Studs, Herds and Flocks.

MESSRS. JOHN PIKE & SONS' HERD OF YORKSHIRE, BERKSHIRE AND SUFFOLK SWINE.

In our usual front page illustration for March 15th issue there appeared portraits of specimens of the three breeds of swine bred in the Markham herd, which was founded and has always been in the possession of the present proprietors. It was while attending to his duties in the herd, which through his management attained considerable prominence, that the late Mr. Levi Pike met his death; just how and the direct cause will probably never be known. It is with sincere regret that the ADVOCATE has to chronicle the fact that so popular a young man from the ranks of our fine stock breeders has passed away. We are glad to state, however, that this breeding establishment will be carried on as heretofore, although, of necessity, there will be a change of title. The herd has steadily increased in size and improved in excellence, until it is now entitled to be enumerated among those in the very front ranks.

Some excellent Suffolks have been bred: all these trace to an importation from Lord Ellesmere's noted herd, and as the firm intends to restrict their breeding operations to Yorkshires and Berkshires, purchasers would find the former a most desirable lot. We were most favorably impressed with the excellent Yorkshires now on hand, and no visitor can inspect the herd without becoming conversant with the fact that these pigs are bred to meet the demand of the day, and that while they have sufficient bone to stand the forced feeding that early development now demands, they still maintain the smooth, even quality and predisposition for quick feeding that must be combined in a perfect pork producer, which shows that they have been carefully selected and skilfully handled. There is none of the upstanding pattern, shortness of rib and extreme coarseness of bone that so many of the first imported Yorkshires displayed, and it is seldom we have seen a herd of any of the breeds where so large a number show as much uniform quality. Quite a number of the different ages had been prepared for exhibition, and among both Yorkshires and Suffolks there were specimens that could hardly have failed to bring new laurels to the credit of the herd, had not the firm decided to refrain from showing this year. These are now offered for sale, and doubtless many will avail themselves of the opportunity of selecting choice animals.

ALVA FARM.

About three miles from Knowlton, Quebec, on the C. P. Railway, and situated on the shore of the picturesque Broom Lake, is where Mr. Sidney Fisher makes his golden Guernsey butter. This gentleman is making a specialty of fancy butter for the city trade, and with the exception of two months of the year can sell all he produces for 30 cents per pound in Montreal. He has tried both the Ayrshire and the Jersey, but he considers the Guernseys are superior to either. In his mixed herd of registered and grade cows the lowest per cent. of fat is 5.20, while the average is nearly 6.0. The milk is very highly colored, as is shown by the fact that even in the winter time it is never necessary to use any artificial coloring to give the rich color of June butter.

The first bull used in this herd was purchased from the Hon. J. C. Abbott, St. Anne's. About three years ago a selection, comprising the splendid dairy bull Beaufit 2255 and four heifers, was made from the famous Ellerslie stock farm of Vice-President Morton. This bull has proved himself a very impressive sire, as is shown by the young stock on the farm, among which we noticed a very promising bull calf, Vampire 3333, out of Vanessa and got by Beaufit. This calf was dropped the 20th of last October, and now weighs 720 pounds. His dam is from the stock of J. C. Abbott, and when two years old gave 6,000 pounds of milk in 320 days, 18 pounds of which would make a pound of butter. From the first of November last to July 1st, she gave 7719 pounds, and this on just the regular feed of the whole herd. As a specimen of what this herd can do in the way of producing beef and steers, we would say that the first bull weighed 2,050 pounds; when killed and dressed 1,542 pounds or over 75%. He has also a pair of three-quarter-bred yearling steers that tip the scale at 1610 pounds. Mr. Fisher reports a steady demand for stock, and believes that this is not due to any booming of the breed, but owing to the real merit of the animals.

About two miles nearer the town is Lordelle Farm, owned by Mr. E. P. Stevens, who is a firm upholder of the Jerseys. He gets a return of \$75.00, on an average, from each of his cows. This is a noted dairy section, as only a few miles from here is the farm of Mr. Whitteman, who obtained a medal and diploma at the Columbian Exhibition for his butter.

SUNNYSIDE STOCK FARM.

Sunnyside Stock Farm is situated about a mile from Stanstead Station, Quebec, on the Boston and Maine Railroad. This farm has been recently purchased by two enterprising young breeders, Messrs. McDuffee and Butters, who have founded a large training establishment for trotting horses, and also a choice herd of Holsteins. The farm is beautifully situated on the shore of the celebrated Lake Memphramagog, and from the barns a magnificent

view of the surrounding country can be obtained. Directly in front is the lake and Bear Mount, and Mount Orford on the opposite side, while away in the distance can be seen Jay peak, the highest point in the Green Mountains in Vermont. The farm is naturally well adapted for dairying, being well watered with a number of springs; on one of these a hydraulic ram is placed which forces a plentiful supply of water up through the house and stables. The training stable, though so lately established, has already obtained such a wide reputation through the eastern part of Canada, that in addition to having horses from the surrounding country, they have a number from Sherbrooke, Montreal, Vermont, and other places, under their care; indeed the applications have been so numerous that a number have had to be refused. These men have made butter dairying their specialty, and for this purpose prefer the Holstein, and are determined to have the best, and they have spared no time and expense in doing so. They have secured a number which were imported direct from Holland by Mr. H. W. Keyes, Newberry, Vt. The need of additional quarantine stations, and the great disadvantages under which the breeders of pure bred stock in the Eastern Townships labor in importing, is shown by the fact that to bring these cattle from their farms in Vermont, one and a-half miles distant, they had to ship their cattle all the way to Sarnia and back to Stanstead by rail a distance of about 1,200 miles to move one and one-half miles. This herd is headed by Artis Peer 9048, sire Prince of Artis 2170, grandsire Artis 127, N. H. B.; dam Netherland Peeress 2nd. Though only four years old, he has the following prizes to his credit:— 1st in New England State Fair, and 1st in herd, 1889; 1st Providence, R. I., and 1st in herd and sweepstakes gold medal, 1889; 1st Boston, 1889; 1st New England, 1890; 1st Barre, 1890; 1st Brattleboro, and 1st in herd, 1890; 1st New England State, 1891; 1st Providence, 1891; 1st Vermont State Fair, and 1st in herd, 1892; 1st in New Hampshire State Fair, and 1st in herd, 1892. In the herd are such cows as Leize 2nd 1023, N. H. B., with a four-year-old milk record of 2,430 lbs. in thirty days, and 4,680 in sixty days. Porcelain of the Pine Grove 12820, with a milk record of 67 lbs. in one day; she was first at both the Vermont State and the New Hampshire State Fairs in 1892. Her milk tests nearly 7% butterfat. Alba 872, with butter record of 18 pounds 14 ozs. in seven days; this cow was 1st at the Vermont State Fair in 1881 and 1882 and 1884, and received sweepstakes at St. John's in 1885 for best cow of any breed. Princess, own sister to Stella Artis, record as a two-year-old 15 pounds of butter in a week. There is a number of young stock on hand, among which is an exceedingly promising bull calf, which at the age of four months weighed 100 pounds. These animals have never been shown in Canada, but should do well at our exhibitions, and we predict for this new firm a full share of the honors at our shows, and we welcome this addition to the ranks of the breeders of the Black and Whites in Canada.

LEA FARM.

About half a mile from Sunnyside, at Rock Island, P. O., on the Tomfobia River, is the farm of Mr. E. P. Ball. This gentleman is engaged in breeding standard-bred and road horses, and also Stoke Pogis and St. Lambert Jerseys. At the head of the stud is the five-year-old chestnut stallion Sutton, sired by Epaullet 219; dam Daisy Maid, by Mambrino Boy 881. This horse was bred by Robt. Steele, Philadelphia, Pa., and has been very successful both on the track and in the stud. They have ten standard-bred horses, besides about twenty others, a number of which they are fitting for the races. The Jerseys are headed by the Duke of Alexis, offspring Stoke Pogis and St. Lambert blood. Altogether, they have about forty head of Jerseys, and find a growing demand for well-bred stock in this section.

SHROPSHIRE AND CHESTER WHITES AT MR. W. E. WRIGHT'S, GLANSWORTH, ONT.

For a number of years Mr. Wright has been quite successful in showing lambs of his own breeding and feeding. It is one thing to show a lot of lambs picked from flocks that someone else has developed, but it is quite a different matter to dictate successful crosses, and then feed and fit the lambs so that they can hold their own against all comers. However, it is this that Mr. Wright has done on several occasions, and we shall be disappointed if this season's shows do not bear out his former reputation for successful fitting. The ram now in use in the flock was bred in old Onibury flock of Messrs. Black, of Shropshire, England, and the exceedingly good lot of lambs that he has got this season proves that he is a good one. Several particularly useful shearing rams were on hand at the time of our visit, and among these were some intended for show. Among these we mention a sheep of capital character by Wool Merchant. The flock has now been established for over ten years, and breeding ewes are almost all imported, selections having been made from time to time from such well-known flocks as Messrs. Sheldon, Brails, House, Buttar, Cooper, Angus, Bach, Onibury, Mrs. Bromley, and others equally prominent in breeding circles. Chester White pigs have been more recently added, and in this line the selections have been equally well chosen; and already the benefit received by this fresh infusion of breeding material can be easily detected in the different herds in the locality.

THE OXFORD HERD OF POLAND-CHINAS.

The stock farm of Messrs. W. & H. Jones, Mount Elgin, is situated eight miles south from Ingersoll, at which station intended purchasers will be met if notice by letter or telephone is given.

The county of Oxford is credited with having been the nursery of the dairying industry in Ontario, and although other localities have taken up this branch of agricultural pursuits more recently, yet Oxford is still considered the headquarters for cheese production. With dairying must always go the kindred industry of pork production, and in no locality are the two products better or more systematically utilized. Feeding large quantities of pigs, they one and all find the necessity for good breeding stock. It was the knowledge acquired through many years of successful dairying that showed the Messrs. Jones the necessity of well-bred pigs for pork production, and induced them to embark in breeding pure-bred swine. Poland-Chinas are the sort they have selected to breed, and the greatest possible care in selection has been observed; and the result is that they have a herd which may be classed as second to none in the uniform excellence of the specimens they have purchased, as well as those bred in the herd.

To attempt to describe the long array of good individuals that this herd contains is entirely out of the question, but as we understand that it is the intention of the Messrs. Jones to exhibit a number of fairly representative animals at the shows of 1893, our readers will have an opportunity of judging for themselves of the uniform excellence of the herd. Four imported boars have been used: among these Ellas Moor, an eighteen-month pig, appears to be the favorite with his owners, and although he is exceedingly smooth and well finished, the other three, to our minds, were equally good when viewed from a breeder's standpoint. At the time of our visit several of the sows had just weaned their pigs, and although they had developed strong pigs and large litters, they were in wonderfully good form, and in fact we were told some of these were intended for exhibition. The herd is in the most flourishing condition, producing wonderfully strong pigs, with scarcely any inferior specimens, considering the large number contained in the herd.

AMPLE SHADE SHORTHORNS AND LEICESTERS.

Messrs. E. Gaunt & Sons, the proprietors of this herd and flock, reside near Lucknow, on Kincardine branch of the G. T. R. Both herd and flock have gained celebrity of late years, having been quite successfully shown at all the leading shows. Many of our readers will remember their bull Lord Lovell and his thrifty, good-fleshed calves, as they first appeared in the show rings a few years since, and this bull has left his mark upon the herd in the excellent lot of cows and heifers which were shown us during our recent visit. Lord Lovell was bred by Messrs. J. & W. Watt, and was sired by Bampton Hero, his dam being Matchless of Elmhurst 2nd, and is, therefore, full brother and one year older than Challenge, who has also been considered one of the best breeding bulls of his day. The females in the Ample Shade herd are large in size, with plenty of length, good, level quarters, and of the thrifty, easy-keeping sort that are sought after on account of their undeniable utility. Among the cows we especially noticed the descendants of the Sittyton-bred cow, Airy Buckingham, by Master of Arts, and as these have been chiefly crossed with bulls of the Aberdeenshire line of breeding their blood lines will be considered orthodox among believers of this sort. As we saw these cattle in the field we could not help thinking what a useful lot they were, with their large shapely udders, and with every appearance of being good feeders as well. As before mentioned the majority of the present herd are sired by Lord Lovell, who was used in the herd for six years, but imported President, a Nonpareil bull, bred at Kinnellar, has also left some good young things behind him. The two-year-old bull, Earl of Moray, at present at the head of the herd, is an exceedingly good one. He is a deep red, remarkably smooth and handsome, and carries such a wealth of natural flesh that we shall be very much surprised, providing he has improved since our visit as he did before, if he does not get a share of this season's winnings. Earl of Moray is sired by Eclipse, a son of imported Baron Lenton and imported Gipsy Mail. The dam of Earl of Moray is the imported cow Lady Fanny, bred by Mr. James Bruce, Forchabers, Scotland. The capital crop of bull and heifer calves of this season proves that Earl of Moray is likely to nick well with the Lord Lovell cows and heifers. These calves are a choice lot. But it is not alone in cattle that the Ample Shade Stock Farm is producing good things, for here is one of the very best flocks of Border Leicesters in Ontario, to which last season's prize lists at Toronto and elsewhere testify. Something over twenty-five shearing rams and ewes in beautiful condition are now on hand, while this season's lambs are most promising, and the many breeders of this useful sort can do no better than call upon Messrs. Gaunt when they intend to infuse fresh blood into their flocks, and as sheep for show purposes are always in demand, they may also obtain something in this line should they happen along in time to get a choice of the many good things we saw there.

Our Cattle Trade.

The continued slaughtering of Canadian cattle at British ports is a slanderous reproach to the herds of the Dominion. Apart from the financial damage, which is its direct result, the farmers and stockmen of Canada are in no mood to allow this libel to rest as it does at present. The disputations in Great Britain as to what the veterinary inspectors there really discovered in the lungs examined, and which they reported to disclose contagious pleuro-pneumonia, have led many to conclude that the deposits were simply of fibrinous material consolidated after an ordinary case of "sporadic pneumonia," or inflammation of the lungs, caused by exposure. We are in a position to state that in a letter to a friend in this country, Dr. S. T. Brown, veterinary surgeon to the Privy Council Board of Agriculture, England, makes the very important admission that he has never said that the disease exists in Canada. As indicated by the letter of the Deputy Minister of Agriculture at Ottawa, given below, every part of Canada was searched by a staff of veterinary officers without finding any trace of the disease: there being no cases here, obviously none could go forward and none could be discovered by the British vets. Shippers and others report this season's trade to have been hopelessly demoralized; and the outlook not improving and everything being in a state of uncertainty, there is already a strong disposition in various quarters to abandon cattle feeding.

With regard to the inspection of our cattle on landing in Britain, we are able to say that Mr. Wm. Hunting, M.R.C.V.S., veterinary surgeon, has been appointed chief inspector under the Contagious Diseases Animals Act to receive the Canadian cattle. Concerning him Dr. Mole, M.R.S.V.S., of Toronto, writes us:—"He is well known as a thoroughly expert veterinarian, and Canadian cattle exporters may feel assured of his fairness and impartiality. His scientific attainments are second to none. As a public man, he is well known in journalistic circles as the editor and proprietor of the Veterinary Record."

We have written the Canadian Minister of Agriculture on this subject, and have the following reply:—

Ottawa, Aug. 19, 1893.

Gentlemen, I have to acknowledge your letter of the 17th inst. in relation to the cattle regulations. You ask what steps, if any, have been taken in order to demonstrate the freedom of Canadian herds from contagious pleuro-pneumonia. When the question arose in England, in October last, of Canadian animals being affected, every part of the country was examined, if not by a little army, at least by a considerable staff of veterinary surgeons, without any trace of the disease being found. The reports of all the veterinary officers of the department in all parts of the Dominion have since been uniform in the same sense; and it is not possible that contagious pleuro-pneumonia could exist in Canada without the fact becoming known.

As respects the second question in your letter, the department has authorized the sending of two experts to Canada by the Veterinary Department of the Imperial Government at the expense of the Canadian Government. A similar invitation was made in October last. It was not accepted then, but from a recent debate in the House of Commons in England I think it is likely the invitation will now be accepted.

I have the honor to be, gentlemen,

Your obedient servant,

J. Lowe,

Deputy Minister of Agriculture.

The Wm. Weld Co. (Ltd.), London, Ont.

Some time ago cable despatches from England represented the Minister of Agriculture as saying he would gladly authorize this sending of experts to Canada to determine whether or not any plague existed here; but in a later speech he appears to have refused to do so. Right or wrong, the restrictions are to be maintained, that is evident, and the Scottish Farmer even hints at the absolute prohibition of the importation of foreign stores; and when that paper says there exists "no economic reason" for allowing stores to come in, it simply means that they are trying the panacea of protection. Canadian cattle men may make up their minds that they will get no favors in Britain, but the honest reason should be given instead of slandering the healthy cattle of Canada.

There has been a company formed in New York to sell milk by the Babcock test, and giving a guarantee of so much butterfat in each quart. This is a step in advance, as milk is sold at present there is absolutely no encouragement for a milkman to keep good cows, and it can hardly be called fraud for him to water his milk down to the standard of butterfat sold by the other dealers, for it all has to be sold at the same price.

Chatty Stock Letter from the States.

(FROM OUR CHICAGO CORRESPONDENT).

Business in this market for the past month has been much unsettled by reason of so much uncertainty in financial matters. Prices have shown at times violent fluctuations, which, from the standpoint of supply and demand, seemed unreasonable. Fortunately receipts have been moderate most of the time, and variations in values have not gone beyond certain limits. The general outlook is a little more favorable than it was. The high rate of exchange on all eastern paper has practically put an embargo on shippers doing business through the banks. This has been a serious blow to this branch of the trade, and has been the means of crippling it very much.

Exporters were doing a good business up to two weeks ago, but the decline of British markets has discouraged business in that line, and now they are operating very cautiously.

The season of western range cattle has been fairly inaugurated. So far supplies have not been excessive, but the quality was generally poor, and prices naturally low.

Hogs have fully recovered the smash occasioned by the Cudahy collapse. Holders in the country concluded not to sacrifice, and the result was a period of small receipts, which, with a good demand, caused an upward turn in prices, though the market is very feverish and unstable.

Top prices at present are about as follows:—Cattle, \$5.25. Hogs (light), \$6. Sheep (native), \$4.40; western, \$3.50; lambs, \$5.50.

Light hogs sell at a premium of 50c. over heavy.

Sheep prices have been very unsatisfactory. The market has been over-stocked with common and inferior grades, many of which were practically unsaleable at the lowest point of the year. Western sheep are coming freely from the ranges. They meet with a light demand from buyers, because they are hardly fat enough to suit killers.

Receipts thus far this month foot up 175,800 cattle, 290,200 hogs, and 183,800 sheep, showing a decrease of 30,600 cattle and 53,400 hogs, and an increase of 63,100 sheep compared with a year ago.

Dealers do not hope for much improvement in prices until the silver question is definitely settled.

FARM.

Agricultural College Affairs.

A commission, consisting of Mr. John Winchester, of Toronto, Master in Chambers, Mr. John Waterworth, ex-M. P. P., farmer, of Wardsville, and Mr. John S. Pearce, seedsman, of London, have completed their enquiry into the alleged lack of harmony among the staff of the Ontario Agricultural College at Guelph. We elsewhere give their findings, which were unanimous. The report itself, which is before us, covers 156 pages, and is the result of about three weeks' investigation, 94 persons in all being examined. Bulky though the report is, Prof. Shaw complains, in his defence through the daily papers, that all the testimony was not included, and that the compilation has not been fair to him. It would have looked better to have given the evidence *in extenso*. The petition asking for an investigation was presented by five ex-students—R. R. N. Morgan, Strathroy, W. L. Carlisle, Chesterville, D. Buchanan, Toronto F. Mullholland, Yorkville, and W. Randall, Camperdown, stating as follows:—

"Speaking on behalf of the great body of graduates of the Ontario Agricultural College, we recognize that you have done much in the interests of agricultural education, especially in the equipment of this institution. We certainly owe our gratitude to the present Minister of Agriculture for the many improvements he has made during his tenure of office, some of which are the establishment of the Dairy School and the erection of new buildings. The College is a great power for good in our Province and elsewhere, and has vast possibilities, but we regret to say it has not done and is not doing what it might. Why? It is well known there is something seriously wrong which has long existed and cannot exist much longer. Unless speedily corrected it must result disastrously. The existing state of affairs is causing comments through the country unfavorable to the institution, has kept students away from the College, and has a most injurious effect upon the character of the students during their course."

Having gone carefully through this extensive report and contrasting it with the findings, we think the latter might have been condensed and in some respects made more pointed.

That there was lack of harmony in the institution is quite evident from this report, and the wonder is that so much good work has been accomplished during the past few years as has been the case. The commissioners hold Mr. Shaw, Professor of Agriculture, chiefly responsible for this element of discord. The question of authority is really the central one in this whole difficulty. It is quite apparent that in any institution of this kind there must be one responsible head, and among subordinate officials a unity of action, if the best results are to be secured.

From the very outset Mr. Shaw seems to have felt or been suspicious that he was slighted. He complains, for instance, that on the first evening of his arrival at the College a special room was not in readiness, and he was required to sleep in a bed in

the room occupied by the President's secretary. When Prof. Shaw's wife was coming to visit him, President Mills extended an invitation (which was accepted) to entertain her during her stay, and sent his carriage to the station to meet her, but another carriage was there and she was taken somewhere else. When President Mills afterwards spoke about it, Prof. Shaw simply listened and made no explanation. Still later he imagined that in consequence of a letter given to Colonel Clarke, the latter ceased giving his son a ride in his carriage, and took up Mr. Mills' boy instead. In the evidence, however, it appeared there had been no communication from Dr. Mills to Colonel Clarke, that such a thing had never been thought of by either of them, and that as a matter of fact Mr. Mills' boy himself had requested Colonel Clarke to take up Mr. Shaw's son, who was lame. Yet for a long period of time this imaginary grievance rankled in Mr. Shaw's mind, and so the thing goes on, the troubles becoming greater. It is greatly to be deplored that his work there has been marred in this way. He admits himself making a serious mistake buying cattle at his own auction sale for the college farm, contrary to the rules and the decision of the Advisory Board.

We must confess that we are unable yet to see any real reason why the staff should not have worked together harmoniously. Mr. Shaw was doubtless actuated by a strong desire to make a success of his work in the institution, and certainly had a capacity in getting through a vast amount of work, as was shown by the fact that he was able to earn at least \$900 in writing for various papers, in addition to his college work (laying his services "upon the altar of his country," as he puts it), for which he received \$2,000 per year. Having the advantage of direction from two such thoroughly practical and successful men as the two successive Ministers of Agriculture, the Hon. Charles Drury and the Hon. John Dryden, together with the advice of the Advisory Board, consisting of such successful farmers as John I. Hobson, John McMillan, M. P., E. Jeffs, J. S. Smith, G. B. Boyce, D. A. Dowling and Wm. Donaldson, he should have been able to have made a marked success in the farm department, and undoubtedly great improvement has been made there within recent years. We notice that he was very strongly urged in the direction of fixing the farm roads, cleaning up about the buildings, killing weeds, etc. On one occasion, when he had been advised to repair a farm road, he undertook, on his own authority, to improve the public road first, saying he thought that would have a better effect upon visitors. It would certainly have been much better all round, had he fallen in line with the able men who were associated in directing affairs at the farm, instead of resisting authority. It was most unfortunate also that he dropped into the habit of explaining (indirectly, perhaps, at times) to the students that he was hampered, or that he desired to pursue a certain course, but could not, because some one else in authority did not concur. Hon. Mr. Drury very early foresaw and clearly pointed out that this would prove destructive to discipline and demoralize the whole institution.

In his defence, Mr. Shaw charges the commission with partizanship, and with making an unfair report against him, explaining among other things that he was not aware of the existence of by-laws governing the institution when he took office. If he could not fall in line, it seems to us that the rational course would have been to have severed his relation with the institution.

With the exercise of a little more common sense, and the application of the "give and take" principle by Mr. Shaw, we believe this trouble would have been avoided, and the commission and its work would never have been needed. The students whose agitation brought about the investigation are entitled to credit for the light that has been thrown upon the weak points in the past conduct of the institution, and it is to be hoped this storm will clear the college sky and result in its doing still more effective work for Ontario agriculture.

The Toronto Empire on the College Trouble.

The Empire, of Toronto, very concisely sums up and disposes of the Agricultural College trouble as follows:—

"From the report of the commission that has been investigating the affairs of the Guelph Model Farm it is clear that the staff and students constituted anything but a happy family. Nearly everybody about the place was, if the commissioners are correct, conspiring against somebody else. The root of the trouble is alleged to be that Prof. Shaw desired to get control of the institution free from responsibility towards the president or the Government. For this purpose he was poisoning the minds of everybody against the president. The late resident master, Mr. E. L. Hunt, also had a knife whetted for Dr. Mills because of the dismissal of the matron. A number of the students who had been rebuked by the president went around by way of revenge breathing slanders against him. The assistant chemist, who was in league with Prof. Shaw, directed his gun chiefly against the assistant resident master. The farm foreman made it his business to foment discontent among the students while they were in the field. The herdsman, who took sides with the president, was severely punished by Prof. Shaw for doing so. Indeed, he was given an assistant who was utterly helpless among the herd by reason of his abject fear of bulls. Under these circumstances the commissioners were quite justified in determining that there was a lack of harmony. That puts it very mildly. The institution was in a state of mutiny, and but for the timely intervention of the Government, strangely enough, at the instance of Prof. Shaw, it would have been necessary to call out the militia."

Findings of the Ontario Agricultural College Commission.

With reference to the charge of lack of harmony on the part of Dr. Mills, the principal evidence respecting the harmony of the staff and officers of the College prior to 1888 was given by the late assistant resident master, Mr. E. L. Hunt. He stated that the following officers were dismissed or resigned in consequence of a lack of harmony between them and the President of the College, Dr. Mills, namely, Professors Brown, McMurrich, Robertson, himself, Bursar Deacon, Farm Foreman Woods, and Matrons Mrs. Speight, Miss Dunn and Mrs. Martin.

The Commissioners regret to be compelled to report that Mr. Hunt gave his evidence in a most unsatisfactory manner, apparently with one object in view, namely, to injure the President, towards whom he admitted having very bitter feelings. His evidence at times was conflicting and contradictory on important matters.

It was apparent from his own and other evidence given upon the subject that he had been influenced against the President by Mrs. Martin, whose matron, and that this feeling became intensified upon the dismissal of Mrs. Martin. He has apparently been doing all in his power to poison the minds of one or two of the officers and several of the ex-students against the President, and was one of the chief agitators for this investigation.

Upon the evidence of Dr. Mills, Prof. Robertson and others, your Commissioners are of opinion that Mr. Hunt was entirely mistaken as to the relations of Dr. Mills and the officers named, other than Mrs. Speight, whose removal at the President's request was justifiable.

With reference to the lack of harmony alleged to have been caused by President Mills towards Prof. Shaw, your Commissioners are of opinion that the evidence establishes that wherever lack of harmony existed it was at first caused by Prof. Shaw's actions towards the President, in (among other things) talking against the ability of the President to outsiders, as shown by the letter written to him by Hon. Charles Drury, then Minister of Agriculture, a few months after his appointment, and his continued refusal to acknowledge the authority of the President.

The cause of the lack of harmony, was in the opinion of your Commissioners, not attributable to Dr. Mills, but to Prof. Shaw.

With respect to the conduct of Dr. Mills, it appears that Mr. Hunt stated to Sharman and others that he was an untruthful man, and that this statement was accepted by them and was their only evidence in support of the charge that the President was a false man. Three of the ex-students, namely, Buchanan, Brodie, and Sleight, stated that the reason they objected to the President was that he had found fault with them while in the College, having on one or two occasions called them names they considered improper.

Prof. Robertson, in his evidence, stated that he had found fault with the President in consequence of some matters of discipline, and the dismissal of Mrs. Martin. It was evident that Prof. Robertson had not known all the circumstances connected with the different matters complained of by him at the time he felt aggrieved. He spoke highly of the President in his position at the College, and considered that he was doing good work; and that he personally did not leave through any lack of harmony with the President, and that he never found it impracticable to get his work well done.

Prof. Shaw stated in his evidence that Dr. Mills was an untruthful man, but gave no instance of untruthfulness in support of this general charge.

Two or three of the present students and Mr. H. B. Sharman, the assistant chemist, gave evidence that the President was false, and alleged in support of that statement that the President had stated to the two gentlemen making inquiry into the late trouble against Mr. McCrae, the assistant resident master, that he did not know the minds of the third year students in that regard. This statement of the President's was undoubtedly true, for we find that in the evidence of Mr. Ferguson he gave the circumstances of the third year students agreeing to go before the President and state their feelings on the matter, but when they went before him, they declined to do so, and Prof. Shaw found fault with their action.

Another occasion stated by these students and Mr. Sharman showing the President to be "false," was in reading a telegram to the students from the Minister of Agriculture respecting their attendance at lectures prior to the investigation into the late trouble. The telegram and papers respecting that matter bear out the President's statement that he read only what had been sent to him, and that the students and Sharman were mistaken.

Mr. John I. Hobson, Chairman of the Advisory Board in connection with the College, spoke in the highest terms of the President's character.

In our opinion the attempt thus made to defame and damage the good name of the President has utterly failed.

We are of opinion that the President has on certain occasions acted harshly in speaking to students, and possibly to some members of the staff, but the circumstances under which he did so evidently required stern discipline.

With reference to the instances of lack of harmony given by Prof. Shaw, first, those against the President, and second, those against the Minister of Agriculture, the evidence fully establishes the fact that Prof. Shaw had no ground for complaint whatever. The instances given were most trivial in their nature, and had evidently been previously made up of by him for the purpose of poisoning the minds of the students against the President and the Minister of Agriculture.

Your Commissioners find the evidence establishes that the President was justified in all his actions in the instances referred to by Prof. Shaw, and that they were of a most trivial nature. We fail to understand how any gentleman of intelligence could look upon such matters as instances of lack of harmony on the part of the head of the Institution, whose duty it was to keep an oversight of all matters connected with the outside and inside departments.

We are of opinion that the real difficulty with Prof. Shaw was his desire to obtain full control of the agricultural department, without responsibility to the Minister, the President or any other officer. He persistently refused to be guided by the President, or to submit in any way to his authority from the day of his appointment up to the present time. The President acted within his authority given him in the by-laws in the instances mentioned.

In connection with the action of Dr. Mills in many of the instances above referred to, your Commissioners find that he was remiss in not upholding his authority over the agricultural department on all such occasions. Had he done so, we are of opinion that much of the present difficulty would never have arisen.

With reference to the instances of lack of harmony with the Minister given by Prof. Shaw, your Commissioners are of opinion that the evidence proves that Prof. Shaw was desirous of evading all responsibility to the Minister of the day. The letters written first by Hon. Charles Drury, and subsequently by Hon. John Dryden, fully prove the difficulties they had to contend with through the actions of Prof. Shaw. His replies thereto were in several instances most impertinent.

With reference to Barnett, the herd-man, while we are of opinion that the herd-man acted improperly, at least on one occasion, namely, with reference to the sheep pen, and that he expressed himself toward Prof. Shaw in a manner that was unbecoming, we find that it was the duty of Prof. Shaw, having charge of that department, to give such instructions to the herd-man as would enable him to attend to his duties efficiently. The Prof. Shaw admittedly declined to do so. He blames Barnett for over-feeding, but is unable to give any instance in which that was done. He, on the other hand, neglected to make inquiry into the quantity of feed supplied to the stock by Barnett from time to time, and also refused to give detailed instructions as to the manner of feeding. He admitted that he seldom visited the stables to ascertain what was being fed, or the manner of feeding, or how the cattle

sheep and pigs were being taken care of. He appeared to judge that Barnett was over-feeding from the fact that the cattle were too fat and were unprofitable, and that the cost of feeding was much larger than formerly.

It is no doubt true that the cattle have been kept in high condition, but as stated by Dr. Grenside and Mr. Hobson, that was absolutely necessary for educational purposes, and especially necessary considering the position of the institution to the public, and the liability to adverse criticism in case they were not found in proper condition.

We are of opinion that Prof. Shaw, in connection with Mr. Story, the Farm Foreman, early took a dislike to Barnett, because, without reasons, they considered him to be a friend of the Minister of Agriculture, and believed him, as Prof. Shaw states in his evidence, to be kept there by the Minister as a spy. There was no evidence whatever to show that Prof. Shaw's belief had any foundation in fact. On the contrary, it was shown conclusively that Barnett received no instructions whatever from the Minister, nor was he there for the purpose of informing the Minister of any acts of Prof. Shaw or of any other officer in connection with the institution, but was retained by the Minister solely on the ground of his qualities as a herdsman and feeder of stock. These qualities are fully upheld by the evidence of Dr. Grenside, Veterinary Surgeon to the institution for eleven years, and by Mr. Hobson, Chairman of the Advisory Board since its inception.

We are of opinion that Prof. Shaw attempted to interfere with Barnett by endeavoring to impose upon him as his assistant an old man, who had acted previously as helper, and had proved himself utterly unfit for succeeding in consequence of his fear of the bulls. These facts were stated by Barnett to Prof. Shaw, and notwithstanding such knowledge the Professor desired to compel Barnett to accept him. Barnett was subsequently upheld in his actions in this matter by the Advisory Board.

With respect to finding fault with the Minister for purchasing stock in the Old Country on account of the expenditure, it appears that Prof. Shaw was aware of the stock being purchased. It appears that the Minister obtained an increased grant to cover the over-expenditure on account of such purchase, as shown in the Public Accounts for the year 1889, page 3.

With reference to his difficulties about the bulletins, we consider that, instead of finding fault, Prof. Shaw should have been grateful to the Minister and his Deputy for correcting the many mistakes therein, which, had they been published in the form presented by Prof. Shaw, must have been ridiculed by the public generally.

Respecting the assistance for work in his office, your Commissioners are of opinion that, while doing as much work as an ordinary editor (for which he received at least \$900 a year in addition to his annual salary from the Government, and without the knowledge of the Minister or members of the Government, or the President of the College), it fell to Prof. Shaw to complain of overwork in the performance of his official duties under the circumstances. When the Minister of Agriculture propose to relieve him from the experimental department in order to give him more time for his remaining duties, he found fault with the Minister for even proposing it, and accused the Minister of insulting him by such proposition.

As to the complaint that he did not have an opportunity of purchasing stock in time for experimental work in one instance, the evidence produced by himself was that he wrote to the Minister for money on October 19, 1882, and his wishes were at once complied with, as soon as he accepted the conditions proposed by the Minister on which the stock should be purchased.

As to charging Prof. Shaw with being responsible for large over-expenditure, the evidence fully establishes that ever since his appointment the expenditure in his special department has exceeded the estimates.

Your Commissioners would respectfully refer to the record book kept by Prof. Shaw, in which he entered all matters that would have a bearing against the Minister, President, and other officers of the institution, in case an investigation should be held. This book is dated 28th October, 1889.

As to the conduct of Prof. Shaw, your Commissioners cannot condemn him too severely. We are of opinion that he has systematically poisoned the minds of students from the date of assuming his office up to the time of this investigation against the President of the College and the Minister for the time being. His opportunities for so doing were facilitated, as he himself stated, by his working with the students in the fields and on the roads.

Prof. Shaw was warned by Minister Drury of the dangerous results of such conduct shortly after his appointment. It was pointed out to him by the Hon. Mr. Drury in a letter dated December 13, 1889, that "nothing can be more destructive to the harmonious working of an institution than for any officer to fall into the habit of explaining to students that he desired to pursue a certain course, but was prevented from so doing because some one in authority did not concur with his views."

He won the confidence of the student in many ways, some by giving them employment at the expense of the Government as drivers, others by showing an interest in their welfare, and then mentioning his grievances, giving them to understand that he was a much abused man, and that he was unable to do for them at the farm as much as he would like because his powers were being curtailed by the Minister and the President, who were oppressing and hampering him in the way above indicated.

He has in this way shown a very marked and deplorable want of loyalty towards the Minister and the President, as well as towards the institution, and has done much to bring about the present feeling of dissatisfaction and unrest among the students and ex-students, he invariably making them believe that he was a victim and the Minister and the President his oppressors.

Your Commissioners have set forth in this regard certain facts that were proven against Prof. Shaw: first, the purchase of his own cattle after his appointment in the name of his servant, and without the knowledge or consent of the Minister or the President, and in direct violation of the by-laws of the institution.

We also find that he was guilty of gross neglect in not keeping a proper account of travelling expenses during the month of January, 1883, whilst on a tour in connection with Farmers' Institute meetings. We are of opinion that he received the sum of at least thirty dollars over and above the actual expenses incurred and paid out by him for the delegation during this tour. His explanations as to the discrepancy in the accounts were most unsatisfactory, and fail to account for the overcharges. The manner of rendering the account was well known to himself, and there were columns for putting down the items that he claimed to have paid out, but he neglected or ignored the same. He kept the account, according to his own evidence, carelessly on slips of paper, which he afterwards destroyed. His evidence on this subject was contradictory in many respects, and although six months had not elapsed from the date of expenditure to the time of giving his evidence, and all that expenditure made within fifteen working days, he stated that he could not remember how the sum of forty dollars over-expended was incurred other than by a general statement that he had paid out all he had charged.

Your Commissioners opened the investigation in Toronto, on June 14, 1893, in consequence of a number of the students being there attending to receive their degrees prior to their departure for home. This was done for the purpose of obtaining their evidence, and also saving expense and delay in bringing them before the Commission from their various homes. After examining such students, and two or three others who attended on June 14 and 15, your Commissioners adjourned to the College, and continued the examination of witnesses on June 16. Prior to commencing such examination at the College, your Commissioners publicly referred to the examinations in Toronto and the reasons for holding same. Prof. Shaw was present when such announcement was made. His son was examined in Toronto and was present during the examination of nearly all the other witnesses there, and from

remarks made by Prof. Shaw during the investigation, it was evident that he was aware of the nature of the evidence so given. At the close of the investigation Prof. Shaw handed in a letter to your Commissioners, in which he protested against the action of your Commissioners in taking the evidence in Toronto without his knowledge, in the presence of Dr. Mills. Your Commissioners informed Prof. Shaw that the investigation was a public one; that they allowed the public to be present, refused admission to no one; that Dr. Mills came in after the first witness had been examined; that there were no charges made against Prof. Shaw or any other officer. Prof. Shaw was then asked if he had been prevented from calling any evidence by your Commissioners, or if he had any further evidence to give before the Commission closed, to which he answered: "No, sir."

Your Commissioners beg to state that Prof. Shaw was represented during the greater part of the investigation by able counsel; no other officer asked the same privilege; and that your Commissioners sent for such witnesses as he required, the expense of same being borne by the Government.

With reference to H. B. Sharman, the Assistant Chemist, we find that he had unduly interested himself in connection with the student movement against the Assistant Resident Master, Mr. McCrae. It appears that he consulted with them from time to time, and apparently encouraged them in their actions. He also alleged in the presence of students that the President was an untruthful man. He informed Prof. Shuttleworth that the President was a liar. He obtained from one of the students a register containing the names and addresses of ex-students, and without the knowledge or consent of the President, forwarded it to Mr. Morgan, of Strathroy, an ex-student, for the purpose of helping him to communicate with the ex-students to enlist their sympathies in the agitation for an investigation of the College. He stated to at least two of the students that they should keep the matter quiet and not inform the President of what he had done.

His acts in connection with both matters were, in the opinion of your Commissioners, such as would lead to disloyalty among the students and influence them to dishonorable acts, especially as it was shown by one of the students that he advised them to recommend a student being called on behalf of Mr. McCrae during the investigation into that trouble, believing, as he stated, that such student would give evidence detrimental to Mr. McCrae.

With respect to Mr. Johnston E. Story, the Farm Foreman, your Commissioners are of opinion that he has been active, in connection with Prof. Shaw, for some years in poisoning the minds of students against the Minister and the President. He reported every little circumstance that came to his knowledge to Prof. Shaw that he considered would occasion discord between Prof. Shaw and the Minister, the President or any officer of the institution.

We are also of opinion that he has not, as farm foreman, attended to his duties in looking after student labor and the regular farm labor as required of him, and that the large expenditure for labor has been largely owing to his laxity in overseeing his work.

Your Commissioners are of opinion that it is a great mistake to require him to travel throughout the country purchasing stock, and thus neglecting his legitimate duties as farm foreman.

Your Commissioners beg respectfully to report that the petition presented by the ex-students calling for this investigation was so presented by friends of Prof. Shaw, asking for the appointment of four Commissioners, three of whom they knew to be opposed to Dr. Mills, the President of the College, and evidently with the intention of having Dr. Mills removed from his position as President. The evidence given by them shows how greatly mistaken they were in the grounds for seeking the investigation.

This investigation has clearly proved to your Commissioners that it is in the interest of the institution that the rules, regulations and by-laws in connection with the institution should be rigidly enforced; that it is absolutely necessary that there should be only one head to the institution, and he alone responsible to the Minister for the proper discharge of the duties of all the staff and officers connected therewith, and that the College by-laws are sufficiently strict and definite if properly enforced.

In conclusion, your Commissioners regret to be compelled to report that the manner in which some of the students gave their evidence indicated that they were not desirous of giving all the information within their knowledge. In this connection we would mention the name of Mr. W. M. Newman, who we believe evaded the questions in a very dishonest manner, and we would also report that his actions among the other students are deserving of the highest condemnation.

We have the honor to forward herewith the evidence taken during the investigation, together with all documents referred to therein. We have the honor to be,

Your most obedient servants,
JOHN WINCHESTER, Chairman.
JOHN WATTERWORTH,
J. S. PEARCE, Commissioners.

Toronto, July 20, 1893.

Memorial to Mr. Foster.

Brandon, Man., July 31, 1893.

To the Editor:

DEAR SIR: You will much oblige the committee that was appointed to get up the enclosed memorial, by inserting the same in your excellent paper with the following advice to the farmers:

To the Farmers of Manitoba, Gentlemen:

We, the committee appointed at a meeting of the farmers of this district to get up a memorial to be presented to the Hon. Mr. Foster, Minister of Finance, on his visit to Manitoba, have tried to discharge the duty assigned us by producing the memorial as you see it in this paper, and which, when submitted to a large mass meeting of the farmers of this country, was unanimously adopted.

We therefore, with confidence, submit the same through the press to every farmer of this Dominion for their adoption, trusting that we farmers can be united on this platform, and that in every locality there will be meetings called and the said memorial (or one as similar as possible) adopted, and delegates appointed from each place to wait on and present the same to the Minister of Finance, when he will visit their locality, as the hon. gentleman has expressed a desire to meet the farmers at different points in this country.

Let every man do his duty; be prepared in time, which means action at once, and we will convince the government that we mean business.

JOHN LEECH,
By order of the committee.

To the Hon. George E. Foster, Minister of Finance.

SIR,—In continuance of expressions by petitions and resolutions last winter, the farmers of Western Manitoba in mass meeting assembled in Brandon on the 29th of July last, adopted the following memorial to the Government as declarative of their necessities for consideration at the next meeting of the Parliament of Canada. They feel that in this your first official visit to the Northwest, which they are pleased you have made, after reasonable enquiry you can find these demands to be only equitable and just. They find that nothing less than meeting these will make farming reasonably remunerative; that the demands are in no way in conflict with the agriculturalist in any other section of the Dominion; and that they are neither extravagant nor unjust to any when due consideration is made for what has heretofore been done for other interests of much less importance to the Dominion. They therefore respectfully submit this as the only list of concessions, the granting of which can give them justice in the premises.

EXPORTS.

The exports of any country are one measure of its internal importance, and consequently the classes employed in export products may be valued according to results. In the trade and navigation returns for 1892, we find the exports classified as follows:—

Of the forest.....\$23,633,675
Animals and products.....30,083,775
Agriculture and products.....30,817,406
Manufactures proper.....7,740,855

As portions of the first two items belong to manufactures and agriculture respectively, we separate them and find in the first

Manufactures.....\$18,000,000
Animals and products—manufactures.....15,000,000
Add manufactures proper.....7,740,855

Total of manufactures in every form.....\$40,740,855

The balance of forest and animals being agriculture pure and simple, when added to the agriculture above gives a total agriculture of \$52,208,075. As manufactures and agriculture are affected in reverse ways by protection, its benefits and burdens are measured in exports by the figures above.

Again manufactures may be divided into 40 classes, and as the government has from time to time lent its ear to the representatives of these forty interests representing an average of \$1,000,000 a year each, we submit it is only justice they should consider the claims of the representatives of the \$52,208,075, which are, province by province, section by section, practically the same.

IMPORTS.

If again we take the matter of revenues from customs and excise, the agriculturists being 3,800,000 of the 5,000,000 of population, they contribute \$20,000,000 of the \$28,000,000 raised from these two sources. If it is contended the manufacturers per capita, by importing heavily for manufactures, pay larger customs than agriculturists, as the latter pay them again in the consumption of the products, it leaves the figures unchanged.

THE PROTECTIVE POLICY.

Whatever may be said of the necessity of this policy at its inception, even its most ardent admirers must admit, with circumstances as changed as they are now, there is every argument for its modification. When introduced there was excessive production in many lines in the United States, because of the plethora of cheap money consequent upon the close of the civil war, and now things have got into their normal condition, their money has got to its true value; the consuming power of their people is better gauged, and their Northwest is being opened up as a field for consumption. Our manufacturers, too, were in their infancy; but now, as most of them can take money they have made in their industries and invest it in outside enterprises and can compete with the Americans in other fields, we submit they can compete at home. In any event competition from outside would cheapen prices, the 3,800,000 out of the 5,000,000 population would get the benefit, and it is desirable on the principle of "the greatest good to the greatest possible number."

But this is not all. When, from an agricultural point of view, the N. P. was adopted there were practically four provinces in Confederation, in every one of which manufacturing industries were created that were of more or less benefit locally to the agriculturists. Since then half a continent has been opened up to agriculture in the Northwest, which can derive none of the benefits of these industries; but the people are compelled to endure all the hardships of enhanced prices by heavy freights and other obnoxious usages adopted in a new country. Some of these may be shown by one illustration: The Toronto binder is sold to Ontario farmers for \$110 cash, the freight to this country is \$12.50, and the price here is \$110 cash instead of \$122.50. The government cannot fix the prices of the products of private enterprise, but it can by the removal of tariffs let in a competition that will speedily work the cure.

But the N. P. is failing in another of its missions, as is evidenced by the statement of the trade and

navigation returns. We give the duties on imports into Manitoba of agricultural implements for the years 1886, 1889 and 1892 to illustrate this:—

	1886.	1889.	1892.
Harrows.....	\$ 124	\$ 222	\$ 378
Harvesters.....	7,111	960	22,378
Mowing Machines.....	64	222	6,388
Plows (sulky and walking).....	161	509	9,884
Threshers and Separators.....	461	9,272	23,470
Barbed Wire.....		61	322
Twine for Binders.....		428	25,902
All other Implements.....	1,395	2,850	9,470
Total.....	11,116	14,314	98,379

This gives the imports of 1889 fifty per cent. greater than those of 1886, and those of last year nine times those of 1886, and seven times those of 1889.

The lesson is, it has taken piles of money out of our pockets for revenues, and fails to keep "Canada for the Canadians," as it was alleged it would do. In a word the duties fail to keep the home field for the home article, but enables the home producer to extort unusual prices on all sales made—as witness a comparison between prices on this side and the other side of the line to actual consumers:

	Dakota.	Manitoba.
Stubble plow, steel beam 14 inches.....	\$ 18	\$ 23
Breaker plow.....	14	25
McCormick binder.....	120	190
Deering binder against Toronto binder here.....	125	140
Mowers.....	55	70
Rakes.....	25	35

Or a total of about \$140 on an average outfit less than here.

From the figures above it will be seen that last year Manitoba paid \$25,902 out of the \$41,852 paid by the whole Dominion on binding twine.

But our grievances are not as agriculturists limited to the implement, twine and barbed wire trades, which are so important to farming in this country. In the lumber protection a burden of equally serious moment is forced upon us. With the American forests practically exhausted there is no danger of illegitimate competition from that quarter, and with our own forests none too large, there is no need for haste in production—the removal of duties could only lead to reasonable competition, and would greatly preclude the possibility of combines. As building material of every kind is scarce in this country, and as protection for man, beast and implement is so imperative, cheap lumber is the all-important question to the Northwest farmer. Under protection we have now, for instance, a combine of all producers that have access to our markets that exacts a profit of 20 per cent. on cost at delivery on all sales, rendering good lumber beyond the reach of the farmer of moderate means, and enabling the dealer to pocket three times the profit in any other commercial business with the same amount invested. Under this combine a profit of half a million of dollars annually is open to the lumber dealers of Manitoba alone.

COAL OIL.

Though the duties on coal were nibbled at last session, a clean sweep must be made to relieve us of an unnecessary burden. We say unnecessary, for the trifling benefit of the industries in Lambton county, Ont., are not at all an equivalent, even from a Federal point of view, for the consequent taxation on all classes of the community. Our payments on duties on this one commodity alone, for the past three years, were \$1,151, \$10,300, and \$26,888. It would require the art of a sagacious statesman indeed to show how the Northwest through the operation of the wells at Petrolia got a return for the \$26,887 contributed to the revenue last year.

To sum up, estimating a set of implements to last five years, those in use on an ordinary quarter section cost the farmers of this country unnecessarily each year.....\$ 30 00

As the railway rates to the seaboard cost the Manitoba farmer from 2 to 5 cents more per bushel on wheat than his Dakota competitor, the quarter section farmer is in this particular handicapped per year by.....50 00

The extra cost of lumber, coal oil, twine, etc., amounts to at least another.....45 00

Total.....\$ 125 00

Which means the difference between successful and unsuccessful operation to the average farmer wherever in Canada he may be found.

When considering the arguments for and against the position herein taken, there is another most important fact to which we desire to call the attention of the government. It is this—the farmer is the only class of producer in Canada who cannot fix the cost of his products, no matter what may be the price of his productions. The manufacturer will regulate the price of his products according to their cost through duties on raw materials, price of labor, etc., but no matter what agencies may tend to raise or lower the costs of agricultural products—the Canadian farmer has to take the prices offered in England and other consuming centres. The necessity, therefore, for enabling him by the removal of tariff restrictions, high rates of carriage of products, etc., to better compete with his American or other rival in the markets of the world must be apparent to all who give the matter a thought.

We submit, therefore, to make farming profitable in this country (and profitable operations to those employed are the best, the only true immigration agent the government can employ), we must have coal oil, binding twine and barbed wire free from duty, and the duties on implements reduced to at least not more than ten per cent, which will leave ample protection to the Canadian makers against discrimination in freights.

All of which is respectfully submitted.

Weeds.

J. HOYES PANTON, M.A., F.G.S.

With this contribution to the columns of the FARMER'S ADVOCATE the writer closes his series of articles upon the weeds of Ontario. It is wonderful how indifferent many farmers are to the presence of these waifs in plant life; but we hope that the reading of these articles will have a tendency to lead them to meet some of these enemies at the very threshold of their attack. We might add here some of the objections that may be urged against weeds:

1. They involve extra labor.
2. Smother out useful plants.
3. Rob the soil of moisture.
4. Add impurities to grain.
5. Take food from the soil.
6. Often afford shelter for insects and injurious fungi.
7. Give farms an unsightly appearance.

If we consider these objections, there is certainly much reason for continual war being waged against weeds. As a fitting conclusion to our outline of the most common weeds in Ontario, and the remedies likely to be successful in getting rid of them, the writer adds in a tabulated form some information which may be of service to intelligent readers for reference in the future.

A TABULATED LIST OF THE MOST COMMON WEEDS IN ONTARIO.

ORDER.	SCIENTIFIC NAME.	COMMON NAME.	DURATION.
RANUNCULACEÆ.	Ranunculus acris.....	Buttercup.....	Perennial.
	R. bulbosus.....	Bulbous buttercup.....	Perennial.
	R. sceleratus.....	Cursed crowfoot.....	Annual.
	Aconitum Napellus.....	Monkshood.....	Perennial.
CRUCIFERÆ.	Camelina sativa.....	False flax.....	Annual.
	Capsella Bursa pastoris.....	Shepherd's purse.....	"
	Lepidium virginicum.....	Pepper-grass.....	"
	Thlaspi arvense.....	Penny-cress.....	"
	Sinapis arvensis.....	Mustard.....	"
	Sisymbrium officinale.....	Hedge mustard.....	"
PAPAVERACEÆ.	Erysimum cheiranthoides.....	Worm seed mustard.....	"
	Papaver rhoeas.....	Corn poppy.....	"
HYPERICACEÆ.	Hypericum perforatum.....	St. John's Wort.....	Perennial.
	CaryophyllaceÆ.	Lychnis Githago.....	Corn Cockle.....
PORTULACACEÆ.	L. Vespertina.....	White Cockle.....	Biennial.
	Silene inflata.....	Bladder campion.....	Perennial.
	Cerastium arvense.....	Field chickweed.....	"
	Stellaria media.....	Chickweed.....	Annual.
MALVACEÆ.	Saponaria officinalis.....	Bouncing bet.....	Perennial.
	Portulaca oleracea.....	Purslane.....	Annual.
ANACARDIACEÆ.	Malva rotundifolia.....	Mallow.....	Perennial.
	M. Moschata.....	Musk mallow.....	"
	Rhus venenata.....	Poison sumach.....	"
	R. toxicodendron.....	Poison ivy.....	"
LEGUMINOSÆ.	R. radicans.....	Climbing poison ivy.....	"
	Trifolium arvense.....	Rabbit-foot clover.....	Annual.
	Vicia Cracca.....	Wild tare.....	Perennial.
	Medicago lupulina.....	Black medick.....	Annual.
UMBELLIFERÆ.	Mellilotus alba.....	Sweet clover.....	"
	M. officinalis.....	Yellow clover.....	"
	Daucus Carota.....	Wild carrot.....	Biennial.
	Conium maculatum.....	Poison hemlock.....	"
ONAGRACEÆ.	Pastinaca sativa.....	Wild parsnip.....	"
	Anothera biennis.....	Evening primrose.....	Perennial.
CRASSULACEÆ.	Epilobium angustifolium.....	Great willow herb.....	Perennial.
	Sedum acre.....	Mossy stone-crop.....	Biennial.
DIPSACACEÆ.	Dipsacus sylvestris.....	Teasel.....	Biennial.

List of Principal Fairs to be Held in Canada, 1893.

ASSOCIATION.	PLACE OF FAIR.	DATES.
Industrial Exhibition	Toronto.	Sept. 4 to 16
Stamstead Live Stock Ass'n.	Stamstead, Que.	Aug. 23 and 24
Eastern Exhibition Ass'n.	Sherbrooke, Que.	Sept. 4 to 7
Prince Edward County A. S. S.	Pictou	Sept. 12 and 13
Lanark Horticultural Society.	Lanark	" 14 and 15
Western Fair	London	" 14 to 23
Wellesley & North East Hope.	Wellesley	" 19 and 20
South Renfrew.	Renfrew	" 19 and 20
Central Exhibition Ass'n.	Whitby	" 19 to 21
Ontario and Durham Ex. Ass'n	Whitby	" 19 to 21
South Lanark Fair.	Perth	" 19 to 21
Bay of Quinte District Ex.	Bellefleur	" 19 to 22
Huntley Agricultural Society.	Carp	" 20 and 21
Fitzroy Agricultural Society.	Mohr's Corners.	" 22 and 23
Central Canada Exhibition.	Ottawa	" 22 to 30
Central Exhibition.	Peterboro	" 25 to 27
Lincoln Co. Union Exhibition.	St. Catharines	" 25 to 27
Midland Central Fair.	Kingston	" 25 to 29
North Riding of Oxford A. S.	Woodstock	" 26 and 27
Mornington Agricultural Soc.	Milverson	" 26 and 27
South Grey Exhibition	Durham	" 26 and 27
Centre Bruce Exhibition	Paisley	" 26 and 27
S. Sherbrooke Agr. Society.	Maberly	" 26 and 27
Shenburn Fair	Brantford	" 26 to 28
Northern Exhibition.	Walkerton	" 26 to 28
Great Northern Exhibition	Collingwood	" 26 to 29
Central Fair.	Lindsay	" 27 to 29
Ross and Bromley.	Cobden	" 28
The Cannington Central Ex.	Cannington	" 28 and 29
County of Peel Agr. Society.	Brampton	" 28 and 29
Dereham Agricultural Society	Tilsonburg	" 28 and 29
North Perth Exhibition.	Stratford	" 28 and 29
Dalhousie Agr. Society	McDonald's Cr's	" 29
Malahide Agr. Society	Aylmer	Oct. 2 to 4
Haldimand County Fair.	Cayuga	" 3 and 4
North Brant Agr. Society.	Paris	" 3 and 4
Arthur Tp. Union Exhibition.	Arthur	" 3 and 4
Stephenson Agr. Society	Utterson	" 3 and 4
North Simcoe Fair.	Stayner	" 3 to 5
North Lanark Fair.	Almonte	" 3 to 5
Peninsular Fair.	Chatham	" 3 to 5
East Riding of York Agr. Soc.	Markham	" 4 to 6
Centre Wellington.	Elora	" 5 and 6
North Renfrew Fair.	Beachburg	" 5 and 6
South Norwich Exhibition	Otterville	" 6 and 7
East Kent Agricultural Soc.	Thamesville	" 6 to 8
Howard Branch Agr. Soc.	Ridgeway	" 9 to 11
West York and Vaughan A. S.	Woodbridge	" 17 and 18
Norfolk Union Fair	Simcoe	" 17 to 19

If any exhibitions have been omitted, we would be pleased to have the secretaries send us their dates, so that this list may be as complete as possible.

Hoard's Dairyman:—"Milk is improved for cheese-making by being run through a separator without abstraction of the fat, and, with very rich milk, we are not sure that it would very materially affect its quality if one pound of fat per hundred pounds of milk were taken out." The good effect of running the milk through the separator is in taking out the dirt, fibrin and other matters that cause deleterious effects to the flavor and texture of the cheese.

ORDER.	SCIENTIFIC NAME.	COMMON NAME.	DURATION.
COMPOSITEÆ.	Senecio vulgaris.....	Groundsel.....	Annual.
	Ambrosia artemisiifolia.....	Ragweed.....	"
	A. trifida.....	Horse ragweed.....	"
	Leucanthemum vulgare.....	Ox-eye daisy.....	Perennial.
	Achillea millefolium.....	Yarrow.....	"
	Tanacetum vulgare.....	Tansy.....	"
	Solidago Canadensis.....	Golden rod.....	"
	Rudbeckia hirta.....	Cone flower.....	"
	Centaurea Cyanus.....	Blue bottle.....	Annual.
	C. nigra.....	Knap weed.....	Perennial.
	Erigeron Canadensis.....	Sow-thistle.....	Annual.
	S. arvensis.....	Corn sow-thistle.....	Perennial.
	Erechtithis hieracifolia.....	Fireweed.....	Annual.
	Lappa major.....	Burdock.....	Biennial.
	Cichorium Intybus.....	Chicory.....	Perennial.
	Taraxacum Dens-leonis.....	Dandelion.....	"
	Erigeron Canadense.....	Field chamomile.....	Annual.
	Maruta Cotula.....	May weed.....	"
	Autheis arvensis.....	Field chamomile.....	"
	Cirsium arvense.....	Canadian thistle.....	Perennial.
C. lanceolatum.....	Bull thistle.....	Biennial.	
Aster cordifolius.....	Aster.....	Perennial.	
Bidens frondosa.....	Bur marigold.....	"	
Inula Helentium.....	Elecampane.....	"	
Xanthium Canadense.....	Cocklebur.....	Annual.	
Verbasum thapsus.....	Mullein.....	Biennial.	
Veronica arvensis.....	Field speedwell.....	Annual.	
V. peregrina.....	Neck weed.....	"	
Linaria vulgaris.....	Toad-flax.....	Perennial.	
Verbena hastata.....	Blue vervain.....	"	
Leonurus Cardiaca.....	Motherwort.....	"	
Nepeta Cataria.....	Catnip.....	"	
Brunella vulgaris.....	Self-heal.....	"	
Echinopspermum Lappula.....	Stickseed.....	Biennial.	
Cynoglossum officinale.....	Common hound's tongue.....	"	
Echium vulgare.....	Blueweed.....	"	
Lithospermum arvense.....	Pigeon weed.....	Annual.	
Datura Stramonium.....	Thorn apple.....	"	
Solanum Dulcamara.....	Bitter sweet.....	Perennial.	
S. nigrum.....	Common nightshade.....	Annual.	
Physalis viscosa.....	Ground cherry.....	Perennial.	
Convolvulus arvensis.....	Bindweed.....	"	
Cuscuta trifolii.....	Dodder.....	Annual.	
Asclepias Cornuti.....	Common milkweed.....	Perennial.	
A. tuberosa.....	Butterfly weed.....	"	
Plantago major.....	Plantain.....	"	
P. lanceolata.....	Rib grass.....	"	
Chenopodium album.....	Lamb's quarters.....	Annual.	
Blitum capitatum.....	Strawberry bite.....	"	
Amarantus retroflexus.....	Common pigweed.....	"	
Polygonum aviculare.....	Knot grass door weed.....	"	
P. Persicaria.....	Spotted knot-weed.....	"	
P. convolvulus.....	Knot bindweed.....	Perennial.	
Rumex Acetosello.....	Field Sorrel.....	"	
R. crispus.....	Common dock.....	"	
R. obtusifolius.....	Bitter dock.....	"	
Euphorbia Cyparissias.....	Yellow spurge.....	Annual.	
E. maculata.....	Spotted spurge.....	Perennial.	
Urtica dioica.....	Nettle.....	Perennial.	
Allium triococum.....	Wild Leek.....	"	
Brusmus secalinus.....	Chess.....	Annual.	
Triticum repens.....	Couch grass.....	Perennial.	
Setaria glauca.....	Foxtail.....	Annual.	
Panicum Crus-galli.....	Barnyard grass.....	"	
P. capillare.....	Witch grass.....	"	
Avena fatua.....	Wild oat.....	"	

29 orders, 81 genera, 104 species.

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.]

Veterinary.

ANSWERED BY W. A. DUNBAR, V. S., WINNIPEG.

STONE IN THE BLADDER.
GEORGE STEWART, Moosomin, Assa.:—"I have a mare that had a foal this spring. Lately I have noticed she has a difficulty in her water. She is constantly dribbling; it is unaccompanied apparently with pain. She has also a difficulty in eating or swallowing. Seems anxious enough for food, but will chew it a little while and drop it from her mouth. I thought her teeth were the cause, but a local veterinarian says her mouth is all right. He gave me some powders for her water, but there is little improvement yet. She is fast losing flesh, and, as I am anxious to discover the cause of her trouble, I apply to you. I might add that after drinking her coat stares very badly. I enclose a stamped envelope for reply, if you consider the case urgent enough for a reply in that way."

Incontinence of urine in the mare is usually a marked symptom of cystic calculus—stone in the bladder. To find out if that is the ailment, you will, immediately after the mare urinates, empty out the rectum by giving an injection of warm water or with the oiled hand; then introduce the hand into the rectum until it reaches the front of the pelvis; feel downward and backward for the bladder, and if it contains a stone or other foreign matter, its presence will be easily detected. The removal of a stone from the bladder of a mare is a simple operation, and, when carefully performed, is unattended with danger. It is, however, necessary that the operator have a sufficient anatomical knowledge of the parts, and be provided with the proper instruments. With all due respect to the opinion of your "local veterinarian," we believe that a thorough examination of the mouth, especially of the teeth, will reveal the cause of your mare's partial inability to masticate and swallow.

LUMPY JAW.

B. ROTHWELL, of Melfort, Sask., enquires for a cure for a lumpy jaw, and also asks if it is a contagious disease.

Lumpy Jaw (*actinomyces*) was fully described and the now generally accepted cure given in the ADVOCATE, April 15th, page 152, but for the benefit of recent subscribers we repeat in part:—It is not infectious nor very contagious; the remedy is iodide of potassium, and the dose for a mature animal about two drachms morning and evening

for a week, and afterwards one drachm twice a day for one or two weeks. The medicine may be given in bran mash.

DOG DISTEMPER.

THOS. C. GERRARD, Shelburne, Man.:—"I have a spaniel dog who, when young, had a bad attack of distemper, and has ever since been troubled with humor in his eyes and soreness and itching in his ears. Last year about this time his feet got sore with inflamed pimples between his toes, and now again his feet are so sore that I fear he will be useless for the season's sport unless speedily relieved. What is best to do for him?"

Give your dog the following purgative dose:—Barbadoes aloes and ginger, of each eight grains; jalap, six grains; soap sufficient to form a pill. When the purgative has operated, give morning and evening for ten days, dissolved in milk, sulphate of soda, fifteen grains. Foment the feet with warm water and apply to them, every alternate day, the following liniment: Solution of potassium, half an ounce; olive oil, three ounces; creasote, two drachms; tincture of opium, four drachms. Feed principally on porridge and milk.

ANSWERED BY DR. MOLE, M. R. C. V. S., TORONTO.

MAMMITIS IN COW.

M. A. RYAN, Sault Ste. Marie, Ont.:—"I have a cow six years of age, recently purchased, when I milk her there appears a thin streak of ropy material the color of blood; she appears good and healthy every other way. I would feel obliged if you would kindly advise me what to do for her, and send me your charge and I will forward it by return mail."

We so very lately went into the subject of mammitis that we do not wish to repeat all the symptoms again. This form, as seen in your cow, is a modification of the acute stage, and most probably due to overstocking the udder at the time of sale; this will account for the gradual development of the symptoms. A camphorated liniment, composed of tincture of camphor 1 part, and glycerine 8 parts, well rubbed into the gland night and morning will bring about recovery. Hand milking every three hours will afford relief.

YOUNG PIGS DYING.

T. E. HUMPHREY, Dixville, Que.:—"I am having a little hard luck with my spring pigs. They are about ten weeks old, and I have fed them on skim milk altogether, nothing else, not even to the butter milk. I found one of them lame in front, and the next morning he was lame both fore and hind legs and could not walk; then the others seemed to be lame all round. One of them died, and I am looking for the others to go very shortly. They do not seem to be in any pain; do not purge or make any fuss. Can you give me any idea how to account for this trouble?"

There is no doubt that your little pigs are dying from direct infection of "Tuberculous Arthritis," by means of infected milk. You will probably have had a cow suffering from Mammitis, or garget of the udder, and her milk has been used for these pigs, thus causing their deaths. In such cases the milk should be scalded or boiled before being used.

COLT QUIDS HIS FOOD

A. H. GOOD, Toronto:—"I have a two-year-old colt that has been in an unhealthy state for some time. He drinks naturally and swallows water without difficulty, but seems to exist wholly on the juices of grass or hay, for the fodder, after chewing, is thrown out in pellets. Can you advise me any practical cure for him?"

On receipt of this enquiry I made a personal investigation, and found that the temporary molars were not shed, which interfered with the proper mastication of the food, and the coarser portions were accordingly rejected. Removing the cause will no doubt bring about recovery.

GARGET IN EWES.

E. A. GARNHAM writes us concerning ewes which have given him trouble with their udders, which became swollen, hot and painful. In some cases the trouble was relieved by rubbing with castor oil, which failed to give good results in others, and loss of one or both sides was the result. One bad case is described as follows:—"About July 1st I noticed one of my ewes not feeling well, and, upon examination, found one side of her bag badly swollen and very tender, so much so that she refused to let her lambs suck. I milked her out dry, and the next morning I tried her again and could get nothing but a little yellowish water from the swollen side; oil was applied, but to no effect; the bag continued to swell until the belly was swollen nearly to the forelegs, the bag becoming purple on the affected side. I was applying a mixture of linseed oil, camphor, turpentine and coal oil; in about one week the swelling began to abate, and, in about two weeks, half of the bag which had become purple dropped off, leaving a very angry, raw place. Turpentine and carbolic acid was used, which kept the flies off but did not heal the sore, but gave it a gangrenous appearance. I have since been using a mixture of crude castor oil and blue vitriol water, but the sheep is far from being well yet. There have been several cases similar to the above in the neighborhood. What was the probable cause of the swelling or inflammation, and the cure? Also the proper treatment of the above case? Where can I procure the best veterinary work, in your opinion, for a farmer's use, and the name and costs?"

The disease is common among ewes, and with a little timely treatment of the proper kind is easily removed. The causes are blows on the glands, sores on the teats, leaving the milk unduly long in the bag, standing in a cold current of air, exposure to cold showers or inclement weather, rich milking food too suddenly supplied, indigestion, or, indeed, any derangement of the general health is liable to produce this disease in an animal in full milk. The July 15th issue of the ADVOCATE gave treatment of "Garget in Mare," which, if given to ewe in the quantity, will answer very well. The proper treatment for ewe with gangrene would be to keep her in a darkened shed, away from the flies; give the alterative powers; wash the affected part with warm soft water, with castile soap and a few drops of carbolic acid every morning, and apply carbolized oil (one part carbolic acid to twenty-five of raw linseed oil). The treatment used by Mr. Garnham has been of too strong a character, and has had a tendency to increase the trouble rather than diminish it. "The Farmer's Veterinary Adviser," by Law (price, \$3), would doubtless answer your purpose. You may order it from this office.

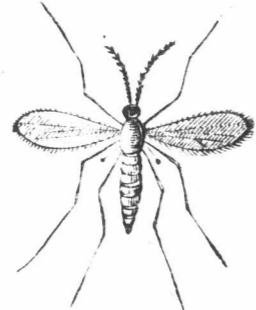
ENTOMOLOGY.

Hessian Fly, Joint Worm and Autumn Web Worm.

Among the most destructive pests that have visited our country this summer are the Hessian Fly and the Joint Worm, about which we have had several letters. The Autumn Web Worm is also very numerous on the fruit trees, as well as others, throughout Ontario.

The Hessian Fly is supposed to be an indigenous insect, the belief from which it receives its proper name that it was introduced into the States by Hessian troops during the revolutionary war—being now dispelled. It is, however, a fact that it was first noticed in the States in 1776. It was seen at Quebec in 1816, and in this province in 1816, since which date it has been a frequent and unwelcome predator upon the fall wheat crops, few years passing without notice of its presence being announced from some quarter. Its body is of a dark brown color, about one-third of an inch long; the wings are of a dull smoky brown, and the legs are a paler brown than the body. The maggots appear in the "flax seed" condition.

It appears first in the fall at the root of the fall wheat plants, its eggs are laid and the larvae hatched out below the surface of the earth on



the root, and there they remain all winter, the brood appearing in spring. There is a second brood in the spring which attacks the stalk, where the insect is most generally noticed. Farmers hardly ever observe the insect at the root, but every one who has observed it has seen it on the stalk.

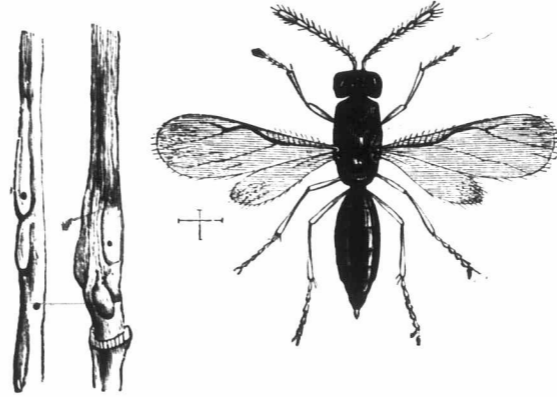
It attacks the stalk just above the first or second joint from the root, where it is enveloped by the leaves. The larvae vary in color at different periods of their existence, being very pale at first, but afterwards of a deep chestnut color. Their first attack is made when the stalk is very tender and green, and they puncture it to extract the sap, the results being to cause a small depression, where the larvae remain. There may be five or six encircling a single stalk at one time, and the result of their combined efforts is to weaken and finally to break it, causing it to fall down, thus ruining the grain.

After the larva has fed for a considerable time upon the stalk, it assumes what is called the "flax seed" state, resembling in color, size and general appearance a grain of the ordinary flax seed. In this state it continues for a considerable period, and it is carried from the field to the granary while in this condition. It is a much discussed point as to what this "flax seed" stage exactly is. It is looked upon as the pupa stage, but how it is produced, being so different from the form common among insects, has not been determined upon by entomologists, some thinking that the "flax seed" covering is the pupa stage, and others that it is an exudation from the body. The Hessian Fly attacks the stalk solely, never the ear.

Every successful wheat grower will readily admit that one of the most effectual preventatives of the ravages of wheat insects is a rich soil, thoroughly tilled. It invariably happens that the crop is most seriously injured on lands that have been carelessly tilled, and have become impoverished by an exhaustive course of cropping.

Prof. Cook, of the Michigan Agricultural College, states that when the season approaches the flies will lay their eggs upon the first suitable plant they can find, and recommends sowing a narrow strip of wheat around each field in August, or early in September, and deferas long as the season will permit sowing the wheat from which the crop is to be obtained. By this means the wheat sown in the strip will make its appearance first, and most of the eggs of the fly will be laid upon it, after which period it should be plowed in very deeply, that the eggs may be destroyed and the later wheat then sowed. The outer strip may then be included also. This method, if successfully carried out, will destroy the fly and protect the wheat at the same time. Hardy varieties that tiller out well are able to withstand backsets of any kind. The use of lime, soot or salt is also recommended.

Joint Worm.—There has never a year passed since our recollection that the effects of the Joint Worm have not been visible in the grain fields, but up till quite recent years the damage has been so limited that there has been little cause for alarm to the cereal grower.



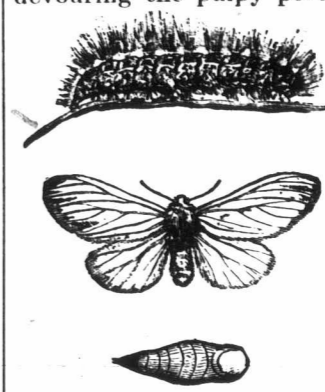
The maggot of this insect is but little more than one-eighth of an inch long, and of a pale yellow color, with the exception of the jaws, which are a dark brown. It inhabits a little cell which is situated in the internal substance of the stem of the affected plant, usually but a short distance above the first or second knot from the root, the outer surface of the stem being elevated in a corresponding elongate blister-like swelling; and when, as is generally the case, from three to ten of these cells lie close together in the same spot, the whole forms a woody enlargement, honey combed by cells, and is in reality a many-celled gall. In each of the galls can be seen little pinhole aurifices, through which the flies passed when the Joint Worms have escaped. At first these little knotty swellings of the stem are apt to elude observation, because of being almost always situated just above the joint or knot on the stem, whence comes the popular name "Joint Worms". They are enveloped and hidden by the sheath of the blade, but on stripping off the sheath they become at once very conspicuous objects.

The mode in which the Joint Worm produces its destructive effects upon small grain may be readily explained. Not only is the sap extracted on its course to the ear, in order to form the abnormal, woody enlargement or gall in which the larvae are embedded, each in his own private and peculiar cell; but a very large supply of sap must be wasted in feeding the larvae themselves. Hence the shrivelling of the ear.

The Joint Worm makes its appearance during the fore part of June. After coupling in the usual

manner the female fly proceeds to lay her eggs in the stems of the growing grain. Leaving a long stubble and burning it is the most effectual remedy yet discovered.

Fall Web Worm.—The appearance of webs or "tents" upon fruit and other trees in late summer and in early autumn has caused many to suppose there was a second brood of the tent caterpillar. These late webs belong to a very different insect, which lays her eggs in a cluster upon a leaf near the end of a twig, and the young caterpillars, like those of true tent makers, begin to spin as soon as hatched, and as they feed and spin in company, the web formed by their united efforts soon becomes conspicuous. The worms descend the branches, devouring the pulpy portions of the leaves upon



them, and form a web as they go. When they have made their growth the caterpillar ascends to the ground, where, just beneath the surface, they enter the pupa state; the next summer they issue as pure white moths to lay eggs for another brood. The worm or caterpillar is of a pale or yellow color, with a broad, dusky stripe along the back, and a yellow stripe along each side, and they have numerous whitish hairs. While the Fall Web Worm often attacks the apple and other fruit trees, it does not confine itself to the orchard, but its web may be seen in autumn upon various kinds of trees, as well as on shrubs and flowers. The only remedy is to destroy the web wherever it may be seen, and as the worms never leave the nest this is quite sure to be effective.

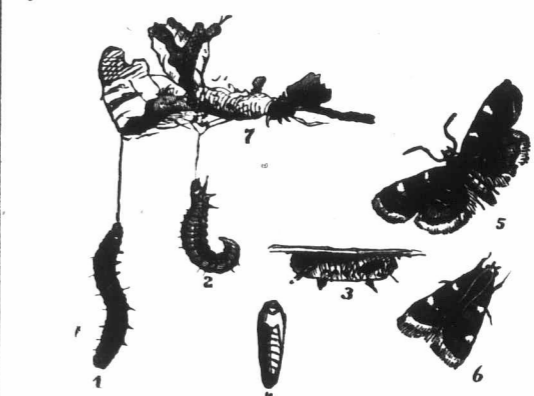
We would advise our readers not to neglect to destroy all the webs and worms that appear on their trees and shrubs; by so doing they not only save the tree that is now suffering, but next year's web worms will thereby be very materially decreased. The task is easily performed by hand—a pair of leather gloves makes it less disgusting. Care should be taken to destroy every insect; where the web has not grown so as to envelop large limbs, it is a good plan to carefully cut off the affected part and burn it. The worms lie very close, some may easily be missed when destroying the web.

The Clover Hay Worm.

The Rev. Dr. Wild recently called at our office to make inquiries concerning a small worm which was damaging his hay. From the description given we had no hesitation in pronouncing it the clover hay worm, *Asopia costalis*; since that time we have been informed that this insect caused a large amount of loss last season across the line. It is not a new pest—it has been known in this country for years, but has never done serious damage, owing to the general practice of cleaning out the hay mows in the spring, thus leaving nothing for the insects to live on; but in places where hay is kept over in large quantities they are often very destructive.

The parent of this pest is one of our prettiest moths. It is not active during the day except in cloudy weather, but towards evening it is often seen flitting around the clover stacks, and frequently finds its way into our dwellings.

The moth with wings outspread measures about seven or eight-tenths of an inch across. The forewings are of a reddish or purplish-brown hue, with a greyish tint over all and a silky gloss. Near the front there are two large, bright, yellow, golden spots. The hind wings are lighter in color, but both are margined with a deep orange, and fringed with golden yellow. The markings on the under side are less distinct. In the cut the larva is shown by figures one and two, the same enclosed in its silken web by seven, the cocoon by three, the chrysalis by four, and the perfect insect by five and six.



The eggs are laid on the clover stalk, or in any of the crevices and openings of the stack or mow; in a few days during summer the larva is hatched. The full-grown larva measures nearly three-quarters of an inch in length, is much wrinkled, and is of a dark, olive-brown color, with several smooth, shining dots, each giving rise to fine, whitish hair. The young larvae are paler in color, and occasionally specimens are met with which even

at maturity retain this light color. They usually dwell within a cylinder of silk of their own construction, and from this issue forth to feed on the dry clover. They are very active in their habits, and are often found lively late in the season, with the thermometer down to the freezing point. They are capable of suspending themselves by silken threads, and in this way sometimes cause great annoyance by hanging from the timbers of the barn.

The pupa when full grown seeks some sheltered spot to pass the chrysalis stage of its existence, as the underside of a board, bunch of hay, or other sheltering material; this stage is passed in an oval-shaped cocoon of silk, and intermixed with other foreign material. It is one-third of an inch in length, and of a pale yellow color, with deeper markings. There are two or more broods each year.

This insect is widely distributed, having been introduced from Europe to this continent, where it has been noticed for the last twenty years. It is in the larval state only that the insect is injurious, by feeding upon the stalks, and webbing them together with a multitude of silken threads, among which is such an abundance of black excrement as to render it unfit for feed. Sometimes the silken webbing and white cocoons form such a dense mass as to give the hay the appearance of being mouldy. The injury is chiefly done towards the bottom of the stack or mow; instances are on record where two feet or more have been rendered absolutely worthless.

The remedy consists in keeping no hay over from the previous season, cleaning up and destroying all rubbish and infested hay, which will kill all larvae and pupae, and thus prevent their issuing as moths later on and depositing their eggs for the next season's crop. Where hay is stacked it is well to raise the foundation above the surface on rails or logs. If the above directions are followed, no trouble from this insect will follow; as they do not feed on green or growing clover, they require dry hay to carry them over the summer or they will starve out.

DAIRY.

Bogus "Butter" Making.

A NEW SCHEME EXPOSED.

THE FARMER'S ADVOCATE has repeatedly found it necessary to expose swindles perpetrated or attempted upon farmers, one of the more recent and familiar being the sale of "Black Pepsin." Casein, the principal solid of milk apart from butterfat, can be coagulated by either rennet or pepsin, and with the fat be worked into a compound resembling butter, but which is not honest butter, but a cheesy mess. Nor is that the only way of attaining the same dishonest result. Good standard butter contains from 80 to 85 per cent. of butterfat, and the man who deliberately incorporates 30, 40, or 50 per cent. of casein and water and sells it for the genuine article, is no better than the thief who robs his neighbour's hen roost or wood pile. These swindling schemes are alarmingly on the increase, and no sooner is one snuffed out than another springs to light. As in the case of the Red Lion wheat and similar frauds, there seems yet to be people quite ready to be duped out of good, hard cash in order to be let into some visionary scheme of making money by magic, but which really means that somebody is to be robbed. Another of this very sort is now being pushed by a so-called "firm" located in Toronto. They claim to have a "new patent process of making and gathering butter," by which from two to three times as much butter can be made from the same quantity and quality of milk as by the old method. With misdirected assurance they have written us as follows:—

"Editor FARMER'S ADVOCATE, London, Ontario.

Dear Sir,—You will please find enclosed a circular and business card of our Canadian Patent butter process, which patent we received a few days ago. We should be very much pleased if you would mention some parts of it in the way of an editorial through your valuable journal, and no doubt the same would be very interesting to those who are subscribers. Our business advertisement we shall have ready soon after the Toronto Exhibition. Trusting we are not asking too much by this favor, we remain, yours truly."

The FARMER'S ADVOCATE finds it necessary to reject hundreds of dollars worth of such advertising as is referred to in the foregoing letter every year, but we do not mind devoting some editorial attention to these gentlemen, as they request, for the benefit of our readers. The circular admits that more butterfat cannot be got out of milk than it contains, but they get the extra amount of butter "by converting other solids in the milk into the form of butter." In other words, they want to teach dairymen how to make a something that looks like butter, that is to say, bogus butter. In the next paragraph the pretence is set up that the

product would be a "healthier article of food" than butterfat and "equally as healthful as milk in its natural state," all of which is senseless rubbish. The impudent pretence is also made that this alleged butter will keep as well as that made by the standard honest process. Any good butter maker knows that to carelessly retain a lot of extra caseous matter is to invite the butter to go "off flavor" and decay, but as this stuff is only to be in the "form of butter" and not the real article itself, perhaps it may keep. So will a keg of sawdust. Agents are, of course, wanted all over the country to sell farm rights inscribed on "an elegant" lithograph license, at the very modest rate of \$3.50 per cow, and shop licenses at from \$50 to \$200 each, and one cent royalty on each and every pound made by the new process over what is made by the old method. Licenses run for one year only. It is all figured out nicely, how that \$33 worth more butter will be got from each and every cow per year over our present stupid, old-fashioned way. Full and very careful directions are given how to send these Toronto gentlemen the funds (they prefer a bank draft). We warn our readers everywhere to give these sharks a wide berth. Have no communications with them whatever. No honest dairyman can for a moment entertain the idea of promoting, either directly or indirectly, this secret process of "butter-making," and if attempted will certainly prove a delusion and a snare. As we have shown from the circular, it is fraudulent upon its very face.

Importance of Rendering Monthly Statements to Patrons of Cheese Factories.

There is no business carried on in this country in which so many people have a particular interest as in the manufacturing of cheese as operated under the factory system, and at the same time there is no business conducted less upon business principles. In a large number of our cheese factories we find patrons supplying milk week after week without receiving any definite statement as to the amount of milk they are sending. In a great many cases this is due to the patrons themselves, who neglect to look after their own interests and take it for granted that everything is correct. It is the proper thing, no doubt, to maintain this attitude of trust towards the factory and those in charge of the work; but, on the other hand, it should not be looked upon as a lack of confidence in the integrity of the cheese-maker or the management of the factory because a patron asks for a weekly or monthly statement of the number of pounds of milk supplied by him, pounds of milk required to make a pound of cheese, prices, or the amount of cut cheese received, and other necessary particulars. Our most successful cheese factories to-day, and the ones holding the confidence of their patrons, are those which endeavor to keep all parties interested in the business well informed by weekly or monthly statements on their business transactions. A pass-book sent out every week with the milk drawer is the means generally adopted for this purpose; this answers very well, and it is not much trouble to the cheese-maker or secretary to copy into the pass-book once a week the amount of milk supplied daily by each patron. The difficulty of this plan is with the patrons themselves who neglect to send in their pass-books at the proper time, and complain because after five or six weeks have elapsed the cheese-maker objects to fill in the back accounts. If the pass-books are filled in regularly every week or two weeks, as the case may be, and returned just as regularly by the patrons, a good means will be furnished of keeping all concerned posted concerning the business carried on during the season. Another good plan, and in many respects better than the pass-books, is to have weekly or monthly statements sent out giving a concise account of the month's business. These statements could be made out on printed slips to be filled in, and could be kept on file by the patron till the end of the year, when they could be used for comparison. There will be much more need of some such scheme in the cheese factories where milk is being paid for according to the percentage of butterfat. Patrons want to know, and they have a right to know, what their milk is testing and how many pounds of butterfat they are supplying each week or month. It will pay all cheese and butter factory companies and the managers of such factories to give particular attention to furnishing their patrons with correct and concise statements once a week, or at least once a month, of the amount of milk they supply, and all necessary information about the factory's business. Patrons will appreciate such efforts, and will have more confidence in the concern, if they realize that they are dealing with business men and that their factory is being run on thoroughly business principles. There is too great a lack in this respect in the transactions of some farmers, and if our cheese and butter factories were run more on business lines it would have a wholesome effect in stimulating farmers to make improvement in that direction.

Points in Dairy Practice.

The keeping quality of butter will be improved if the cows are supplied with salt every day.

How seldom do we find a really palatable piece of cheese on the hotel tables? With proper attention the home consumption of cheese could be doubled.

Pure, cold water is absolutely essential in order to make the best butter. The temperature of the dairy and make rooms can be lowered considerably by sprinkling the floor with water, which takes up a large amount of heat in evaporation.

Farmers would do well to heed Prof. Henry's advice when he said that farmers cannot be too careful when putting their money and feed into old animals. Old cows rarely pay expenses, the profit always is in young animals.

Which is the best breed of dairy cows? We hear this question asked over and over again. Our advice is to go and test her with the weighs scales and Babcock, and discard all the poor ones, for it costs as much to keep a poor cow as a good one.

Pure cultures of cream ferments are in use in all good dairies in Denmark. These cultures are prepared and sold by the laboratories, and have now met with the approval of the practical dairyman. The culture is not added directly to the cream, but is first propagated in skim milk, which is, when possible, selected from the milk of a fresh cow.

The Massachusetts Ploughman says:—The farmer who complains that his cows are unruly merely advertises his own neglect to furnish good feeding for the animals. Cows do not jump fences merely to show their agility or for exercise—unless to get a chance to exercise their jaws and digestive apparatus. The unruly cow believes in the doctrine of self-preservation.

A writer in an exchange says:—"A man is not in good standing in our humane society who will allow his cows to wear their dangerous horns." In this country, until the Government investigation decided against it, this society preferred fining the farmers for following this humane practice, yet, in spite of this course, many men would rather be martyrs to the mistaken zeal for the prevention of cruelty than to allow their animals to inflict unnecessary suffering upon their fellows.

Experiments conducted by C. S. Plum at the Purdue University, show no gain in butter through the use of the aerator, though there was a considerable gain in the cream. Another experiment showed that the use of a separator saved, over the ordinary methods in use, one-fourth of a pound of butter in every hundred pounds of milk. This does not indicate that the use of the aerator is of no value in the dairy, for all experiments prove that the quality and flavor of both cheese and butter is better, and also that the use of the aerator is a preventative of milk tainting from foul odors.

In a recent issue of Heard's Dairyman we noticed complaints of loss in yield of milk due to the ravages of the Horn Fly in different parts of the Union—Mississippi, Georgia and Wisconsin. In addition to the remedies which we advised in our second issue for June, page 222, we noticed the following from Prof. Weed: Crude carbolic oil acid, 1 oz.; pennyroyal, ½ oz.; sulphur, ¼ pound, and cottonseed, fish or lard oil, 1 gallon. Fish oil and tar was also recommended. Prof. Atwood, in Insect Life, advises the use of tobacco water instead of clear water to dilute the kerosene emulsion.

During dry, heated terms the utmost care is necessary to prevent milk from becoming tainted. In order to obtain the best results, the cows should have an abundance of succulent food, should be allowed to drink pure water at least twice a day, be given salt every day, and also protected from the fierce blaze of the summer sun. Cows should be prevented from drinking impure water, and should be protected from being worried by dogs. Care should be taken to milk at regular times, and the milk should be strained immediately after it is drawn from the cow, aired by dipping, pouring or stirring, and protected from being contaminated by the impure air. If the milk is to be set for cream-raising it should be stirred as little as possible in the airing, and then the cans placed at once in the creameries or tank of cold water.

Will it Keep?

Editor FARMER'S ADVOCATE.

I have been told that it is not necessary to sour my cream before churning, and that sweet cream butter will have just as nice a flavor and keep as well as when made from cream slightly acid. Is this the case? I have been doing very well with my butter, and do not want to make any mistake now.

MIDDLESEX DAIRYMAID.

ANS.—Unless you churn sweet cream at a much lower temperature you will lose considerable butterfat. It also requires longer churning. The flavor will be milder than that of acid cream butter. If properly made, sweet cream butter will keep almost as well as sour cream butter. In some tests it has kept equally well, and in time appears to take on the sour cream flavor. Better follow the old plan.

Cheese Markets.

There has been a lull in the cheese markets in Western Ontario during the last two or three weeks. The first half of July make went off in pretty good time, at prices ranging from 9 $\frac{1}{2}$ to 9 $\frac{3}{4}$. But since these were disposed of some new factors have developed in the trade, which, in the opinion of factorymen, will have the effect of stimulating the price of cheese and lessening the stock on hand.

The extremely dry weather, which has been pretty general over Ontario and some of the important dairy districts of the United States, has no doubt decreased the production very materially. In Western Ontario there is a shrinkage of at least one-third in the amount of milk received at the factories. The extreme drought has so severely affected the pastures that cows have hardly enough feed to keep them alive, let alone supplying milk for cheese-making. The horn-fly has also been an important factor in lessening the flow of milk. This pest is so common, and its effects so serious, that dairymen everywhere are asking for remedies. The drought in Great Britain has seriously reduced the production of the home product, and will be a much more important factor in strengthening the cheese market in this country than anything else. The factory men consequently are holding, perhaps not unwisely, for higher prices. There were no sales at London cheese market for two markets—a thing that has not occurred before in a dozen years. The prices offered were not as high last market as the one previous. Although most of the salesmen are holding for 9 $\frac{1}{2}$, a great many of them would dispose of the remainder of July's at 9 $\frac{1}{4}$. The buyers were not willing to go that far for July's, and appear to be holding back for August's. It is not a good plan to hold the make of one month till the cheese of the following are offered, as the new goods take the lead and crowd the others out of the market. The buyers, on the other hand, claim that they are offering the outside limit for cheese, and that orders are coming in slowly.

The silver question and the condition of the money market across the lines has had the effect of varying the rate of exchange with Europe. Buyers claim this to be so serious as to lower the price of cheese here $\frac{1}{2}$ of a cent per lb. This means that if the money difficulty had not occurred, instead of offering 9 $\frac{1}{2}$ and 9 $\frac{3}{4}$ they could pay as high as 9 $\frac{1}{4}$ and 9 $\frac{1}{2}$ for cheese. This is a serious difficulty, and will counteract the stimulating effect that the shortage in production will have on the price of fall goods.

Preparing Cheese and Butter for the Exhibitions.

The fall exhibitions will soon be here, and parties who pride themselves in the excellency of their products will be getting them ready for display. Too much attention cannot be given to having exhibits, and especially butter and cheese, done up as neatly and cleanly as possible. No matter how good the quality of the goods shown is, if taste and neatness have not been shown in arranging the exhibit, the chances are that instead of the goods taking first place they will take a second or third rank.

People very often say: If the quality is all right, the greasy cloth around the butter or the rough edges on the cheese should not prevent it from taking a first place. Cheese and butter are judged upon their market value and neatness, cleanliness and good taste—an important factor in determining what an article is worth in the commercial world.

All exhibitions are object lessons, and the neater and more presentable an object on exhibition is the more distinction does it bring the exhibitor. We had the pleasure while in Chicago of examining a few of the cheese for the July competition from the States of Wisconsin and New York; while some of the exhibits were neat and tasty, others were almost unrepresentable. In some cases it was surprising how dairymen could send cheese of such unsightly appearance to an ordinary exhibition, let alone to the World's Fair. Prospective exhibitors of dairy products at the coming exhibition will profit by giving attention to the following notes:—

(1.) Have both the butter and cheese as fine in quality as they can be made.

(2.) Do not send a cheese unless it is perfectly symmetrical and straight, without any projecting edges or cracked faces.

(3.) Put the cheese in strong, well-made boxes, with covers that will fit on without nailing, if possible.

(4.) Cleanliness should be particularly noted in arranging exhibits of butter. Use parchment paper for wrapping up the pound prints, or have the cloth covering them scrupulously clean and neatly arranged.

(5.) Firkin butter should be put only in well-seasoned tubs, neatly put together. If some melted paraffine is run over the inside of the tub it will be air-tight, and keep the butter in a better condition. The top of the butter should be well-protected by a coat of salt, and the tub covered with a neat, tight-fitting lid.

(6.) Care should be taken to have exhibits addressed to the proper parties, and shipped in time to reach the grounds so as to be properly arranged for display before the show begins. It is not well, however, to send them too early, but look at the railway time-tables carefully, and get all perishable goods at least sent off in time to reach their destination safely and no more.

The Champion Cows.

The three champion cows in the fifteen days' cheese contest at the World's Fair were the Jersey, Ida Marigold, owned by Mr. Sweet, of Buffalo, credited with 70.92 lbs. cheese, at a net profit of \$6.97; the Shorthorn, Nora, owned by Sheehan & Sons, Asage, Ia., 60.97 lbs. cheese and gaining 56 lbs. weight, with a net profit of \$6.27, and the Guernsey, Sweet Ada, owned by Mr. Eddy, Saratoga, N. Y., making 54.05 lbs. cheese, at a net profit of \$5.27.

Improving the Quality of Milk.

S. S. Lawrason, St. George, Ont.:—“Is it not possible, by a certain course of feeding, to increase the amount of butterfat contained in milk? I have noticed a statement, by an agricultural professor, to the effect that it could not be done, but I am satisfied that I can so feed my cows as to accomplish that result, and would like to have the question answered through the FARMER'S ADVOCATE.”

ANS.—This subject was very fully dealt with in our issue of April 15th, but being a new subscriber since then, Mr. Lawrason probably did not see the article in question. In actual farm practice, as a general rule, we believe his contention to be quite correct, though, under certain conditions, an increased fat percentage may not follow an increase in the grain fed a cow. At the Vermont Experiment Station it was found, in feeding the waste products of corn, that a richer milk was produced in fourteen cases out of seventeen, and at the Colorado Station wheat bran increased the fat percentage. The Babcock and other tests have brought to light numerous instances where, by the judicious use of certain foods, dairy farmers have improved the quality of the milk produced by their herds. It has been commonly understood that a cow has what is styled a “normal capacity” of fat-production, up to which good care and a full and proper ration will bring her, though beyond that point, in a limited period of time at least, she would not be expected to go. But how many cows have reached that point? That one cow can be made to give as rich milk as another is doubtless not possible. Farmers must, therefore, breed for quality as well as quantity. The Babcock test is forcing many to do so.

Dairy Notes.

The Breeders' Gazette states that the death loss chargeable to the World's Fair dairy test already foots up a fearful total. Ten head have died—four Jerseys, four Guernseys, and two Shorthorns.

A writer in Hoard's Dairyman gives his experience with long and short ensilage. He says:—Last year his cutter, that was geared to cut a half-inch, went wrong, and a substitute had to be used that would cut 1 $\frac{1}{2}$ inches as the shortest length, and the result was to convince him that he had better wait a considerable length of time and continue with a half-inch cutter rather than finish the filling with ensilage beyond that length. When the short ensilage was arrived at, the character was different and for the better. With the long cut there was a picking over of the silage and minding by the cows that never takes place with the fine cut; more long pieces were left until the last, and a great deal more time was used in picking out the short pieces, instead of a rapid eating of ration which one likes to see. With the short cut the ensilage packs closer and settles more solidly, and, with a good distributor, needs little attention when filling, while the 1 $\frac{1}{2}$ wanted directing to its proper place every once in a while.

POULTRY.

Poultry on the Farm.

BY MRS. IDA E. TILSON, WEST SALEM, WIS.

At a store where eggs are taken for goods, I have more than once seen a clerk sorting out and wiping off a lot which should have come in better shape. Tidy nests make clean eggs, and in market clean eggs are more attractive than soiled ones. If washing is necessary, let it be done at once and thoroughly. Hold an egg before a strong light, or examine with a microscope, and how porous its shell appears. The taint of outside dirt soon reaches the inside. Even clean eggs kept in a mouldy cellar or other unsuitable place absorb and taste of the same mustiness. Then, a dirty coating soon hardens, sticks like a leech, and leaves unsightly stains. Some of our grandmothers had an idea washed eggs do not keep as well, and, indeed, to smear a spot of dirt in a thin film all over a shell, so often done by merely wiping off, is no advantage, but a harm. Instead of spreading, diluting and rubbing in, the dirt requires removing. I prefer more cleaning of nests and less washing of eggs. Randolph, of Roanoke, once complained at a Richmond hotel that the eggs served were not fresh, and suggested they be purchased in another county, just across the James river, because the people over there were too poor to keep their eggs long. Since I wish to sell my eggs at their prime, I would not hold them over a month in cold or a week in warm weather. As a fact, I rarely have a chance to obtain them even a week. However, an aunt, who formerly got her white's supply of me, said by turning occasionally she had them perfectly good

for six weeks or so, in pans, on a shelf in her dry cellar. Had she but used an egg-case, she would have anticipated what has now come to be considered as probably the best method of preservation. If I were sending mine abroad, should, like many poulterers, write on each egg, as gathered, the date. Then the commission man could market seasonably, their history would be known, and the oldest might be used first. An egg having been subjected to such heat in biddy's interior does not beat up so stiffly nor cook as well till cooled, and epicures say is in its prime from one to three days old. If necessary to use those just laid, first immerse them in cold water awhile. Those kept in too warm a place and grown a little stale will be cooled, freshened and made less refractory, if a pinch of salt is put in the whites when beaten. As eggs are broken for cooking, considerable white adheres to the shells, unless it is detached by the finger. Cooks who have measured say the amount of one egg may thus be wasted out of every dozen. A temperature of 60° is often recommended for stored eggs, but a few degrees above or below do no harm. Mine are put summers in a store-room which has an ice-box adjoining. According to several trials with a thermometer, the temperature of room runs from 65° to 75°. A valuable Houdan hen took to laying in our barn one cold February; though some of her eggs became quite chilled before gathered, I set them in March and received nine chicks. From my own experience, the effect of any cold above freezing is less dreaded than that of heat on flavor and vitality of eggs, and I have read that Canadian eggs average the largest and heaviest of all, quite defying competition from warmer countries. There are some disadvantages in living near a village and selling my product at the house. I must be constantly posted on prices, keep and make change, be often hindered, and, though usually appreciated, do occasionally meet one like a lad who asked me whether they would not come cheaper if he took ten dozens. I think I convinced him that to let any one person have so many guaranteed strictly fresh eggs would be a great favor on my part.

Of course, the reason why eggs are cheaper in summer is because that season is so favorable for laying, and more are sent to market, but their cheapness is no reason why summer eggs should be despised and considered unprofitable. Not only is their number increased, but the cost is lessened, so at a low price the profit equals that in winter. There is both a saving on the quantity of food and in the time required from the manager. Think how self-helpful our biddies are on their grassy runs, contrasted with their helpless condition imprisoned by snowbanks. Then we are heavily feeding grain to create animal heat; now we are lending our bushes and shade trees to keep them cool. Whenever we compare the cost of production with the price received, we shall find poultry yielding more in proportion to capital invested than any other branch of farming gives. There can be no over-production while the U. S. and England still import eggs, but I believe if people were only sure of buying good ones and always getting their money's worth, they would eat more eggs and extend our market. It is not generally enough to take what comes, we must go after something besides. Let us as poulterers study to make this a twelve-months-a-year business, each month yielding its profit and pleasure. Summer eggs have the advantage of very yellow yolks, which is often noticed in comparing preserved with winter's fresh-laid ones. Grass and green foods contain the coloring matter which passes into a hen's product the same as into a cow's butter. Let us be carefully curing and saving fine, succulent clover and lawn clippings, and on the lookout for a vegetable supply. If I have not repeated this two or three times before, it ought to have been, and those who make no plans for the future seldom bestow much attention on even the present.

Poultry Yard Notes.

From this time forward, as the growing stock is coming to maturity for the season of 1893, we should give them special attention. At no time can we do our growing chickens so much good as while they are progressing from the ages of two or three months to six or seven months old, through systematic care and judicious feeding. If they have a good roomy range in field or pasture, they will now obtain a great variety of insect provender among the grass and herbage adjacent to the runs and pens. If we are obliged to keep them penned up or confined to lesser space, then these things must be supplied to them as abundantly as possible artificially. They must have plenty of green food or they will not thrive satisfactorily. This can be furnished in the shape of sods thrown to them daily, or the lawn-trimmings may similarly be given them with advantage. Freshly cut grass, turnip-tops, surplus green corn, chopped turnips and onions, all are excellent in their way, and one or the other of these will be in season in spring, summer and autumn. A little cooked coarse meat, an occasional feed of chandler's scraps, etc., will each and all supply a needed want if the birds have no place to roam in. But the “green food” of some kind is a desideratum, be it observed. Without this we have never found in our experience that good chickens can be raised; and we therefore remind our readers at this season of the absolute importance of this provision.

VETERINARY.

Dentition and Dental Diseases of Farm Animals.

BY DR. MOLE, M. R. C. V. S., TORONTO, ONT.

In order that veterinarians and judges of stock may be in a position to decide as to the age of any animal, a knowledge of the growth of the teeth is invaluable.

A breeder's certificate would afford the most reliable evidence of an animal's age, if scrupulous exactitude in recording the birth were practiced, but the failing to note time and exact date of birth is inherent in the ordinary farmer. He generally refers the occurrence to some event that occurred in the family just about the same time, and so evidence of a certificate is often more calculated to mislead than assist the judgment. It therefore becomes necessary to supplement or correct the exhibitor's certificate by such evidence as the animal itself affords, and by common consent the periodical changes to which the teeth are subject are accepted as indication of age only second in value to positive proof of the date of the animal's birth. We shall not describe minutely the anatomical structures that make up the teeth, but only those parts that are necessary to understand the subject.

The cheeks or sides of the mouth are lined with mucous membrane, on which the ducts of the uveal glands pour their secretions. We may distinguish the opening of the parotid duct, generally about opposite the third molar tooth which secretes the largest quantity of the saliva necessary for deglutition or swallowing; it also acts chemically on the starchy matter, and is the largest gland of the mouth.

On the roof of the mouth the mucous membrane is thick, and in the cow and sheep is known as the dental pad; it causes that particular condition known as "lampass" in horses, which is due to a congested state from dental or stomach irritation. That portion which is attached to the hard palate, from which a number of grooves or ridges run in a direction outwards, is termed the "bars."

Occupying the outer margin of the roof and floor of the mouth we see the teeth. These are products of mucous membrane, and by some anatomists considered bones. One material difference between bone and the teeth is: that the latter bear exposure and friction with impunity, while the former can endure neither without becoming diseased. They are also much harder than bone, and, further, fixed in cavities, which are surrounded by the gums. They vary in number in different animals, and in size, form, structure and position; thus, in Herbivora they are termed compound; in Carnivora, where tearing is requisite, the molars are sharp and pointed; and in man they are mixed, and in all the lower animals there is an interdental space.

They present three parts: A fang, that part enclosed in the alveolar cavity; crown or table, that part visible on inspection after the teeth are fully developed; neck, that part connecting the fang and the crown, to which the gum is attached.

Teeth are composed of three substances:—Dentine, enamel and crusta petrosa. Dentine constitutes the major part the tooth, and is of a yellowish substance, best seen in the elephant, when it assumes the form of the well-known tusks of ivory.

Enamel, the second tooth material, crusts over the dentine of the body and dips into the cavities of the tables; it is known by its pearly whiteness, and is the hardest animal texture known.

Crusta petrosa is externally placed, and dips into the enamel plates of the table; it is of a yellowish brown color, and is the softest dental structure.

The upper surface of the tooth generally presents one or more depressions, the infundibulum, into which dip the three layers of the substance of which the tooth is composed. When a tooth is wholly covered on its external surface with enamel, it is termed a simple tooth; all other teeth are compound. Thus the milk or temporary teeth, and the teeth of the dog, are termed simple teeth; they are named, according to their function, grinders and pinners or incisors.

For convenience of description teeth are divided, according to their situation in the mouth, into four sets: incisors, canines, pre-molars and molars.

Ungulate mammals—that is, hoof-shaped animals—without exception, have on each side above and below three incisors, one canine, four pre-molars and three molars; that is, eleven on each side above and eleven below, or forty-four altogether. The modern horse, as you must know, has only forty; the front teeth are the same, six above and six below.

The canines or tusks are present, as a rule, only in the males, and fully developed in the stallion.

The cheek teeth, or pre-molars and molars taken together—for there is little difference to distinguish them in form and size—are generally but six, instead of seven, on each side above and below. Here is a case of specialization by suppression. One of the teeth of the ancient form has disappeared; which is it? The examination of a series of fossil remains show us, that the first of the series, the anterior pre-molar, is missing, and known among horsemen as the wolf's tooth. We frequently hear veterinary dentists, horsemen and others discourse very learnedly about these teeth, and yet we can see that they are merely the teeth in a state of evolution. Grooms, horsemen and trainers consider them highly injurious, and attribute all manner of complaints to their presence, such as inflammation of the eyes, coughing, indigestion, etc. At the

present they are recognized as the simple representatives of those organs, which in other animals render the teeth an unbroken curve; they generally disappear when the shedding of the molars takes place.

Dentition covers that period which the young animal takes in cutting its teeth—from birth to the age of five years, and there is a relative period of duration of the life of all animals. Thus man will be cutting teeth until the age of fourteen, and the evolution of the molar teeth does not usually take place until the system has acquired its full development, which will be at the age of fourteen; six times that period will make the age eighty-four, and is limited to a single act of reproduction in the case of the ordinary milk teeth, and to a double one in that of the permanent molars. The process of budding then ceases in man. In many animals of the lower class the process goes on through the whole life without any limit. By a process of this kind the continual renewal of the teeth takes place, the base of the pulp cavity remains unconverted, and the new cells are constantly being secreted, and thus the tusk or tooth is continually lengthening at its base, which compensates for its usual wear at its crown or summit. If anything should prevent that wear, as when the opposite tooth decays or is broken off, there is an absolute increase in the length of the tooth, from the continued growth at its base, and it becomes a source of inconvenience to the animal.

The horse takes four years to develop its teeth, and may live six or seven times its age of development—say twenty to thirty, the average being eighteen years, although there are some historical records of horses living to sixty-five. But we are of the opinion that there must be some error, although there is no doubt that mares live longer than horses. The same fact is noticed in the human race, where women live longer than men. Those animals that do not attain maturity until six or seven years of age may live to twenty and still be healthy; and an undoubted case is as follows. "We have kept a record of many, and the history of the following case seems hard to beat:—August 3rd, 1871, died Mr. Joseph Kaye's well-known roan horse, Paramatta. Three owners possessed this horse—the first had him seventeen years, the second had him for a like term, and the third had owned him nineteen years, when he died; this makes a period of fifty-three years. Old Paramatta was able to do little jobs quite up to the last years of his life."—Veterinary Record.

The heavy draught horse, which attains this growth in even less time than five years, is aged at ten or twelve.

Examples of horses at thirty, thirty-six, or forty, would not be so rare if the tyranny, hard usage and maltreatment imposed them by unfeeling man did not aid greatly to shorten their lives.

Ordinarily, as soon as a horse has seen its best days it is sold from stable to stable, goes rapidly into the hands of the hackman or every keeper doing harder work on less nourishing food, until completely used up and depreciated to the value of the hide at the bone yard; whilst a kind, humane owner will work and keep his horse well and fit for years, doing a vast amount of work—so that "used up" has become the horse term for "aged" in man.

To any one accustomed to horses it is an easy matter to distinguish at sight the very young from the adult animal, and the middle-aged horse from a very old animal. There are many signs that will indicate an aged animal; white hairs commence to show around the temple, around the eyes and nostrils, if the color be dark, while the grey, roan and chestnut become much lighter, and even white. In addition to the teeth, there are many signs not usually known—points of great value, but none compare in exactness to the appearance of the teeth.

The Arabs consider that if the skin on the forehead below the forelock is elastic and returns to its original position rapidly, becoming perfectly smooth, the animal will make a good horse; if no wrinkle, is left the animal is young; if the skin remains wrinkled, it is old and worthless. Another old-fashioned method was to determine the age by means of the knots in the tail. These knots are felt distinctly at the base of the tail when the horse has attained thirteen years of age; in two years later they become more prominent—they have behind a distinct little depression. At sixteen a second pair of knots are found, which, like the first, in about two years have behind them a distinct depression, but there is no practical value in these appearances, for it requires a long period of experience to be able to determine them.

Anyone who has been accustomed to examine the mouths of horses of one section of country will find that he must extend his ideas and adapt himself to new conditions when called upon to judge of the age of a horse from another region, as no two horses' mouths present exactly the same characters.

If a horse's mouth presents exactly the period of its age, or a certain number of years of growth, we say that it is so many years; if it has not quite attained the age, we then describe it as rising to the year; if it has passed the period, and has not attained the marking of another year, we say so many years off.

The natural division of the two periods of age as indicated by the temporary and permanent teeth is subdivided as follows:

- 1st. The period of eruption of the incisors of first dentition.
- 2nd. The levelling of these teeth and their progressive use.

3rd. The period of the falling out of the milk teeth, and the appearance of the permanent ones; the levelling of these later.

4th. The successive forms which these tables present as the teeth wear away.

There are few in this country who have ever seen a horse with a "bishoped" mouth, as it is a method employed by gypsies and low horse chaunters to alter the appearance of the incisors, which can only deceive those who are entirely ignorant of the teeth of the horse's mouth, and is not likely to deceive anyone familiar with the anatomy of the subject. The operation is dignified by the term "bishoping" from the name of its inventor. To make the operation successful, it is too laborious and expensive to be often performed. The method is as follows:—The crowns of the incisors of the young animals are wide from side to side, the dental tables are modified as the animal becomes older, and become successively oval and triangular; in the centre of the table the dental star appears. "bishoping" consists in giving to the table an artificial cup of a dark color. The teeth are usually filed even, each table is then gouged out until concave; the new cup is then blackened by nitrate of silver, or by a point of hot iron. It may readily be recognized by careful examination: the file marks are invariably left, and the artificial blackened cups are always anterior or in front of the remains of the real mark surrounded by the enamel; the tusks are usually filed to a point, which is an unnatural shape.

For all the arts of deception the practice of "bishoping" is to be held as an example of labor lost; we have not seen a case since we were in "dear old Ireland." There in almost every horse fair one or two specimens of an ancient race may be seen, decked out in ribbons, tail braided, and mane plaited as only an Irishman can do it; with a fig of ginger, and a liberal cracking of the whip, an old animal is made to look so that its own mother would never recognize him. They generally call attention to the black mark in the corner tooth. We well remember the tale told by one of the ancient and fast disappearing class of horse chaunters:—

"Sure, and yer Honor is a good judge of a beast; he is a foine leaper, and ee's young. Sure, and your Honor knows that when a horse has the mark on his tooth, he can't be more than five years old." "Nor less than fifteen, when it is placed there by Culdoon of Armagh," was our reply. There is also another method of deception practised there, and known as "puffing the glyns"; it consists of blowing out the temporal fossa above the eyes with air, but is only very temporary, and sometimes leads to very dangerous results.

The enamel of the teeth is hard, brittle and readily fractured; is protected by two layers of crusta petrosa, so that in wearing it always presents a fine cutting edge. It has been likened to a brick-layer's trowel, which is, as most mechanics know, two layers of iron enclosing a layer of steel in the centre. For cutting bricks iron would be too soft and steel would be too brittle, so, in order to protect the steel a layer of soft iron is placed each side. That is as nearly like the composition of the teeth of the horse as possible, only that we see we have six layers composed of three different substances—crusta petrosa, dentine and enamel. In the incisor temporarily up to eight years old, and permanently in the molars, the temporary layer is shown in the accompanying illustration.



A five-year-old permanent incisor will take on the appearance as shown in this sketch, and the various changes are to be seen and can be readily followed. At five years old the crown will be seen marked with the infundibulum, which is usually filled with food, but can be readily removed, showing the cavity; as years pass over the crown becomes worn, and at eight years old this mark is worn out of all the incisor teeth, and the tooth alters in shape, taking on an oval form at ten years old, while at fifteen it is quite angular and square in shape.

THE QUIET HOUR.

The Starless Crown.

They that turn many to righteousness shall shine as the stars for ever and ever.—Dan. XII., 3.

"Wearied and worn with earthly cares, I yielded to repose. And soon before my raptured sight a glorious vision rose; I thought whilst slumbering in my couch, in midnight's solemn gloom, I heard an angel's silvery voice and radiance filled my room, A gentle touch awakened me—a gentle whisper said, 'Arise, O sleeper, follow me;' and through the air, we fled. We left the earth so far away that like a speck it seemed, And heavenly glory, calm and pure, across our pathway streamed. Still on we went—my soul was rapt in silent ecstasy; I wondered what the end would be, what next should meet mine eye. I knew not how we journeyed through the pathless fields of light, When suddenly a change was wrought and I was clothed in white. We stood before a city's walls, most glorious to behold; We passed through gates of glistening pearl, o'er streets of purest gold; It needed not the sun by day, the silver moon by night, The glory of the Lord was there, the Lamb Himself its light. Bright angels paced the shining streets, sweet music filled the air, And white-robed saints, with glittering crowns, from every clime were there; And some that I had loved on earth stood with them round the throne. 'All worthy is the Lamb,' they sang, 'the glory His alone.' But fairer far than all beside, I saw my Saviour's face, And as I gazed He smiled on me with wondrous love and grace; Lowly I bowed before His throne, o'erjoyed that I at last Had gained the object of my hopes—that earth at length was past. And there, in solemn tones, He said, 'Where is the diadem That ought to sparkle on thy brow—adorned with many a gem? I know thou hast believed on Me, and life through Me is thine; But where are all those radiant stars that in thy crown should shine? Yonder thou seest a glorious throng and stars on every brow; For every soul they led to Me they wear a jewel now. And such thy bright reward had been if such had been thy deed. If thou hadst sought some wand'ring feet in path of peace to lead, I did not mean that thou shouldst tread the way of life alone, But that the clear and shining light which round thy footsteps shone Should guide some other weary feet to My bright home of rest. And thus in blessing those around, thou hadst thyself been blest.'

The vision faded from my sight, the voice no longer spake, A spell seemed brooding o'er my soul which long I feared to break, And when at last I gazed around in morning's glimmering light, My spirit fell, o'erwhelmed beneath that vision's awful might, I rose, and went with chaste'd joy that yet I dwelt below, That yet another hour was mine my faith by works to show, That yet some sinner I might tell of Jesus' dying love, And help to lead some weary soul to seek a home above. And now, while on the earth I stay, my motto this shall be, 'To live no longer to myself, but Him who died for me!' And graven on my inmost soul this word of truth divine, 'They that turn many to the Lord, bright as the stars shall shine.'

Lonely Workers.

Many Christians have to endure the solitude of unnoticed labor. They are serving God in a way which is exceedingly useful, but not at all noticeable. How very sweet to many workers are those little corners of the newspapers and magazines which describe their labor and success; yet some, who are doing what God will think a great deal more of at the last, never saw their names in print. Yonder worker is plodding away in a little country village; nobody knows anything about him; but he is doing his best to bring souls to God. Unknown to fame, the angels are acquainted with him, and a few precious ones whom he has led to Jesus know him well. Another has a little class in the Sunday-school; there is nothing striking either in her or in her class; nobody thinks of her as a very remarkable worker; she is a flower that blooms almost unseen; but she is none the less fragrant. There is a Bible-woman; she is mentioned in the report as making so many visits a week; but nobody discovers all that she is doing for the poor and needy, and how many are saved through her instrumentality. Hundreds of God's servants are serving him without the encouragement of man's approving eye, yet they are not alone—the Father is with them.

WHAT TO FEAR.

The only failure that a man should fear is failure in cleaving to the purpose he sees to be best. As to just the amount of result he may see from his particular work—that's a tremendous uncertainty; the universe has not been arranged for the gratification of his feelings. As long as a man sees and believes in some great good, he'll prefer working towards that in the way he's best fit for, come what may. George Eliot.

MEASURE NOT THE WORK Until the day's out and the labor done; Then bring your gauges. If the day's work's scant, Why, call it scant; effect no compromise, And honor us with truth if not with praise. Mrs. Browning.

FAMILY CIRCLE.

My Wife's Son.

BY DAISY RHODES CAMPBELL.

I was about to be married. In spite of the fact that I was no longer a young man, with youth's hopes and fancies, and rush of passionate emotions, I was very happy. Indeed, that seems a mild way of describing the state of my mind, which might better read: I was supremely happy. The case was briefly this: Constance and I had been lovers in the past. We seemed made for each other. I know that this is a common declaration among lovers, but there were others beside myself—cooler, dispassionate onlookers—who said the same thing. Our tastes were singularly congenial. We loved books, about which we only differed enough to save our discussions from monotony. We both—while for various reasons unable to indulge greatly in it—were fond of travel. We loved music, although Constance was the only practical musician. Her voice was a rich, powerful contralto, highly cultivated, and with a sympathetic quality which thrilled one's heart in listening. What I admired in my sweetheart was her freedom from narrowness of soul. Constance Werner seemed literally incapable of small or petty actions; she seemed to live far above the gossip, the malice, the little meannesses of our common human nature. It was this, which after the first desperate "falling in love," bound me to her by the added ties of respect and honor. And yet, after saying all this, a day came of which even now I cannot bear to think. We had a terrible misunderstanding; everything seemed to conspire to help it on. A large part of the "everything" was Constance's parents, who from the first had not favored our courtship. They sent her away immediately to California, to visit a gay young aunt of hers in San Francisco, who had always been the young girl's admiration. The next thing I heard—a year or so later—was Constance's marriage with a prominent business and society man of Sacramento—Henry L. Starr. I never knew, until I saw the notice of that marriage, how much hope I had cherished—now that dream of my life was over. Instead of travelling, as the wealthy do in sorrow, I was obliged to work hard. It proved a tolerable panacea for heart-ache, and as years went on I accumulated a small fortune. My wants and expenses were few, and I gave my whole attention to my business, which was nothing more interesting than hard-work. I wondered sometimes if dealing in this branch of industry were not having its effect on my character. It was a fancy, but I knew as a fact that I was neither as sympathetic nor as kind as I had been. At first I did not mind this. What mattered anything so long as I made a success of my business? It was all there was left to me, and the lack of the softer virtues only made success the more assured. But in time I felt differently. Some way Constance had been too real an influence in my life, in spite of all that had happened, to be forgotten or easily thrust aside. In spite of myself I believed in her, and I determined to make of myself somewhat such a man as I thought she would like. I did not come to this conclusion easily or rapidly, and when I did the carrying out of my plan was uphill work. There was so little that was noble or unusual in my character that it was harder for me to rise above my natural faults and weaknesses than for most people. I don't know that I succeeded very well, but certainly the trying was of more benefit than doing nothing. Some years later I heard of Henry Starr's death. Two years from that time I met Constance at our old home, which I had long since left. She and her only child were visiting her parents, and I my venerable great-aunt—I had no nearer relatives. We met, and in time the old trouble was explained and found to be, after all, a trifle exaggerated by others. I knew her heart, and she was always loyal to her husband, but I was quite satisfied with her feelings toward me. And we are actually to be married after all! I had to say it over and over to myself many times to comprehend it, and even then I failed. Although, as I said, I was no longer young, my pulse beat much more readily, and a sudden choking came into my throat when I met her in the library just before we were to go down into the parlors, where the minister and a few friends were to see us made one. I can see her now—this woman who was so much to me—as she came to meet me across the pretty room. She was of a tall and queenly presence, and carried herself superbly. Her hair was dark and abundant; her face fine rather than beautiful, with bright, grey eyes, which could express more than any other eyes I ever knew. "Constance," I said, as I drew her toward me, "can you trust me with so much?" Her steadfast eyes met mine with a look which thrills me even yet to remember. "I shall never say you again," she said. "I shall love you and trust you till death parts us." If there is much to be missed in the marriage of older folks, is there not present something which young people cannot feel? While the illusions of hope, if not gone, are at least softened, there is a calm assurance, a conviction that, having had experience, you are now certain that this step is to be the happiest of your life; that this woman by your side is not only a merry companion, but your tried and faithful friend—a matured woman, with all the charms and beauties of a character moulded and perfected by life's school and the added years, which must be lacking to younger lovers. At least this is a slight glimpse into my own feelings, as I stood that morning, solemnly pledging myself to cherish and love this woman whom I had already cherished and loved so long in my heart. We had the usual congratulations and a dainty wedding breakfast, which my wife's mother, reconciled at last, in a measure, to her daughter's miserable taste in matrimonial wares, had taken pride in having a marvel of taste and excellence. We left soon after for a lengthy wedding trip, which to me at least was a series of pleasant days and fresh and unexpected discoveries into the wealth of my wife's nature. After our return my wife and I settled down in a pretty home in the large town where I was in business. Constance's taste was such that she made of those bare rooms a dream of beauty and a reality of cozy comfort. I had given her the finest piano I could find, and my reward was a hundred-fold in the music with which my wife feasted me when I came home from the worries and friction of my daily routine at the store. I began to realize something of what I had missed all these years, and I determined to enjoy my present happiness to the fullest extent possible. But in the realization of this there was one drawback. If I have said nothing of Constance's son beyond the merest mention of his existence, it is not because he was unimportant to me. He was a tall, fine-looking boy of about fifteen. I have already said how little there was that was noble in my nature, and it was a decided proof of this, that from the first I disliked this boy. I struggled against it, but the feeling was there, cover it up as I might. If he had looked more like his mother I might have been more drawn toward him, but from a picture I had seen of his father I knew that Donald was very like him. I did not know that I could have such feelings, and I was full of shame at the discovery, but I never looked at Donald that something did not rise up in my heart against him. The boy did not like me, I knew, though he was always polite and pleasant to me. There was a barrier, invisible, yet real, always between us. I tried to forget Donald when we were on our trip; he stayed with his grandparents—but as soon as we were settled he was sent for. I tried to be kind and just to the boy. I thought that I was, but I could not like him, and he was quick to feel it. If Constance suspected the state of feeling between us she never hinted at it. She was very fond of Donald—surely I was not jealous of the young fellow, her own son! But I confess I did not enjoy seeing her express him. The boy seemed shy and

reserved, and I mistrusted him. I had been such a different boy myself, I thought he must be deceitful. He was an obedient boy. Constance was always most careful to defer to me, and to have Donald come to me for permission to do certain things. He attended the High School, where he stood unusually well in his studies. It was after his graduation that I proposed to Constance to send him to college at my own expense. "Let me do this for Donald; I know he is longing to go, and then his own money can be untouched, to be ready for him when he is through his school-days!" I said, hardly liking to meet my wife's clear gaze for fear she would see the eagerness with which I longed to have Donald away from home. A quick look of pain came into Constance's eyes, and she turned away. But only for a moment. "You are very kind," she said. "Donald must go somewhere to college, and I shall talk it over with him to-night, and tell him of your generous offer." "Don't!" I said impulsively. "Let the boy go unhampered by any sense of obligation; let him believe it is his own." Constance hesitated. "I hardly like concealment of any kind," she said doubtfully, "but if you wish it—" "I do, dear; it will be best, I'm sure," I said, kissing her. The result of the conference between mother and son was that Donald prepared for college at once, and early in the fall was admitted. I felt like a boy after his departure. To have Constance to myself—to have my home freed from the only shadow it held made me wildly happy. I tried to control myself, so that Constance might not suspect the reason; but, of course, any woman not blind, deaf and dumb could perceive the change in me. I know it pained her, but she said nothing. She was always the same loving, thoughtful wife, the same interesting, intelligent companion; if possible, I loved her more as time went on. Donald spent his short vacations with his father's relatives, but his summers were passed with us. As Donald grew older Constance's eyes would follow him in loving pride. He was certainly a fine specimen of manhood. To me he was always quiet and courteous, yet we never came any nearer to each other than at first. I gave him handsome presents on certain holidays and anniversaries, for which Donald thanked me cordially; yet I knew that he would have been better pleased if I had let them—and him—alone. He was far too clever not to know that they served as a panacea to a guilty conscience. So the years, which have a way of slipping by so swiftly and silently, went on with no unusual excitement, and with a quiet happiness which is also unusual, I think. Comfort expressed the state of our lives—Constance's and mine. While far from being a passive, indolent character Constance never stirred me up unpleasantly; she gave her opinion frankly, but with no temper. Her life, though uneventful, was full of interests not confined within our home. She could talk with me on any subject, but while I only skimmed the surface of things she generally startled me with her original, fresh ideas on different themes. She was keenly interested in other people, and while superior to most of those about her she never seemed so. She had a few warm friends whom she dearly loved. She was one of those rare women who could keep house easily, without being either a poor or careless housekeeper. She had a happy knack of managing servants, who generally seemed to adore her. She was indulgent, yet knew where to draw the line. One day I was surprised to find in my mail at the store a letter addressed to me in Donald's handwriting. While the boy wrote regularly to his mother he rarely communicated with me, and when he did so he only wrote a few lines. I opened the letter with some surprise and curiosity, and read: "May—, 18— "DEAR MR. HASSAN: I'm in trouble. Won't you come to me? Enclosed please find check for traveling expenses. Please don't tell mother where you are going, as I don't want her worried. "Sincerely yours, "DONALD M. STARR." "Well, this must be serious! What scrape has he tumbled into now?" I thought impatiently. "He need not be afraid of my telling his mother. Confound the boy, he couldn't have chosen a more inconvenient time for me than now." I made the best possible arrangements at the store for a short absence, and hurried home. I pleaded business to Constance, but it was my first concealment from her, and though many might think it foolish it troubled me. When I reached C— I asked for Donald, and was directed to his rooms at a pretty cottage near the college buildings. A tired voice answered my knock with "Come," and I entered. Donald sat by the window, book in hand, but as soon as he saw me he came forward at once. "You want help?" I said, as we sat down, and I saw his pale, anxious face, so different from the care-free one familiar to me. "Now tell me all about it," and I inwardly braced myself to hear the worst. "Thank you, sir," said the young fellow warmly. "You are very kind. I shan't apologize for troubling you, and shall take as little time as possible in telling you of my—my misfortune. But first you must pledge me your word of honor that you will repeat nothing that I confide to you without my permission." "I don't know whether I can do that," I said hesitatingly. "Then, sir, I cannot say a word," said the boy. (How like the lad's expression was to his mother's!) I promised, and with downcast eyes Donald went on: "You know, sir, that it is against the rules of the college for any of the students to enter a saloon. Lately a small and most disreputable one has been started in the town just below here. The boys were most emphatically warned that one visit here meant dismissal, or they would be expelled. A few nights since several of the students—more in a spirit of lawlessness than a desire for drink ran off to this place. In spite of all their caution some hint of it leaked out at the last moment, and two professors went in pursuit. The boys were warned in time and escaped, but as luck would have it one of them dropped one of my handkerchiefs with my name written in mother's plain handwriting in one corner. I had lent it to him one day at some entertainment where his was forgotten. He was not a friend of mine, and I see him but seldom as he is a sophomore; yet while those three boon companions go scot free I am the one of whom they have proof of guilt. "It seems too silly and commonplace—the whole thing—and yet it has brought me into a world of trouble. I have been up before the faculty, and am threatened with being expelled. As you know, I'm a senior, and if this disgrace falls upon me I shall not be allowed to graduate. Even that is not the worst, but it is of mother I think. Such a thing would break her heart. It seems to me that I could not bear that." Donald broke off suddenly and began pacing the floor. "But what do you mean? Of course the student who dropped your handkerchief will not let you suffer for it?" I asked in astonishment. "Well, he will, and does," said Donald. "But mercy on us, boy, I shall go and expose him—I shall not let you suffer," I burst forth. "But your promise," said Donald quietly. "You're crazy, Donald, to do such a foolish, Quixotic thing as this," I said impatiently. "Are you so fond of this mean, contemptible fellow that you wish to shield him, or is it some crazy idea of honor you have?" "Neither," the young fellow answered, looking straight into my eyes (strange that brown eyes could look so like gray ones). "I am so anxious to graduate with honors, yet I cannot—must not—expose this fellow, because—I love his sister." "Oh!" I stopped in time to keep from adding "nonsense!" "Yes, I love his sister," Donald repeated earnestly. "I have written to mother about her. It would kill her if there were serious trouble for her brother. It isn't as if they were not so alone in the world, either, but they are orphans, and the sister, who is the elder, has been like a mother to him. She bears him on her heart all the time, sir. I could hardly put it before you just as it is, for she has denied herself and borne so much for her brother. And now, before he is half through his college course, to have disgrace come upon him—and her. It

would be too cruel. I am a man—it is best for me to stand it instead of a loving, helpless girl. If there is no alternative I must go. But I don't think that all is lost yet." Donald gave a singularly bright smile. "I knew that you were such an old friend of Professor Hicks, and I wondered— for the first time Donald hesitated.

"Go on," I said. "What can I do?" "I know you think me foolish, and I am not sure that you would be willing, but I wondered if you would go to Professor Hicks and tell him solemnly that you were satisfied that I was perfectly innocent, but that the circumstances were such that I felt bound to be silent."

"Certainly I am willing," I replied, "but you know that Professor Hicks is against several, and he may think me partial."

"Oh, but you could tell him that you've never cared for me," Donald broke in impulsively, then stopped, looking annoyed.

"Go on," I said once more. "Well, you know, sir, you never have liked me," said Donald as if he apologized, "though I cannot complain of your treatment of me, and I felt that if you would say this to Professor Hicks that your statement would have more weight than if, for instance, you— you— were my father or were fond of me."

"You seem to take it for granted that I believe you," I said. "Yes, sir. You are a just man on the whole, and I think you know me well enough to be certain that whatever my faults I would not lie"— again his manner so like his mother's. I looked at him curiously—I was beginning to think I had been mistaken in this tall, quiet, young man, and no man likes to own himself as fallible as other poor mortals.

"I will see the Professor at once," I said "and may I congratulate you on your engagement with the fair unknown?" "We are not engaged," said Donald simply. "Mother and I both decided that I was too young, and I felt that I must have something assured. I could not bind a girl—and especially one who has had enough uncertainties in her life—to a possible long waiting for a student not yet out of college. She must know I love her—I could not help that, sir—and I hope—at least I fancy that she does not dislike me."

"As I could not keep my face perfectly sober I smiled outright, and then hurried off on my mission. My old friend seemed unaffectedly glad to see me, and after we had talked over old times I introduced the subject uppermost in my thoughts. I told him the little I could, adding my unswerving belief—may I know—of Donald's innocence—of Donald's innocence.

"It has astonished us all," said the Professor with a troubled air. "Donald's record has been so fine that we were amazed over this proof of his guilt. Of course I can imagine circumstances where it could be possible that Donald might be perfectly blameless, yet I cannot think that there is any student here who would permit such a thing." He looked keenly at me, I but flattered myself that my face was non-committal.

"The question that interests me is whether Donald is to be allowed to stay to graduate," I said. "If he isn't it will kill his mother, as well as blight the boy's prospects."

"I have always admired the boy, Chris. He seemed so manly good, not prudly good," Professor Hicks went on in the old earnest way I so well remembered, "and you know how I always detested prigs. You say you are sure of the boy's innocence—so am I; but I surely didn't understand you to say that Donald had never been a particular favorite of yours—why, man, he's one in a thousand."

"I must say I felt quite uncomfortable under the scrutiny of those keen eyes of the learned Professor—I knew how miscreant students must hate to sit still under such a glance. It seemed not only to look about and around you, but through and into the deepest recesses of your being."

"Well, a man can be mistaken, can't he?" I blurted out like a boy. "One can't have the wisdom and insight of an ancient philosopher." An inscrutable look came into my old friend's eyes, but he said nothing.

"When I took my leave he grasped my hand cordially. "I shall do what I can for your son, you may be sure," he said, "and shall write you the result."

"No, telegraph," I urged to my own surprise. Again that queer look came into the Professor's eyes as he replied: "Very well, I shall do so."

I hurried back to Donald and told him of my interview. He thanked me most cordially. "I feel that I must leave to-day, unless by staying I can do you good," I said.

"You have done everything possible—I must now await the result, and I always have hope." Donald smiled as he said this, but his eyes belied his words. They were not only tired, but had a hard look I had never seen there before.

"Donald," I said, grasping his hand, "let us be friends—no more then friends. I own that I have been foolishly prejudiced against you, but that is past—"

"He would not let me go on: "It was a prejudice on both sides, I am afraid," he interrupted me in a frank manner, "but as you say, it is now a thing of the past. Certainly, as we both think so much of the same woman— here he gave a look half shy, half amused at me, "we have one thing in common."

"As I was whirled away on the swift-going train my thoughts seemed to partake of the train's motion—they seemed quicker and keener than usual. They were principally with and about Donald. So many things—trifling they seemed at the time returned to me, of the opportunities I had willfully lost, to win the boy's love and confidence— was it still too late? It certainly spoke well for him that he could trust me so entirely in this affair. Would those stupid, dreamy professors know enough to acquit him, with that unfortunate handkerchief as proof? Why one look into the lady's eyes would be enough to offset that small and silent witness. As Professor Hicks had said, he was a boy to be proud of; he had spoken, of him a "your son," and the phrase haunted me. Why hadn't the been my son as well as Constance's?

When I met my wife after these few days' separation I looked at her with new eyes. For the first time I seemed to partly realize her feelings as a mother.

At the dinner-table I incidentally praised Donald's capacity as a student. The sudden lighting of her eyes, the quick look of surprise touched me. What a jealous beast I had been!

How anxiously I awaited that telegram! Constance started me one day by saying: "Do you know, Christian, I've felt for days that Donald was in some trouble—aren't mothers foolish?" "No, they are far too good for us, but we need them more than they imagine," I answered with feeling.

"Christian," said my wife with a look of relief, "you are so different." I knew what she meant. With her quick instincts she had felt that she could, for the first time, speak freely to me of Donald.

At last the telegram arrived. I tore it open in furious haste. It ran: "All serene. Donald is to graduate. SAMUEL HICKS. You seem very happy," said Constance. I longed to tell her all, but felt that Donald should be allowed to do that.

The lad graduated in June, and Constance and I went on to C— to witness his triumph. His oration was praised universally, and not a few declared that it excelled the valedictory. I thought there was no doubt about it. I was astonished at its originality and depth of thought.

I confess I was proud of the handsome, tall, young fellow who bore his honors so modestly, yet with a self-possession I almost envied. And in the evening, at the promenade concert, Donald brought up a young girl to whom he introduced us—Miss Henschel. I knew this must be the fair unknown. I had only thought of her in a careless way—a passing boyish fancy—a college flirtation—but after that meeting my opinion was shaken.

Marie Henschel impressed me as a girl of no ordinary calibre. I had seen more beautiful girls—never but one with the peculiar attractiveness she possessed. That look in her eyes showed character; it could not be assumed at pleasure. It came from experience in sorrow as well as a habit of thought. Yet she was not a grave young woman. Her smile was sunny, and her manner as bright as it was winning. I could see that Constance felt drawn toward her at once. Yet, mother-like, she criticized while entertaining her most charmingly. It was

WINNIE MAY'S DEPARTMENT.

A Scene at Smith's Falls.

The picturesque and bustling little town of Smith's Falls is fast becoming a favorite summer resort of the idler, the camper-out and the sight-seer. Situated on the junction of the Rideau and Cataraqui river, and in the heart of the oldest settled land in Ontario, the water privileges have tempted and nourished many a flourishing industry. Frost and Wood's large agricultural works do an immense business and one of the largest flouring mills in Ontario, a chemical works, and several foundries are a few of the many successful enterprises. It is situated in the county of Lanark, and within easy access by rail or boat. The drives about the town are remarkable for their beauty, the roads are some of the best, the people hospitable, and a general feeling of success and content pervades this pretty spot.

Recipes.

RAW CATSUP.

Peel and slice one peck of ripe tomatoes, strew in a cup of salt in alternate layers, let stand over night; then drain off all the juice. Chop fine and add a tablespoon of pepper, cloves and allspice, and a little cayenne pepper, one pound of brown sugar and one quart of good vinegar. Bottle for use.

CHILI SAUCE.

Twenty-four large, ripe tomatoes, 6 green peppers, 4 large onions, 3 table-spoons salt, 8 table-spoons brown sugar, 6 teacups vinegar. Chop peppers and onions very small, peel the tomatoes and cut very fine, put all in a kettle and boil gently one hour.

SEED CAKE.

Two cups granulated sugar, 1 cup of butter, 3 eggs, 1 cup of milk or water, 3 cups of flour, 3 teaspoons of baking powder, 1/2 cup of caraway seeds or peels; beat eggs separately.

WHITE FRUIT CAKE.

One half pound each of flour, butter, white sugar, and blanched almonds, 1 lb. citron peel, 1/2 cup of coconut, whites of 8 eggs, 1 teaspoonful of baking powder, lemon or white rose flavoring.

CREAM SPONGE CAKE.

One cup of white sugar, 1 cup of flour, 2 teaspoonfuls of baking powder mixed into the flour. Beat two eggs in a cup and fill up with thick, sweet cream. Flavor to taste.

PICKLED APPLES.

Ten pounds of fruit, 4 pounds of sugar, 1 quart of vinegar, a few cloves and cinnamon. Boil the apples in the syrup until soft.

Kitty Knew About Sheep.

Seven sheep were standing By the pasture wall. "Tell me," said the teacher To her scholars small, "One poor sheep was frightened, Jumped, and ran away, One from seven—how many Woolly sheep would stay?" Up went Kitty's fingers— A farmer's daughter she, Not so bright at figures As she ought to be. "Please, ma'am"—"Well, then, Kitty, Tell us, if you know." "Please, if one jumped over, All the rest would go." Exchange

The longest single span of wire in the world is used for a telegraph wire, and is stretched over the river Kistnah, between Begorah Tectanagram in India. It is over six thousand feet long, and is stretched from the top of one mountain to another.

The growth of ivy on the walls of houses renders the walls entirely free from damp, the ivy extracting every particle of moisture from wood, brick or stone for its own sustenance by means of its tiny roots, which work their way even into the hardest stone. The overlapping leaves of the ivy conduct water falling upon them from point to point until it reaches the ground without allowing the walls to receive any moisture whatever.



A SCENE AT SMITH'S FALLS.

almost unconscious yet none the less keen. I felt—and wondered that I had seen more beautiful girls—never but one with the peculiar attractiveness she possessed. That look in her eyes showed character; it could not be assumed at pleasure. It came from experience in sorrow as well as a habit of thought. Yet she was not a grave young woman. Her smile was sunny, and her manner as bright as it was winning. I could see that Constance felt drawn toward her at once. Yet, mother-like, she criticized while entertaining her most charmingly. It was

I had said as I watched Marie Henschel: "If that young scamp doesn't prove faithful to that girl he don't deserve his salt." But even as the thought passed through my mind I knew that Donald would prove as constant as the truest knight in old ballad or story.

After the commencement was over we three went off for a stay at the seashore. It was there we talked of his future. I had thought of it often lately, and wondered which of the professions he would select. To my surprise, when I asked him, he said: "I do not want a profession. Will you answer a question with perfect freedom?" I assented. "Would you care to take a partner in your business—one with capital?" he asked.

"I've always had a prejudice against partners, but you don't mean that you are the partner?" I added as sudden light visited my obtuse brain.

"Yes, I do," Donald said smiling, "but you must refuse if you have the slightest hesitation about it. I shall go into mercantile life of some sort, and I should like the benefit of your experience, if you could put up with my lack of it. Don't answer now, sir; I can wait."

Well, the result was that in the fall there was a new firm, a fine new building put up, with a new sign: Hassan & Starr. Donald's money was very acceptable to me in extending my business, and he seemed to think my established reputation and experience helped him, so it was a mutual satisfaction.

As soon as the arrangements were fairly settled up there among the mountains, Donald was the accepted fiancee of Marie Henschel. They were married soon after.

It was at the pretty, quiet wedding at Marie's aunt's that Donald surprised me more than I thought possible in a man of my years. As Constance and I came near to kiss the bride, so sweet and tremulous in her happiness, Donald said quickly: "Oh, father, you will love her, won't you?" It was the first but not the last time Donald called me by that new title. I should never have dared ask for it, but the voluntary giving of it was more gratifying to me than I can ever express.

UNCLE TOM'S DEPARTMENT.

MY DEAR NEPHEWS AND NIECES:—

June's roses have faded, and her long days are gone for another year. July has followed day by day, with hot suns, dewy mornings, thunder showers, and fields ready to be harvested. August saw the completing of its work, and now in September we hold our harvest home. Not, is it true, in the style of our forefathers, but keeping pace with the times we do it in the style of our latter part of the nineteenth century. What changes may yet come before the century is ended I do not know. One man, Bellamy, wrote as if he lived ahead of his time; but what he saw on "Looking Backward" I think no one else will see fulfilled. Your Uncle Tom is no prophet, only an honest old farmer, who through life has learned to be practical, and, as the days go on, to trust less and less to the wonderful and strange things. True, Mr. Stead, the editor of the "Review of Reviews," may believe in ghosts, may, by his process of telepathy, have communication with absent friends, he may be able to get the photographs of spirits, and do other uncanny things, but the same power has not come to light in my experience. Away back among the tales of our great grandfathers there were weird stories of ghosts, witches and fairies. One, braver than the others, tried to test all strange experiences, and found real causes. Once, though, he was frightened when alone amid the darkness of the Scottish Highlands, when he saw two flames, as it were, before him. He did not run, but gathering courage determined to find out the cause. They were the eyes of a deer at bay flaring in the surrounding darkness. However, the wonderful discoveries of the last few years bid us older folks to scoff not, but to quietly await developments. We are on the eve of many changes—those that have come only showing what may yet be.

Yet I doubt not, thro' the ages
One unceasing purpose runs,
And the thoughts of men are widened
With the process of the suns."

How well I remember the old threshing day in my barefoot boyhood's days. Five teams of horses hitched to their respective arm, running from a centre, plodded their weary way round and round and round. On the said centre was perched a box, and on that a driver, who cracked his whip with gusto, and gave "cuts" to the lazy or lagging horses, and with a voice sharpened by experience shouted "G' lang." The old machine cracked and buzzed, and ate the sheaves down, and rendered out its golden grain often amid much calling out for grease—more grease. The machine was not first-rate, the straw carriers were not perfect, but to the small boy that was the greatest machine, and threshing day the greatest one of all the year. The grain was cut with a cradle then, and the hay with a scythe, and, although I was not born in the seventeenth century, I have seen the sickle used. Slow old ways, you say, boys and girls; yes, but in your faster days, with machinery and steam and electricity, see to it that you,

"The heirs of all the ages,
In the foremost files of time,"

make your lives so as to accomplish more each day—more and better than those now passing away. Learn this, that every fault is a weakness, every step from the path of truth, be it but a hair's breadth wide, is a weakness, that every step from the right path makes you less able for the work of life. Quit yourselves like brave men and wise women; be strong, that the weak may take refuge behind you.

UNCLE TOM.

Prize for Selected Poetry.

MORLEY SMITHSON, GREYSTOCK, ONT.
William Wordsworth.

William Wordsworth was born in 1770, and holds a high position as a poet. His language is remarkably simple and commonplace. He was an enthusiastic lover of nature. His poems are marked by simplicity, naturalness, and tender pathos. The greater part of his life was spent in the lake district in Cumberland. On the death of Southey, in 1843, he was appointed poet laureate.

To a Skylark.

Ethereal minstrel! pilgrim of the sky!
Dost thou despise the earth where cares abound?
Or, while the wings aspire, are heart and eye
Both with thy nest upon the dewy ground?
Thy nest, which thou canst drop into at will,
Those quivering wings composed, that music still!
To the last point of vision, and beyond,
Mount daring warbler! that love-prompted strain
(Twixt thee and thine a never-failing bond)
Thrills not the bosom of the plain.
Yet might'st thou seem, proud privilege! to sing
All independent of the leafy spring.

Leave to the nightingale her shady wood,
A privacy of glorious light is thine;
Whence thou dost pour upon the world a flood
Of harmony, with instinct more divine.
Type of the wise who soar, but never roam;
True to the kindred points of Heaven and Home.

Nature.

Named with a thousand names, I am but one;
Mother of men that are, or were of old,
Of all that creep or fly below the sun.
The eagle and the blind-worm in the mould.
I am the seed that sprouts, the leaf that falls,
The summer's bloom, the winter's blighting breath;
I am the first-spring bird that cries and calls;
I am the pangs of birth, the peace of death.
Mine is the hand that guides you speeding spheres,
And those small notes that glimmer in the light;
I write on rocks the records of the years,
Whose feet tread down the cities in their flight.

I am the smallest part, the mighty whole,
I sing with streams that sing in quiet lands;
I rave with winds on seas that reel and roll,
I loose or leash the tempests with my hands.
I wave my torch, and lo! the lightning's flare;
I breathe, and hark! the forests sway and rock;
I speak; the thunder-lions in their lair
Roar diapasons with the cyclone's shock.
I am rude, ruddy health, and wan disease;
Dives and Lazarus are one with me;
I am the laws that smite, the thief that flees,
Utmost and undermost of sky and sea.
Strength of the strong, and weakness of the weak,
I dare the soldier on to deeds of fame;
I urge the dastard's flight through battle reek;
I am the death, the splendor, and the shame.
Child of my breast, I neither love nor hate;
With equal bliss and blight I dower thee;
I hold and hide the secret of thy fate;
I slay or save, I bind or set thee free.
I ask no prayer; not mine the need of praise,
I blindly grant the gift, or wield the rod.
I am the slave of One unseen, who says,
"Let it be so:—ye mortals call him God."

Womanhood.

All skilful hands in other days,
The poets, priests, and premiers great,
Employed their craft in divers ways
To build for her a seat of state,
Ivory white
And jewel bright:
And all the world declared 'twas good—
A throne was meet for womanhood.
But queens have left their thrones ere now—
Have doffed their crowns and said or proved
That royalty itself might bow,
And through the populace have moved,
To serve and pray
And go their way;
And none have hindered, thought they could—
Is this the case with womanhood?
It seemed where'er I chose to roam
I saw to-day in every place—
The busy mart and quiet home—
A being dowered with regal grace,
At work with men,
Brain, hand and pen:
And this, somehow, I understood
Was throne-despising womanhood.

Alfred Tennyson.

Alfred Tennyson was born in 1810, and has been by common consent the leading poet of the Victorian age. He has shown entire devotion to the poetic art, and, at the same time, has been a close observer of the life and pursuits of his fellow-men. From his secluded home in the Isle of Wight he has sent forth numerous highly-finished poems, distinguished for their grace, melody, beauty and strength of thought, and for their pure and noble sentiments. Many of his beautiful lyrics have been set to music. On the death of Wordsworth in 1850 he was made poet laureate. In 1883 he was raised to the peerage as Baron Tennyson D'Eyncourt. "Ring Out, Wild Bells" is from "In Memoriam," a series of elegiac lays written by Tennyson in memory of his friend Arthur Hallman. Tennyson himself died in 1892.

Ring Out, Wild Bells.

Ring out, wild bells, to the wild sky,
The flying cloud, the frosty light:
The year is dying in the night;
Ring out, wild bells, and let him die.
Ring out the old, ring in the new,
Ring, happy bells, across the snow:
The year is going, let him go;
Ring out the false, ring in the true.
Ring out the grief that saps the mind,
For those that here we see no more;
Ring out the feud of rich and poor,
Ring in redress to all mankind.
Ring out a slowly dying cause,
And ancient forms of party strife;
Ring in the nobler modes of life,
With sweeter manners, purer laws.
Ring out the want, the care, the sin,
The faithless coldness of the times;
Ring out, ring out my mournful rhymes,
But ring the fuller minstrel in.
Ring out false pride in place and blood,
The civic slander and the spite;
Ring in the love of truth and right,
Ring in the common love of good.
Ring out old shapes of foul disease,
Ring out the narrowing lust of gold;
Ring out the thousand wars of old,
Ring in the thousand years of peace.
Ring in the valiant man and free,
The larger heart, the kindlier hand;
Ring out the darkness of the land,
Ring in the Christ that is to be.

Puzzles.

1—SQUARE WORD.

My first "a case for instruments," as you will quickly see;
My second "a kind of spliter," I am informed, may be;
My third is known as "wideness," and if you take a look
You'll find my fourth is merely "recording in a book."
My fifth "exists in ether, a hypothetical base";
If still incredulous, look it up, you'll find it is the case.

ADA ARMAND.

2—CHARADE.

Oh, puzzlers great, you are doing well;
Each at your post I see;
But where am I? I have just come on;
Have you LAST no post for me?

I am late, I know, my captain,
To be added to the crew;
Yet I promise that I will do my best
First the good "Advocate" canoe.

My reward will not be so great
As if I had started sooner, I see;
But I ENRAGE I must obey all orders
That are given by our captain, Uncle T.

THOS. W. BANKS.

3—NUMERICAL.

Young 7, 6, 5 ate a big slice of my 3, 8, 1, 4, 5 so nice; then
he drank of my whole, quite a big drop, and finished by sucking
one of my 1, 2, 3, 4, 5 before he stopped.

H. REEVE.

4—SQUARE WORD.

My first is "a harbor" where vessels and ships
May go and be safe from the storm.
My second is left "by itself"—undisturbed—
Even though the weather be warm.
My third is "a rapid transition of notes
In music," my friends, so I'm told.
My fourth is "a poem that Virgil did write."
While my fifth is "in want of a fold."

FAIR BROTHER.

5—ENIGMA.

I have no tongue and yet I talk,
Although my words are few;
I have no feet, I cannot walk,
Yet run I can and do.
In figures I am posted well,
I'll point them out, their names I'll tell.
My face you often on it gaze;
My hands I often upwards raise;
In truth I never lifted one
But what I told you when 'twas done.

ADA SMITHSON.

6—CHARADE.

They made me a "middy," COMPLETE my consent,
But now FIRST my office I'll be quite content;
I'll try to do my duty well,
But how I'll succeed I cannot tell.
They'll soon be putting me LAST, perhaps,
There are so many clever chaps
Who'd fill the office far better than I,
If they only had the pluck to try.

I. IRVINE DEVITT.

7—CONUNDRUM (Not Original).

How could this be?
Two women were standing at a door. As two men ap-
proached, they said: "Here come our fathers, our children's
fathers, our children's grandfathers, and our husbands."
A. BORROWMAN.

4—DECAPITATION.

We are a band of puzzlers,
With a leader good and true,
Trying in our noblest way
What great work we can do.

We love our puzzling TOTAL,
And try, what'er we do,
To please our dear old Uncle Tom,
And to him always be true.

Persevere and succeed,
Our motto we prize so dear,
For it FIRST proved its value
In this, our puzzling sphere.

We'll welcome all new cousins,
Though they hail from distant places,
For all are welcome to compete
In this great puzzle race. GEO. W. BLYTH.

9—CHARADE.

I have a friend who, I am told,
Is fond of playing tricks;
He tried one just the other night,
And 'most got in a fix.

Like me, my friend's a country lad,
And rooms at nineteen-ten;
He thought he'd play a little joke,
And spring it on the men.

Of course, you know, 'twas not at home,
This trick he tried to play;
But at a city boarding house,
Where we are wont to stay.

Into the secret he did let,
ENTIRE friend and I;
He then put on a cowboy's hat,
And fixed up on the sly.

A false face then he did put on,
And slipped out the back way;
Unnoticed by the people who
On the portico held sway.

He came around, passed by them all,
Right in the house went he,
A man dashed after him, and then
The women yelled quite free.

A tramp! a burglar! catch the thief!
What makes him act so queer?
Send for a cop! a lady cried;
He has no business here.

Inside the house the fun went on;
The man caught him, I'm told.
They had a tussel in the dark,
And round and round they rolled.

He's got away, the slippery eel,
Somebody strike a light!
He's gone down cellar, hurry, quick!
Alas! He's out of sight.

Out from their rooms the people came—
'Twas after ten you know—
Some only partly dressed; ha, ha!
Come out to see the show.

The search began, high up, low down,
They scattered far and wide,
And hunted long, but found him not.
My friend had got outside.

He changed his clothes and his cravat,
And round the corner he
Came, and asked the innocent
What might the tumult be.

Somehow the trick leaked out at last—
Of course, jokes always will—
It furnished gossip for a week;
In fact, 'tis talked of still.

Some thought it was PRIME awful trick,
While FINALS thought 'twas fun;
One lady got completely mad,
And now my story's done.

FAIR BROTHER.

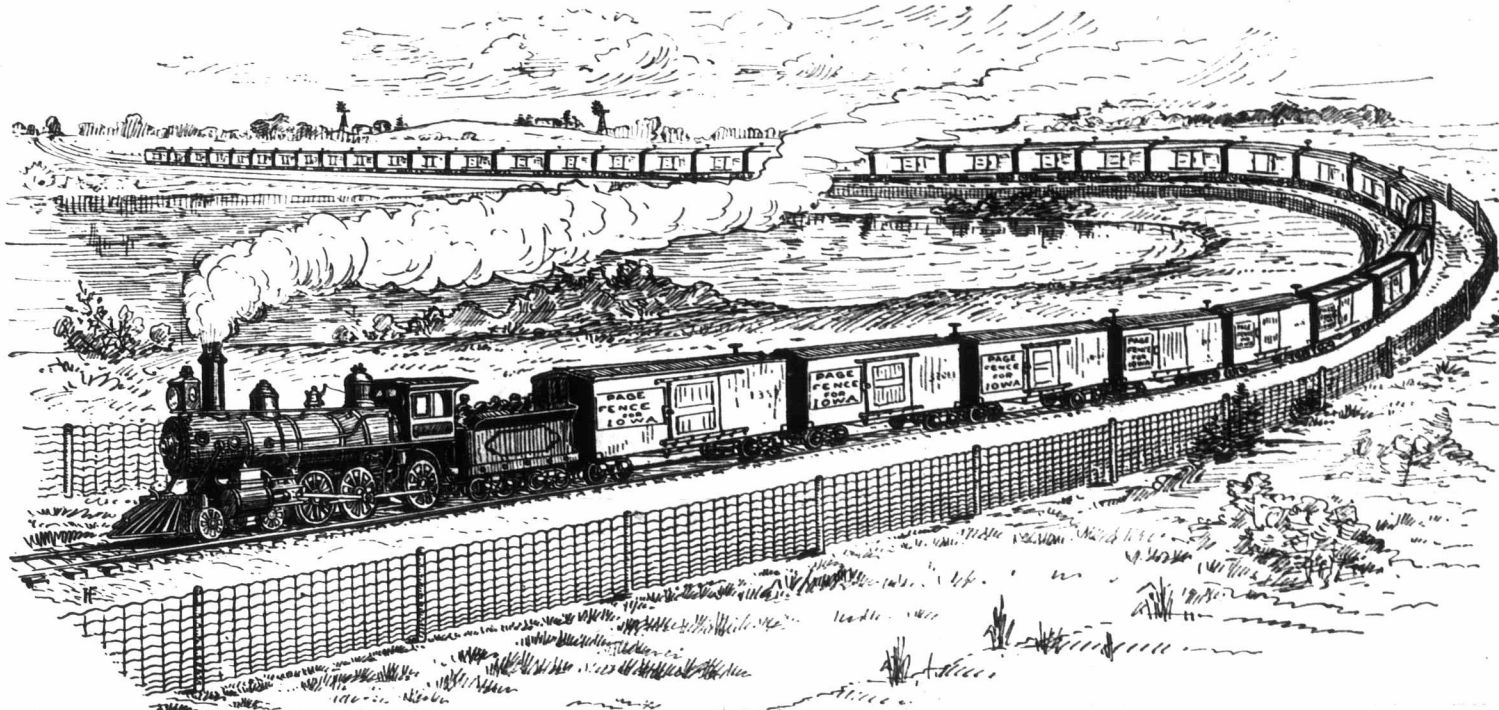
Answers to August 1st Puzzles.

1—With-in. 7— C
H MOB
2— TOM MOREL
T AMER CORONET
HOMERIC BENE
MERINO LET
RINGS T
COST

3—Stone, notes, tones. 4—Send-end. 9—(a) Policeman.
5—Petchora. 6—A nail. (b) Intemperate.
8—Peal, pale, plea, leap. (c) Pardonable.

Names of Those Who Have Sent Correct Answers to August 1st Puzzles.

Ada Smithson, Henry Reeve, Oliver Snider, Addison Snider,
Josie Sheehan, George W. Blyth, Morley Smithson, Joshua
Umbach, Ed. A. Fairbrother, Minnie Moore, George Garside,
A. R. Borrowman.



The Page Fence

Was introduced into the State of Iowa but two years ago, yet the farmers of that state used thirty-eight car loads of ten miles each during three months of the present year.

A Canadian company was formed last year and began the manufacture of the fence at Walkerville, Ont. Already their sales are reaching large amounts, and The Page is taking the lead of all other fences here as it has everywhere.

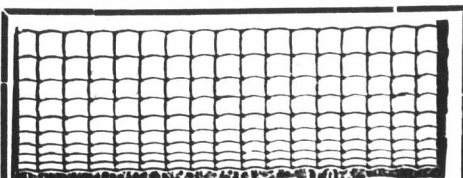
The fence is not an experiment, but has been in use for the past eight years near the home of the inventor, and the first fence put up, without attention since, is still in perfect condition. It needs no attention, for, in weaving, each wire is coiled into a perfect spring its entire length, and this not only keeps the fence from sagging, but enables it to counteract the action of heat and cold, of snow-drifts, and the shocks of animals running into it. It is the only self-regulating fence made, and thus needs fewer posts. Our standard fence is five feet high, closely woven at the bottom, and consists of eleven large steel wires securely tied together every foot. It is shipped from the factory woven and ready to be stretched on the posts. We recommend and prefer that for this fence the posts be placed two rods apart—three posts to the hundred feet.

An Illustrated Paper Free.

It is impossible for us to tell all about the Page Fence in the limits of this page, but, if you will send us your name and post office address, we will be glad to send you descriptive circulars and copies of our illustrated monthly paper, "The Coiled Spring Hustler." The cut which heads this page and parts of the reading matter are from the "Hustler," and every issue is full of interesting reading for all who use fences. Among other features is a monthly prize for the best written fence experience—to be written on one of the large post cards. It will cost you nothing and pay you well to send for a copy.

We will be at the Larger Fairs.

In neighborhoods where there is none of our fences, we are always glad to ship fence subject to the purchaser's approval after he has stretched it on his posts; but if you do not wish to take the trouble of ordering in this way, you will have an opportunity at the coming fairs to examine the fence thoroughly. We will exhibit our fence at Montreal, Toronto, London and Ottawa, and at some of the other large fairs. In these exhibits we will have the fence stretched up as it is on the farm, with posts two rods apart, and you can climb on it, jump on it, run into it, or test its elasticity in any way, and satisfy yourself that it is all we claim. We have a test of our own—the "bunter", shown in the



REFORMATION OR ANNIHILATION.

Many farmers are prejudiced against all "middlemen," and of late the cry has been "abolish them." We have a better plan: reform them. We find farmers make splendid middlemen; the better the farmer the better the middleman he makes. Knows how to temper his "wind" to the shorn lamb, as it were. Send for particulars of agency.

PAGE WIRE FENCE CO. OF ONTARIO, LTD.
WALKERVILLE, ONT.

ADVOCATE last June—and we want you to see it. After examining its lack of effect on the Page fence, try to persuade some rival fence man to test his fence that way. It will be a good chance to test the comparative merit, for the "bunter" simply condenses the wear of a year into a few minutes.

My First Experience with the Page Fence.

(From "The Coiled Spring Hustler.")
Hartland Four Corners, Vt., June 19th, 1893.
Page Woven Wire Fence Co.:

GENTLEMEN,—Between some of my buildings and the road I have a yard in which cows or horses are sometimes allowed to feed. This yard is separated from a field on one side by four rods of Page Woven Wire Fence. My wife would not let me hang a bag on that fence to dry, for fear it would sag it and spoil it. A small boy that goes by here to school got to walking on my stone wall and I told him not to, and that if he must walk on a fence to walk on that wire fence, and he got right on it at one end and walked the length of it on the top wire but one, keeping his shins against the top wire. Then I began to believe some of your big stories about the fence, and got on it myself; I weigh 180 lbs. Then I got Fred, English, a neighbor, who weighs 150, to get on with me. Then my wife saw us and yelled, "Biren, are you trying to spoil that fence? Fred, get off that fence, or I will come there with a broom." Fred laughed and said to her, "Why will you ever lie on a stuffed lounge when here is so good a hammock so near by?" for we were sitting on the two or three top wires, they being deflected over some. Now, Fred is a mechanic and has a machine shop, and is familiar with iron and steel, and is 71 years old. Said I, "Fred, how much do you think we've sagged this fence?" "O, some," said he, "perhaps an inch or two," but when we got off, it came right up, and I could not see that it was sagged a mite. Fred said it beat all he ever saw for a fence. Another good thing about the fence is, it is so invisible you can see most anything right through it and not see the fence at all. Two men have started to drive through it with their teams during the ten months that it has been put up, to say nothing of horses and cows; but they get used to it—evidently like it.

Yours very respectfully,
BYRON P. RUGGLES.

A Ride With One of Our Local Agents,

Mr. A. is a prominent farmer in a western county, who has bought a quantity of fence for his own use, and having tested it thoroughly has asked for the agency for his section. On arriving at his place we find his fence up in splendid shape about the highway. The end and gate posts properly anchored and braced according to directions, and the fence stretched as well as could be done by one of our most expert employees. This agent is not only thoroughly enthused, but he imparts his enthusiasm and confidence to every one he meets. He is well pleased to meet one of the Company, who is authorized to give him control of the county, and after a fair understanding of the terms and conditions on which he can have it, he proposed to have us visit some of his most influential neighbors with him, which we, of course, are both willing and anxious to do.

On driving up to an attractive farm house we seek out the proprietor, and our friend hails him with, "I suppose you have noticed my new fence along the pike?"

"I have seen it, and it looks to me like a good fence, provided it is strong enough."

"Strong enough! It is the strongest fence you ever saw. The Company guarantee it to hold any animal you can bring against it."

"But I do not understand why the wires should be so crooked. I think it would look better if the wires were straight."

"Oh, no," says our friend, "that would be too monotonous. We think this wavy principle adds to its beauty greatly, and makes it more plainly visible for the animal. But that is not the object of it. It really is the most important principle in its construction. That wavy line is nothing less than a perfect coiled spring, but so nearly drawn out straight that you do not recognize it. It is that feature that provides for all changes of temperature, as well as aids in its resistance against the attacks of animals. You know many wire fences are provided with a ratchet at the end to take up the slack caused by contraction and expansion; but instead of such a contrivance at the ends of a hundred-rod string we have this in every foot of its length, so that wherever the blow strikes there is the reserve force, and no occasion for the wires to slip through hundreds of staples to relieve the strain at any particular point."

"But won't it sag when there is so much give to it? It seems to me it would do better to be rigid."

"That is the very point," returned the agent. "It will sag or give whenever required to do so, but springs back to place the moment it is let loose."

"I notice you put your posts a long ways apart. I suppose you intend to set others in when you have more time."

"No, that is the regular distance recommended by the manufacturers. You see a short panel would tend to make the fence more rigid, while these long distance panels give ample room for the fence to spring whenever anything runs against it, and there is less danger of breaking it, as well as injuring the animal, from the less sudden stroke."

"How about the price? Can you furnish it as cheap as we can build barbed wire fences?"

"Now, that is not a fair question, neighbor, because you can see that it is a much more effective fence than barbed wire as usually built, besides being wholly devoid of its danger to animals. This fence is delivered and stretched on your posts; and with the great saving of posts it is cheaper than any fence you can build that is equally effective and durable. Even the barbed wire you cannot make pig proof for less money. I am so well satisfied that it is the coming fence from my own experience and what I have learned from others, that I have decided to accept the agency for this county."

"You turn fence agent! I supposed you had enough to do on your farm to keep you busy without undertaking the agency for anything."

"Well, I suppose I might contrive to keep busy as I always have done, but you know my boys are getting old enough to want to start out for themselves, and rather than have them leave home I prefer to let them take the old place and act under my advice and direction rather than to go off by themselves. This will give me a chance to look after their interests and drive about the country selling and attending to putting up fence."

"But do you suppose you can do enough of it to pay you to neglect your regular farm work?"

"Well, I can only judge by what others are doing in no more prosperous sections than ours, and I propose to show my confidence in the fence by putting it in use wherever needed on my own farm. I will also put it up on trial. For instance, if you are ready to take away that old rail fence along the highway and set posts for this fence, I will furnish and stretch it in place and allow you to decide whether you want it after the work is done. This is what the Company did by me, and it did not take me long to decide, either.—The Coiled Spring Hustler."

FOR CIRCULARS AND FULL PARTICULARS, ADDRESS

THE PAGE WIRE FENCE COMPANY OF ONTARIO, LTD.,
Walkerville, Ontario.

Canadian Honors at the World's Fair.

CATTLE.

Shorthorns. Bull, three years or over.—Third premium, W. B. Cockburn, 18th, W. C. Edwards, Rockland, Ont., Dr. Lenton; 12th, F. Bir-sall & Son, Birdsall, Ont., Waverly.

Bull, two years and under three.—Fifth premium, W. C. Edwards, Rockland, Ont., Knight of St. John; 5th, W. G. Saunders, St. Thomas, Ont., Elgin Chief; 11th, J. & W. Russell, Richmond Hill, Ont., Prince Royal.

Bull, one year old and under two.—First premium, J. & W. Russell, Lord Stanley 3rd, R. & S. Nicholson, Sylvan, Ont., Valasco; 4th, R. & S. Nicholson, Norseman.

Bull, under one year old.—Second premium, W. B. Cockburn, Indian Warrior; 6th, J. & W. Russell, Prince Kummelliar; 8th, W. C. Edwards, Lyndhurst II.; 9th, John Morgan & Son, Kerwood, Ont., Goldfinder; 12th, W. G. Saunders, Daisy Prince; 13th, W. B. Cockburn, Lord Saunders.

Cow, three years or over.—Ninth premium, W. B. Cockburn, Village Lily; 13th, W. C. Edwards, Bessie of Rockland; 17th, J. & W. Russell, Queen Mary; 19th, W. C. Edwards, Belinda; 22nd, W. B. Cockburn, Wimple of Hutton.

Heifer, two years old and under three.—Second premium, J. & W. Russell, Centennial Isabella; 9th, W. B. Cockburn, Nonpareil Prize; 12th, W. C. Edwards, Rose-water.

Heifer, one and under two years.—Fifth premium, R. & S. Nicholson, 31st Maid of Sylvan; 7th, J. & W. Russell, Centennial Isabella; 8th, W. B. Cockburn, Wimple Mirdie; 10th, J. Morgan & Son, Sussex Maid; 11th, R. & S. Nicholson, Lenore of Sylvan; 17th, same owners, Lenore of Sylvan 7th.

Four animals, either sex, under four, the get of one sire.—First premium, J. & W. Russell, Lord Stanley, Ruby Princes, Nonpareil 5th, Centennial Isabella 5th, 3rd Lenora of Sylvan; 5th, R. & S. Nicholson, Nonpareil Chief 31st, Maid Sylvan, 5th Lenora of Sylvan; 8th, W. B. Cockburn, Indian Chief, Greenhouse Chief, British Chief, Nonpareil Chief, Indian Warrior.

Two animals, either sex, produce of one cow.—Third premium, same owners, Rose-rinose, Prince Royal, Queen Mary; 9th, W. B. Cockburn, Daisy Star, Greenhouse Chief, British Chief.

Heifer, two years old and under three.—One heifer, two years old and under three; one heifer, one year old and under two; one heifer, under one year old.—Seventh premium, J. W. Russell; 9th, W. C. Edwards; 10th, W. C. Edwards.

Young herd, consisting of one bull and four heifers under two years, bred by exhibitor.—First premium, J. & W. Russell; 5th, R. & S. Nicholson.

Aberdeen-Angus.

Bull, three years or over.—Second premium, Robert Craig, Montreal, Emly.

Bull, one year and under two.—Third premium, Robt. Craig, Royal Blackbird; 5th, same owner, Emensu.

Bull, under one year.—Seventh premium, same owner, Pride Imperial.

Cow, three years old or over.—Seventh premium, same owner, Pride of Quisa Chan 31st; 8th, same owner, Fairy H. of East View.

Heifer, two and under three.—Seventh premium, same owner, Pride of the Ermine; 8th, same owner, Ericaia.

Heifer, one year and under two.—Tenth premium, same owner, Pride of Emlyn; 11th, same owner, Emlyn's Favorite.

Heifer, one bull, two years old and over; one cow, three or over; one heifer, two and under three; one heifer, one and under two, and one heifer under one year.—Fifth premium, same owner, herd by Emlyn.

Galloways.

Bull, three years old or over.—Second premium, Wm. Keough, Owen Sound, Ont., Clarehouse; 7th, same owner, Grey of Clarehouse.

Bull, one year and under two.—Second premium, same owner, Glencairn 2nd; 4th, same owner, Ottawa.

Heifer, two years old and under three.—Fourth premium, same owner, Countess of Glencairn 4th; 7th, same owner, Rachel 3rd.

Heifer, one year and under two.—Fourth premium, same owner, Countess of Glencairn 5th.

Heifer, under one year.—Fifth premium, same owner, Mary 8th.

Herefords.

Bull, three years or over.—Sixth premium, F. A. Fleming, W. St. On, Commodore.

Bull, two and under three.—Sixth premium, same owner, Baron Bowdy.

Bull, under one year.—Fifth premium, same owner, Barnum.

Cow, four year or over.—Fourth premium, H. D. Smith, Compton, Que., Lady Tushingham 3rd; 14th, F. A. Fleming, Barbara; 15th, same owner, Lily Welton; 18th, W. D. Smith, Amy 3rd.

Heifer, two and under three.—Eleventh premium, H. D. Smith, Spot 3rd; 13th, F. A. Fleming, Playful 2nd; 13th, same owner, Lady Fenn 5th.

Heifer, one and under two.—Fourteenth premium, same owner, Lotus Beauty; 15th, H. D. Smith, Josephine 2nd; 20th, H. D. Smith, Cherry 2nd.

Heifer, under one year.—Fourth premium, F. A. Fleming, Lady Fenn 2nd.

Herd, consisting of one bull, two years old or over, and one cow of either age.—Eighth premium, F. A. Fleming, herd headed by Commodore.

Four animals of either sex, under four years old, the get of one sire.—Eighth premium, same owner, Wilton Hillhurst.

Two animals of either sex, the produce of one cow.—Third premium, same owner, Play, 6th, H. D. Smith, Sylvia.

HORSES.

Clydesdales.

Stallion, five years old or over.—Sixth premium, B. & O. Sorby, Quebec, Ont., Grandeur; 7th, Robert Ness, Howick, Ont., Lawrence Agar; 8th, Adams Bros., Drayton, Ont., St. Gatten; 9th, National Haras, Montreal, Barcelona; 10th, M. Goringe, Howick, Ont., MacTures; 11th, Jos. Moffatt, Tresswater, Ont., Crosby Chief; 12th, G. B. Stewart, Howick, Lordroll.

Stallion, four years and under five.—Sixth premium, Robert & John Turner, Calgary, Canada, Balgrogan Hero; 8th, Robert Ness, Life-guard.

Stallion, three years and under four.—Fourth premium, Wm. Innes, Rockford, Ont., Symmetry; 5th, S. C. Johnson, Manila, Ont., Palzowin; 6th, John Davidson, Ashburn, Ont., Westfield Stamp; 14th, A. Bell, Trout River, Ont., Sir Walter Scott.

Stallion, two years and under three.—Eighth premium, Wm. Philip, Milverton, Sir Burren Dale.

Stallion, one year and under two.—Seventh premium, Jas. Snell, Clinton, Ont., Hullett's Pride; 11th, Wm. Philip, Ontario Lad.

Stallion, under one year.—Seventh premium, A. Bell, Gay Lad.

Male, five years old or over.—Eighth premium, A. B. Scott & Son, Vanux, Ont., Kate II. of Congreth; 9th, Robert Davies, Toronto, Ont., Lady Dunmore; 10th, Jas. Snell, Gypsy Queen; 11th, James L. Davidson & Son, Balsam, Ont., Boydstone Lad.

Male, four years and under five.—Sixth premium, A. B. Scott & Son, Jean Armour.

Male, three years and under four.—Second premium, Robert Davies, Young Lily; 4th, D. O. Sorby, Sunbeam of Colts; 7th, Robert Davies, Candour; 9th, R. G. Ratcliffe, Anderson, Ont., Belle Wallace.

Male, two years and under three.—Fourth premium, Robert Davies, Lady Thorncliffe; 6th, same owner, Pride Thorncliffe; 12th, J. L. Davidson, Kate Hill 2nd; 13th, J. Snell, Lizzie Larimore; 15th, A. B. Scott & Son, Moon light 4th.

Shires. Fifth premium.—John Carr, Trout River, Marlboy's Fashion.

French Draft. Stallion, five years and over.—Sixth premium, V. C. Guillon, Compton, Captain.

Percherons. Stallion, three years or over.—Eleventh premium, Paul Watton, Montreal, Que., Bon-Homme; 12th, E. & P. P. Craptes, Oak, Que., Bertrand; 14th, Haras National, Montreal, Que., Boston; 15th, Chaz, Dobbie, Lachute, Que., Gladus; 18th, Haras National, Montreal, Que., Brilliant Blin.

Stallion, four years and under five.—Fourth premium, T. Beaubien, Montreal, Que., Voltaire.

Male, five years or over.—Ninth premium, T. Beaubien, Agathe; 10th, T. Beaubien, Euclette; 11th, Deat and Dumb Institute, Montreal, Que., Talouse; 12th, Deat and Dumb Institute, Plutaton.

FREE TO FARMERS!

Our Fall Catalogue is a 64-page book, with over 500 illustrations of the goods we offer for sale. It is a complete shopper's guide for the use of farmers. In our stock we carry everything that farmers require, and our prices are for spot cash buyers only. Now, this catalogue is free to all who are interested enough to ask for it. You send in your name and P. O. address on a post card and we will mail you one of those price lists free. It will be a guide whether you send us an order or not, and we will be pleased to send you the catalogue. Many light goods, such as Fur Caps, Winter Choring Mitts, etc., we send by mail to you, post-paid. On all orders of \$10 and upwards we pay the freight to all Ontario stations, and on all \$10 orders from other provinces we make a liberal discount in lieu of prepaying the freight. We also state exactly the freight rates to all Manitoba, N. W. T. and British Columbia points. Everything is made very plain, so that shopping by mail is an easy matter. Don't fail to send for "Our Shopper's Guide."

We keep a large stock of everything farmers use, including Stoves, Horse Blankets, Fur Caps, Fur Coats, Fur Robes, Winter Mitts, Harness, Boots and Shoes, all kinds of Hardware and Carpenters' Tools, Crockery, Soaps, Tinware, Granite, Ironware, Whiffletrees, Paints, Road Carts, Cutlery, Guns, Patent Medicines, Writing Paper, Clocks, Cross Cut Saws, and a thousand other articles which farmers use every day. Write for Catalogue. Address all communications to

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Bargains Beyond Record.

A Chatham Fanning Mill & Bagger, only \$15.00

A Coud " " Brantford, " 14.00

An Agricultural Furnace—Cowdy " 15.00

A 14-inch Ross Ensilage Cutter (without carriers, only 50.00

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A Thomas Organ, Woodstock, only 75.00

A Karn Organ, Woodstock, only 75.00

We guarantee these goods to be in first-class order. The number we have of each is limited, so order at once if you want them. They can't be got again at these prices.

GRANGE WHOLESALE SUPPLY CO.,

35 Colborne St., - TORONTO, R. Y. Manning, Manager. 341-a-0

Burlington Route HARVEST EXCURSIONS

Will be run from CHICAGO, PEORIA and ST. LOUIS via the BURLINGTON ROUTE

AUGUST 22, SEPTEMBER 12, OCTOBER 10,

On these dates ROUND-TRIP TICKETS will be SOLD at

LOW RATES

To all points in NEBRASKA, KANSAS, COLORADO, WYOMING, UTAH, NEW MEXICO, INDIAN TERRITORY, TEXAS, MONTANA.

Tickets good twenty days, with stop-over on going trip. Passengers in the East should purchase through tickets via the BURLINGTON ROUTE of their nearest ticket agent. For descriptive land pamphlet and further information, write to P. S. EUSTIS, Gen'l Passenger Agent, Chicago, Ill. Form Ad-101-3 340-f-om

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If you have anything to sell, SEND AN ADVERTISEMENT to

The William Weld Company LONDON, ONTARIO.

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FOR SALE BY AUCTION

FRIDAY, SEPTEMBER 8th, 1893,

at my upper farm, Eastwood, directly after luncheon, one hundred choice registered Shropshire Ewes and Rams. Also three young Clyde horses and six registered Shorthorn heifers.

TERMS.—Six months' credit on approved notes, or six per cent. per annum discount for cash.

N. B.—Eastwood is next station east of Woodstock. Grand Trunk trains reach it from east and west in the morning, returning in the afternoon. C. P. R. trains to Woodstock. Catalogues, etc., on application to

T. C. PATTESON, 340-b-om Postmaster, Toronto.

Stock Farm For Sale!

The farm known as Sunnyside, consisting of three hundred acres, equipped with ample buildings, stone stabling capable of accommodating 100 head of cattle, 150 sheep, 25 horses, pigs and poultry; splendidly watered. Farm has always been the basis of a large stock breeding establishment, and is therefore in the highest possible state of fertility. Brick residence, ten rooms, and tenement house for men. Farm may be divided.

JAMES HUNTER, 341-b Aima.

ROBERT NESS, WOODSIDE FARM.

Importer & Breeder of Yorkshire Coachers, French Coachers, Clydesdales, Shetlands and Ayrshire Cattle. Prices to suit the times. ROBERT NESS, Woodside Farm, Howick P.O., P.Q. 329-y-om

ELMWOOD STOCK FARM, LENNOXVILLE, P. Q.

The home of DODGER 22281, record 2.24 (over half-mile track), by Arminius 22280, he by Raveller 3109, by Satellite 2500; and GROVELAND 11223, three years old, sired by Alcander 6617, record 2.20, by Alcantara 723, record 2.23. FOR SALE.—Wager, bay stallion, with black points, foaled June, 1891; sired by Boston Globe 2.28, by Red Wilkes 1749; dam City Girl, record 2.35 (dam of Dodger 2.24). Wager will make a horse of 1100 lbs., with the best of feet and legs, and is very speedy. He is well broken and a sure trotter. For all particulars, address J. SHUTER, Lennoxville, P. Q. 339-1-f-om

H. CARGILL & SON, Cargill, Ont.

SHORTHORNS. Two imported bulls are now at the head of our herd. Stock of both sexes and different ages from the best imported and home-bred cows now for sale. 335-1f-om

VALENTINE FICHT, Maple Leaf Farm, Oriol, Ontario,

Offers for sale at reasonable figures and on liberal terms, 30 head of well-bred Shorthorn bulls and heifers, yearlings, and two-year-olds also a three-year-old shire stallion from imported sire and dam (2nd prize, Toronto), and a grand lot of Cotswold sheep. STATION: Woodstock, on C. P. R. and G. T. R. 335-1-y-om

H. & W. SMITH, Hay, Ont., have a few choice heifers and young cows sired by silver medal bull, Prince Albert, and from prize-winning dams of the best Cruickshank blood. Exeter Station, G. T. R., half mile. 337-1-y-om

FOR SALE.

One choice young Bull sired by a Sussex bull, by Dryden's Imp. Sussex; dam Crimson Flower, by Imp. Royal Barnpton. The accompanying cut is a half sister bred by me. Also a few fancy show Heifers of the same breeding bred to young Indian Chief bull. Some fine Road Horses for sale. 331-1-y-om J. MORGAN & SONS, Kerwood, Ont.

FOR SALE

A FEW SHORTHORN HEIFERS AND HEIFER CALVES AT REASONABLE PRICES. R. RIVERS & SON, Springhill Farm, Walkerton, Ont. 321-y-om

IF YOU WANT A WELL-BRED SHORT-HORN BULL for use on Grade Cows, or a Heifer to start a herd with, at a price that your pocket can stand, write me. I can suit you. C. G. DAVIS, Woodlands Terrace Farm, Freeman P. O., Ont. 337-1-y-om

FOR SALE.

A good Shorthorn show bull calf. Also some other thrifty young stock of both sexes. Some fine, young Berkshire boars on hand one ready for use. John Racey, Jr., 341-y-om LENNOXVILLE, P. Q.

MEADOW-LAWN SHORTHORNS.

I will sell bull calves from my stock bull Royal Sovereign at prices to suit the times. Come and see me or write. M. J. IRELAND, Copetown, Ont. 339-1-y-om

H. I. ELLIOTT, Riverview Farm, Danville, P. Q.

Breeder of Scotch Shorthorns. Representatives of the most noted Scotch families: Duchess of Gloster, Lovely, Claret and Nonpareil. Herd headed by the imported Cruickshank bull, King James. 339-1-y-om

WRITE F. A. FOLGER

RIDEAU FARM, - KINGSTON, ONT.



FOR PRICES ON

Holstein -:- Cattle.

331-1-y-om

HOLSTEINS & YORKSHIRES

None but the best are kept at BROCKHOLME FARM, Ancaster, Ont. R. S. STEVENSON, Proprietor.

Write me for prices if you want first-class stock at moderate figures. Holsteins in the advanced registry. Yorkshires all recorded. 337-1-y-om

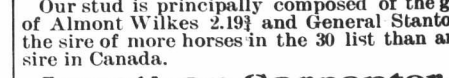
Ross-shire Holstein-Friesians.

I intend to sell, at public auction, date not yet fixed, the whole of my herd of pure-bred Holstein-Friesians, chiefly of Aaggie and Netherland blood. All bred from an importation of my own. Catalogues later. H. L. ROSS, Georgetown, Ont. 339-f-om

JERSEYS AND TROTTERS.

At the head of herd is Nell's John Bull, grandson of Ida of St. Lamberts. Females from \$75 to \$150. Our stud is principally composed of the get of Almont Wilkes 2.19 and General Stanton, the sire of more horses in the 30 list than any sire in Canada. Jonathan Carpenter, 337-1-y-om WINONA, ONT.

NOW IN QUARANTINE



Royal-bred Ayrshires of the deepest milking and prize record strains traceable back and up to date from Scotland's noted breeders. A fuller milking and other records will be furnished by catalogue to those wishing to improve their stock. Limited number of calves for sale after January, 1894. Maple Grove Ayrshire Stock Farm, Lyn, Ont., eight miles from Brockville, Ont., line G. T. R. R. G. STEACY, Importer and Breeder Ayrshires. 340

ATTENTION, DAIRYMEN!

FOR SALE.—Young Ayrshires of both sex, from deep milkers; also herd bull Lad O'Kyle (imp. in dam)—1125—, by D. Morton & Son, Hamilton. N. G. PERRY, Smithville. 341-a-0

GUERNSEY - BULL FOR SALE.

A choice animal, three years old, well marked, and of imported stock; bred by Wm. Davies, of Toronto. Send for particulars. JOS. B. SNYDER, Waterloo, 339-1-b-0 Ontario.

SHROPSHIRE AND SHORTHORNS.

Shearling rams and ewes by imp. Thomas ram, and lambs by imp. Bradburn ram. Both these rams were first prize winners in England and Toronto. Also bulls and heifers of choice breeding and quality. W. G. PETTIT, 337-y-om Freeman P.O., Burlington Stn., G.T.R.

IMPORTED SHROPSHIRE

My stock was selected by myself, and consists of Shearing Ewes and Ewe Lambs from the leading flocks of England, and of the highest quality and breeding. Stock of all ages for sale.

C. W. GURNEY, Paris, Ontario. 327-y-om

I have just arrived from England with 160 shearing ewes of the same stamp that my former importations were noted for—size and quality combined. This flock holds a certificate from the Sec'y of the English Flock Book Assn. to the effect of their high standard. No reserve. First come, first served.

W. S. HAWKSHAW, Glanworth Post Office, Ont., 7 miles south of London. 328-y-om

SHROPSHIRE FOR SALE.

My whole flock of 60 head of Imported Rams and Ewes, a few home-bred Shearing Rams, and a choice lot of lambs of both sexes.

T. H. MEDCRAFT, Sparta, Ont. 31-y-om

SHROPSHIRE

A fine selection of Shearing Rams and Ewes by Royal Uffington, also Ram and Ewe Lambs from imported ewes and sired by Royal Marquis, 170 head to select from.

J. & J. SMITH, Paris, Ont. 331-y-om

MAPLE SHADE FLOCK OF SHROPSHIRE

Pam Lambs of 1893. I am now prepared to supply choice Ram Lambs at reasonable prices. Also a limited number of Yearling Ewes.

JOHN DRYDEN, Brooklin, Ont. 313-1-y-om

HILL HOME STOCK FARM SHROPSHIRE

The highest type of imported and Canadian bred Shropshires. Special attention paid to character and quality. Choice young stock for sale.

D. G. HANMER & SONS, 327-1-y-om

LINCOLN SHEEP

Lambs and Shearlings of both sexes always for sale. Our last importation was made direct from the flock of Hy. Dudding, Esq., of Great Grimby, and comprises the pick of a flock numbering 1700 head.

T. W. HECTOR, Importer and Breeder of Dorset Horn Sheep. The oldest flock in Canada.

ST. VINCENT IS

EUROPEAN ADVERTISEMENTS.

SHROPSHIRE

JOHN W. EDWARDS, "The Hollies," West Felton, Shropshire, Eng. Invites all American and Canadian buyers to visit his flock, which has sent more than one winner across the Atlantic.

SHROPSHIRE

Foreign buyers are invited to visit the Wolf's Head Flock, as there is always a good selection of ewes and rams for sale, and we handle none but the best, and can supply select specimens for breeding or exhibition purposes.

BREEDING DISTRICT BUYERS are assisted in selecting from other flocks. Write for prices or visit us before going elsewhere.

BARCHESKIE HERD OF AYRSHIRES

Andrew Mitchell, the largest breeder and exporter of Ayrshire cattle in Scotland, has a 1-way on hand and for sale bulls, cows and heifers of the choicest breeding and quality.

ANDREW MITCHELL, 327-1-y-om Barcheskie, Kirkcudbright.

Ample Shade Stock Farm

LEICESTERS—Ten first-class Shearing Rams. The pick of our last year's crop of lambs; also Shearing Ewes, Ram and Ewe Lambs.

E. GAUNT & SONS, St. Helens, Ont. 337-1-y-om

COTSWOLD -- SHEEP

William Thompson, Mt. Pleasant Farm, Uxbridge, Ont., Importer and Breeder. Stock recorded. Sheep of all ages and sexes on hand for show purposes.

COTSWOLD RIDGE FARM

The largest breeding flock of pure-bred Cotswold Sheep in Ontario. Shearing Rams and Ewes from imported sires and dams.

JOHN PIKE & SONS, 311-y-om

THE MARKHAM HERD

Farm at Locust Hill Station, C. P. R. Registered Improved Large Yorkshire, Berkshire and Suffolk pigs. As we do not intend to exhibit, we will now sell a choice lot of show pigs of each breed.

IMPROVED LARGE YORKSHIRE PIGS.

Thirty-five choice Breeding Sows from the best English breeders. Young stock of all ages. Stock supplied for exhibition purposes, registered and guaranteed to be as described.

YORKSHIRE PIGS

Of the best type & breeding. Pairs not akin for sale at all seasons. J. M. HURLEY & SON, Belleville, Ont. Box 42. 311-1-y-om

IMPROVED LARGE WHITE YORKSHIRES AND LARGE ENGLISH BERKSHIRES.

The undersigned offer for sale this month a few sows, Yorkshires, five months old. Also a choice lot of young pigs, both Yorkshire and Berkshire. Pairs supplied not akin. Prices reasonable. Satisfaction guaranteed. Apply to WM. GOODGER & SON, Box 169, Woodstock, Ont. 335-1-y-om

ISRAEL CRESSMAN, New Dundee, Ont.

H. J. DAVIS, Woodstock, Ont. Breeder of High-class Large Berkshire and Imp. Large White Yorkshire Swine, Short-horn Cattle. — A grand lot of young pigs ready for shipment of both breeds; also boars fit for service from prize-winning stock. Stock shipped to order. Satisfaction guaranteed. Young Bulls generally on hand. 332-y-om

BERKSHIRES, COTSWOLDS JERSEYS.

Young stock of both sexes and of various ages for sale. Show Rams and Ewes, Ram Lambs and Ewe Lambs. Come and see, per address— J. C. SNELL, EDMONTON, ONT. 332-y-om

S. COXWORTH, CLAREMONT, ONT.

Breeder and Importer of Berkshire Hogs. Young stock of different ages constantly on hand. Pairs supplied not akin. A few good boars of March and April litters by High Clear Prince. Intend exhibiting my stock at Montreal, Toronto and Ottawa, and would be pleased to meet customers. Station and Telegraph Office—CLAREMONT, Ont. 332-y-om

C. R. DECKER, Chesterfield, Ont.

Breeder of high-class Large English Berkshires. Young stock for sale, both sexes. Pairs not akin. Boars ready for service. Sows in farrow. Write for prices, or come and see stock. Bright Stn, G.T.R. 339-1-y-om

TAMWORTH SWINE, SHROPSHIRE, CLYDESDALES AND SHORTHORNS.

Can furnish a number of choice young pigs in unrelated pairs, bred from the best stock procurable in England. Pigs crated suitable for long journeys. A few nice Shropshires for sale, from stock imported by such importers as John Miller & Sons, Brougham; R. Caullcott, Tyrone, etc. A few of the best Clydesdales on the continent—The Granite City and Eastfield Chief at head of stud; also Shorthorns of choice breeding. Correspondence solicited. Visitors welcome. MILKEN STN (Midland Division), G.T.R. JOHN BELL, Clydesdale Farm, Amber, Ont. 325-y-om

RED TAMWORTH PIGS

We have two litters now ready to ship. Also Yorkshire Pigs and Ayrshire Cattle. All stock pure-bred and registered. A standard-bred and registered pacing stallion from a producing sire and dam at a bargain. CALDWELL BROTHERS, Briery Bank Stock Farm, Orchardville, Ontario. 335-1-f-om

Duro-Jersey Swine

are the best all-round hog known. No squealing; quiet disposition; good grazers; defeated the Berks and P. C. on all points at Mich. Agri. Coll. test. Pigs for sale. Address PETER LAMARSH, Wheatley, Ont. 329-1-f-om

PINE GROVE HERD OF POLAND-CHINAS

I am breeding and importing Poland-China Pigs. Corn in and Tennessee strains especially. Pigs of this breeding for sale; also plants, small fruits and honey. A. P. T. A. W. YOUNG, Tupperville, Ont. 311-1-y-om

CANADIAN BLACK BESSHERD

Of Registered Poland-China—A choice lot of young pigs for sale. Elected 48th, the great ribbon winner at the head of herd, assisted by Rht's Chief, who weighs 1,000 pounds. Correspondence or inspection of herd solicited. J. J. PAYNE, Chatham, Ont. 332-y-om

THE OXFORD HERD OF REGISTERED POLAND CHINAS

We have spared no expense in selecting the choicest individuals from the best American and Canadian herds. TWO IMPORTED BOARS IN USE. W. & H. JONES, Mount Elgin P. O. Telephone connection. 339-y-om

IMPROVED CHESTER WHITE SWINE

DORSET-HORNED SHEEP A SPECIALTY. Write for particulars or call and inspect the stock. Visitors welcome. R. H. HARDING, Mapleview Farm, Thornedale, Ont., Middlesex Co. 311-1-y-om

STOCK GOSSIP.

WE WANT AGENTS. We want agents to canvass at the fairs. To good men we will give most liberal terms, either commission or salary. Permanent employment, when desired, will be given to suitable persons, either male or female. Our readers who cannot take up the work, but know a reliable person who can, will confer a favor by sending the name and address of such alone.

Farmers' sons and daughters can earn good wages by canvassing for us during the fall and winter months.

We ask each old subscriber to send us at least one new name. The larger our subscription list the better paper we can afford to publish. With 1893 the ADVOCATE made a bold step in advance by issuing semi-monthly instead of monthly, incurring thereby greatly increased expenditure, but being confident of the support of the farming community, our largely increased circulation this year satisfies us that our efforts are being appreciated, and during the next year we wish to make the ADVOCATE more valuable than ever before.

John Jackson & Sons, Abingdon:—"We have just received from England 5 Southdown sheep. They were all prize winners at the Royal Counties' Show this year, and have come over in very good shape. With these added to our present flock of show sheep we have by odds the best show lot we have ever had."

Mr. R. G. Robinson, of the "Elbow Ranch," Calgary, called on us on his way through to Montreal with five cars of very fine steers from his ranch. He owns a herd of about 1,000 head of cattle; prefers Hereford and Short-horn bulls. Has also about 500 head of horses, and uses Clyde, Shire, Coach, thoroughbred and standard-bred stallions, and by judicious mating on half-bred Percheron mares claims to procure wonderfully satisfactory results.

Mr. Dryden writes:—"I have just separated my lambs, ewes and rams, and on close inspection find I have the best lot I have ever raised. There is not a single cull among them. They are even in size, uniform in fleece, with well covered heads and legs. Every lamb but one gave entire satisfaction last year, and I am certain of equally good results this year. Orders are now being filled from day to day. I have added two imported stock rams to my flock this year, both of them of superior quality—a two-year-old bred by J. Bowen Jones, and a yearling bred by M. Williams. Mr. Hawkshaw, who kindly brought them out for me, was good enough to say that the two-year-old was one of the best he had ever seen. He was Mr. Jones' best yearling last year."

C. R. Decker, Chesterfield, Ont.:—"My stock of Berkshires are doing well; have a large stock of all ages on hand from imported boar and others, and from first-class sows from Ontario and in several States, also in Quebec, Manitoba and the Northwest. The following are a few of the numerous sales during the past few months: J. H. Taylor, Richmond, Que., 1 sow; L. Edmonds, Jasper, Ont., 1 sow; Jno. Davis, Frankfort, Kansas, 1 sow; T. Haslip, Cranston, Ont., 1 boar; F. A. Thompson, Napanee, 1 pair; W. Pringle, Napanee, 1 sow; Harry Pimrose, Minden, 1 pair; J. P. McKnaughton, Dominionville, pair; Charles Hill, Frankfort, Kansas, 1 trio; Jas. Richards, Eccola, boar; Bob Rollin, Madoc, boar; F. E. West, Greenore, 1 boar; Jno. Stokes, Thomasburg, 1 sow; David Conigal, West Huntingburg, 1 sow; Lesley McGibbon, Milford, boar; W. H. Lowery, Frankfort, Kansas, 1 sow in farrow and a boar; Wm. Bass, New-son, 1 boar and 3 sows; Charles Hill, Frankfort, Kansas, 1 sow in farrow and a boar; D. Tennyson, Frankfort, Kansas, 1 sow in farrow and a boar; L. W. Seeley, Ivanhoe, 1 boar; W. Wilson, West Huntingburg, 1 boar; Jno. L. Read, Bobcaygeon, 1 sow in farrow and a boar; E. Wool, Harrowsmith, pair."

J. M. Hurley & Son, Belleville, Ont.:—"Our pigs are doing well, and sales are numerous and cover a large area of country. We have pigs of our breeding in nearly every county in Ontario and in several States, also in Quebec, Manitoba and the Northwest. The following are a few of the numerous sales during the past few months: J. H. Taylor, Richmond, Que., 1 sow; L. Edmonds, Jasper, Ont., 1 sow; Jno. Davis, Frankfort, Kansas, 1 sow; T. Haslip, Cranston, Ont., 1 boar; F. A. Thompson, Napanee, 1 pair; W. Pringle, Napanee, 1 sow; Harry Pimrose, Minden, 1 pair; J. P. McKnaughton, Dominionville, pair; Charles Hill, Frankfort, Kansas, 1 trio; Jas. Richards, Eccola, boar; Bob Rollin, Madoc, boar; F. E. West, Greenore, 1 boar; Jno. Stokes, Thomasburg, 1 sow; David Conigal, West Huntingburg, 1 sow; Lesley McGibbon, Milford, boar; W. H. Lowery, Frankfort, Kansas, 1 sow in farrow and a boar; Wm. Bass, New-son, 1 boar and 3 sows; Charles Hill, Frankfort, Kansas, 1 sow in farrow and a boar; D. Tennyson, Frankfort, Kansas, 1 sow in farrow and a boar; L. W. Seeley, Ivanhoe, 1 boar; W. Wilson, West Huntingburg, 1 boar; Jno. L. Read, Bobcaygeon, 1 sow in farrow and a boar; E. Wool, Harrowsmith, pair."

A. C. Hallman & Co., New Dundee:—"Although we have not reported sales very frequently of late, our trade has been very encouraging. We have sold all our bulls ready for service and several young ones, besides a number of females. We again intend to make an exhibit at Toronto Industrial, and would invite our numerous old friends and all others interested to meet us there and see the quality of stock we breed. We purpose showing an average sample of our herd, mostly young stock. Besides Holstein-Friesians, we are now making a specialty of thoroughbred pigs, and have chosen the two leading bacon breeds—the Improved York and Tamworths. We intend to make a small exhibit of the two breeds, in order to show the quality of our foundation stock. In Tamworths we made our selection out of Mr. John Bell's herd, Amber, Ont. In addition we just recently imported from England a choice boar and sow of the best breeding, and out of prize-winning stock—the dam of the sow (Cliff Belle 1212), winner of first prize at the Royal, Warwick; first at Norfolk and first at Leicester in 1892; sire, Uncle John 225, a prize winner. The boar is also of equal breeding. Uncle John's dam, Hersie 2448, first prize at the Royal at Nottingham in 1888; sire, Plymouth Brother 2269, winner of many first prizes and sire of Cliff Belle. The sow is due to farrow, bred to one of the best boars in England."

NOTICES.

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

How to be always successful in preserving; how to make the very best jellies, jams, pickles, etc., and how, at the same time, to do it economically, can be learned from Ayer's Preserve Book. The receipts are all practical and never fail. Ayer's Preserve Book mailed free to any address on receipt of a two-cent stamp by J. C. Ayer Co., Lowell, Mass.

In a recent trip through the province, one of our staff visited Owen Sound, and while there called upon Mr. C. A. Fleming, the popular president of the Northern Business College. It was an agreeable surprise to find such a large, roomy, three-storey building devoted to this work. This college was opened in a very small building in 1881, but the attendance steadily increased until it was found necessary to build the present spacious quarters. The high position which this college holds among institutions of a like nature is largely due to the fact that the principal unites in himself both the practical business man and the experienced teacher, for Mr. Fleming, in addition to having served as book-keeper and accountant for several large concerns, has taught in both the high and public schools of this province. The course of study is a thoroughly practical and efficient one, and embraces book-keeping in all its branches, correspondence, commercial law, typewriting and shorthand. The past year has been one of the most successful that has been known, while the attendance still keeps up its steady increase.

THE SASKATCHEWAN BUFFALO ROBE.

The above headline will remind our readers that cold weather will soon be upon us, and many will be considering what to do in the way of replenishing their supply of robes. Messrs. Newlands & Co., of Galt, Ont., have invented and patented the Saskatchewan Buffalo Robe, which in appearance very much resembles the real buffalo. One of the ADVOCATE staff called upon this firm a few days ago and made a careful inspection of the manufacture of these goods. We believe them to be the coming robe for comfort, durability and appearance. We were shown a robe which had been used for three years in a livery stable, and the only place that showed any wear was the border. The furry part was improved in its appearance by use, as it had become more curly. The invention has had a trial of five years, and the only deficit that could be found has been overcome by putting in a light rubber sheet between the furry part and the lining; this makes it absolutely wind and waterproof. We would recommend our readers to see these robes before purchasing any other. Address the manufacturers for a pamphlet giving testimonials and full particulars.

One of the best assistants in a home is a good washing machine; by its aid much of the most laborious and unpleasant work is accomplished. The reason many people do not secure this valuable help is that they are not fully acquainted with the benefits to be derived therefrom. There are several washers now manufactured that do excellent work—work that will please the most careful and particular. The Manitoba Washer is one that combines ease of working, saving of time and soap, and does the work with much less wear on the clothes than by using the washboard in the ordinary way. The most delicate fabric can be thoroughly cleansed without injury, and all wearing apparel can be perfectly cleaned in much less time than by the old-fashioned way. Some people, in trying a new machine with which they are not acquainted, do not sufficiently inform themselves about it to work it properly, and then, instead of being delighted as they should be, blame the machine for their stupidity. We are acquainted with Mr. McCrossan's machine, and take pleasure in recommending it to all requiring a washer. We have yet to learn of one that is not entirely satisfactory, and many who are using them have expressed themselves as greatly pleased and that they would not be without one.

A representative of the Advocate called at the Grange Wholesale Supply Company's establishment in Toronto, and found the manager busily engaged in waiting upon his patrons. He reported that business prospects had never been so bright as they are at present, and that the business for the past year had been sixty-five per cent. in advance of former years. Some of the reasons for this success are that the store is owned by the farmers themselves, and that the rules of the institution prevent any shareholder from acquiring more than fifty shares, and that three directors are elected every year; these conditions prevent any of the members of the company from obtaining a monopoly in the control of the stock. The officials are compelled to give heavy bonds for the proper performance of their duties. The shareholders are well satisfied if they receive six per cent. on the money invested; therefore all that is made, after paying salaries and the bare working expenses, goes directly into the pockets of the patrons of the store, and not, as in private enterprises, to build up individual fortunes. The company buy their goods from the manufacturer, and deal directly with the farmer. The above facts enable this company to give the farmer much better terms than could be otherwise obtained, but the main reason for this continued prosperity is the confidence of the patrons in the management, for, during the whole fourteen years of its existence, no one has complained of being dissatisfied with either the treatment accorded or the goods sent out. Some years ago we asked the question, which we repeat again, for any one who had not received fair treatment from the company to let us know, and we received no answers. At the time of our visit the manager, Mr. Manning, had just arrived from Chicago, where he had been successful in arranging very advantageous terms with a manufacturing firm to supply sewing machines at a much lower figure than they could be obtained in this country. This will be a chance to obtain a good machine at a greatly reduced figure. These machines will be guaranteed equal to the best in every particular.

HOW SHE MADE HER MONEY.

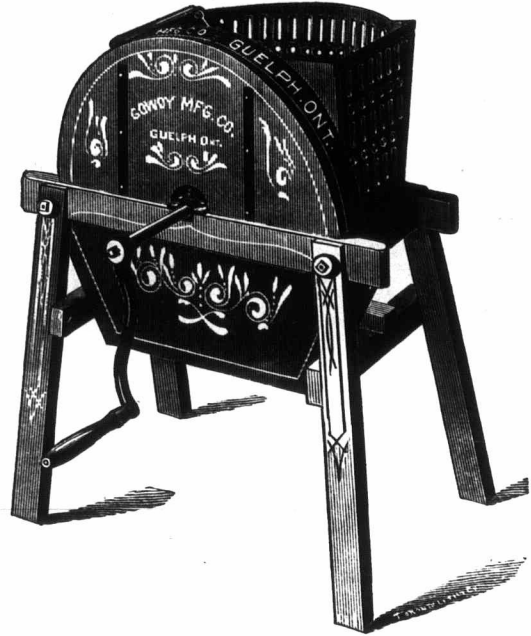
Mrs. E. M. Jones' New Book, "DAIRYING FOR PROFIT," Tells the Whole Story.

So anyone reading it can do the same, and secure a comfortable independence. 60,000 COPIES SOLD ALREADY! Orders still pouring in. Price, 30c. by mail; four copies to one address by mail, \$1. **ROBT. Y. BROWN, Agent,** BOX 324, BROCKVILLE, ONTARIO, CANADA.

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ARE KEPT AT ISALEIGH GRANGE.

This is what we claim and our customers endorse. **GUERNSEYS, SHROPSHIRE AND IMPROVED LARGE YORKSHIRES.** Seventy-five beautiful ewes in lamb to our imported rams, winners at England's greatest shows. In Yorkshires we imported last year the cream of the English winners at the Royal, the Liverpool and Manchester, and the Royal Cornwall and other large shows, including the first-prize boar at the Royal. Do not forget that like produces like, and send in your orders for young pigs early. Address, 333-y-om **J. Y. ORMSBY, Manager Isaleigh Grange Farm, Danville, P. Q.**



The GOWDY MANFG. CO., Guelph, Ont.

E. D. GEORGE
PUTNAM, ONT.
Importer and Breeder of
Ohio Improved Chester White Swine
The largest and oldest established registered herd in Canada. I make this breed a specialty, and furnish a good pig at a fair price. Write for prices. 331-1-y-om

OHIO IMPROVED CHESTER WHITES
Have on hand a choice lot of young stock of different ages, all from imported stock and great prize-winners at all the leading exhibitions in Canada. Give us a call.
H. GEORGE & SONS,
332-1-y-om Crampton, Ont.



Saved Her Life.
Mrs. C. J. WOODRIDGE, of Wortham, Texas, saved the life of her child by the use of **Ayer's Cherry Pectoral.**
"One of my children had Croup. The case was attended by our physician, and was supposed to be well under control. One night I was startled by the child's hard breathing, and on going to it found it strangling. It had nearly ceased to breathe. Realizing that the child's alarming condition had become possible in spite of the medicines given, I reasoned that such remedies would be of no avail. Having part of a bottle of **Ayer's Cherry Pectoral** in the house, I gave the child three doses, at short intervals, and anxiously waited results. From the moment the Pectoral was given, the child's breathing grew easier, and, in a short time, she was sleeping quietly and breathing naturally. The child is alive and well to-day, and I do not hesitate to say that **Ayer's Cherry Pectoral** saved her life."
AYER'S Cherry Pectoral
Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.
Prompt to act, sure to cure

PLOWS!

SINGLE AND TWO-FURROW, WITH MOULDBOARDS OF THE BEST STEEL.

ENSILAGE CUTTERS

WITH CARRIERS TO ORDER.

ROOT PULPERS

FOUR AND SIX KNIFE.

ALSO COMBINED

PULPER and SLICER

WHICH WILL PULP OR SLICE WITHOUT REVERSING THE KNIVES.

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Farmers, Harvesters, Threshers!

USE SOMETHING GOOD.

PEERLESS OIL

WILL DO ALL YOUR WORK.

FOR SALE ONLY BY FIRST-CLASS DEALERS, Hardware, Druggists, General Stores, &c.

Notice that packages bear THE PEERLESS BRAND, and take no other.

IT'S THE OIL FOR YOUR USE.

SAMUEL ROGERS & CO.

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SASKATCHEWAN BUFFALO ROBES

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NEWLANDS & CO.,

Galt, Ontario,

ARE

Durable, Warm, Handsome

Equal in all respects to the Buffalo Skin.

Are Thoroughly Lined and Trimmed.

HAVE STOOD ROUGH USAGE FOR FIVE YEARS BY

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And have given entire satisfaction.

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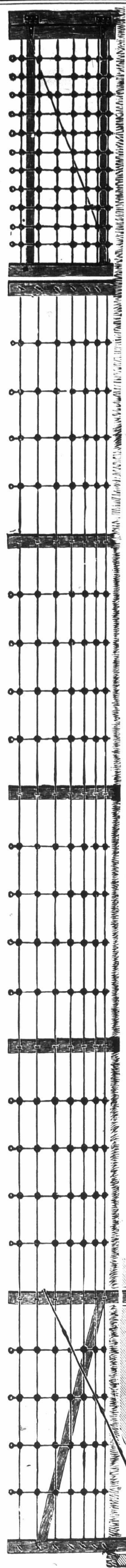
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STOCK GOSSIP.

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

Mr. Mortimer Levering writes us: "The annual meeting of the American Shropshire Registry Association will be held Monday, October 2nd, 10 o'clock a.m., in the Assembly Hall, Live Stock Building, World's Fair Grounds, Chicago, Ill. The annual meeting of the American Shropshire Pony Club will be held Saturday, October 14th, 7 o'clock a.m., in Assembly Hall, Live Stock Building, World's Fair Grounds, Chicago, Ill.

The National Swine Breeders' Association announces the following programme for their eleventh annual meeting, to be held in Assembly Hall, World's Columbian Exposition, Chicago, Ill., October 13th, 1893. Address—S. E. Morton, President, Campden, Ohio. Reports—John G. Springer, Secretary and Treasurer, Springfield, Ill. The Swine Industry—Hon. J. Sterling Morton, Secretary of Agriculture. Care of Boar—Charles J. Stuckey, Atlanta, Ill.; discussion led by I. N. Barker, Thornton, Ind.; Care of Sow—George F. Davis, Dyer, Ind.; discussion led by J. B. Cunningham, Edin. Ill. Swine Feeding—Theodore Louis, Louisville, Wis. The Breeding Pen—George S. Prine, Oskaloosa, Iowa; discussion led by A. J. Lovejoy, Roscoe, Ill. Necessity for a National Organization—W. W. McClung, Waterloo, Iowa; discussion led by S. H. Todd, Wakeman, Ohio.

THE SWINE BREEDERS' ASSOCIATION'S PRIZE ESSAYS.

The Executive of the Dominion Swine Breeders' Association determined to offer a first prize of \$10.00 and a second prize of \$5.00 for the best essays on the subject, "How shall the general farmer manage his swine so as to realize the greatest profit?" A large number of excellent essays were sent to the Secretary. The examining committee, viz., Messrs. R. Gibson, Delaware, Ont., J. E. Brothour, Burford, Ont., and S. Coxworth, Claremont, Ont., and R. H. Harding, Thorndale, Ont., found it very difficult to decide who should receive the prizes. The judges were compelled to pass over some very able productions. It was eventually decided to award Mr. W. C. Huff, Mountain View, Ont., the first prize. Second prizes were awarded to Messrs. Walter Cowie, Valens, Ont., James Sharp, Everton, Ont., and W. J. Haycraft, Agincourt, Ont.

THE DOMINION SHEEP BREEDERS' ASSOCIATION'S PRIZE ESSAYS.

The Executive of the Dominion Sheep Breeders' Association offered a prize of \$10.00 and a second prize of \$5.00 for the best essays on the subject, "How shall the general farmer manage his sheep so as to realize the greatest profit?" As in the case of the Swine Breeders' Association, many excellent papers were forwarded to the Secretary. The awarding committee, Messrs. J. C. Snell, Edmonton, Ont., John Jackson, Abingdon, Ont., and H. Gibson, Delaware, Ont., found it difficult to decide who among the essayists was entitled to first money. They also found it imperative that several excellent papers be rejected. This is to be regretted, but the ground covered by the rejected ones is fully covered by others and as it was impossible to publish all, it was decided to make a judicial selection of such as would jointly bring out the greatest number of good points without going over the same ground again and again. The first prize was awarded to Walter Cowie, Valens, Ont. Second prizes were given to Messrs. James Sharp, Everton, Ont., A. P. Kitchen, Brucefield, Ont., James Bowman, Guelph, Ont., John Dickin, Milton West, Ont., and Charles Ellis, Parkdale, Man. Between the first prize essay and the others there is very little difference, but the majority of the judges gave Mr. Cowie's production the highest score. Each writer makes many good points, yet each leaves unsaid that told by others. Several are weak in some points, yet very strong in others.

NOTICE.

HARVEST EXCURSIONS.

On August 22nd, September 12th, October 10th, 1893, the Chicago, Milwaukee & St. Paul Railway Company will sell tickets at standard single fare plus \$2.00 for the round trip from Chicago to points in Iowa, Minnesota, North and South Dakota, Kansas, Nebraska, Colorado, Wyoming, and to points in Manitoba as far as and including Brandon. For rates of fare, time tables and full information, send to A. J. Taylor, Canadian Passenger Agent, Chicago, Milwaukee & St. Paul Railway, No. 87 York Street, Toronto, Ontario.

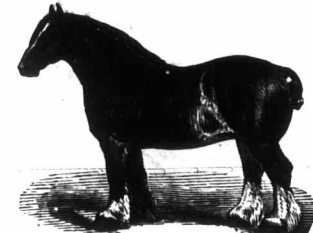
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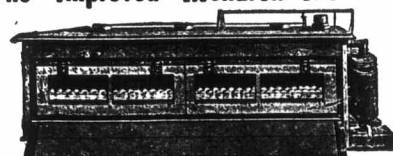
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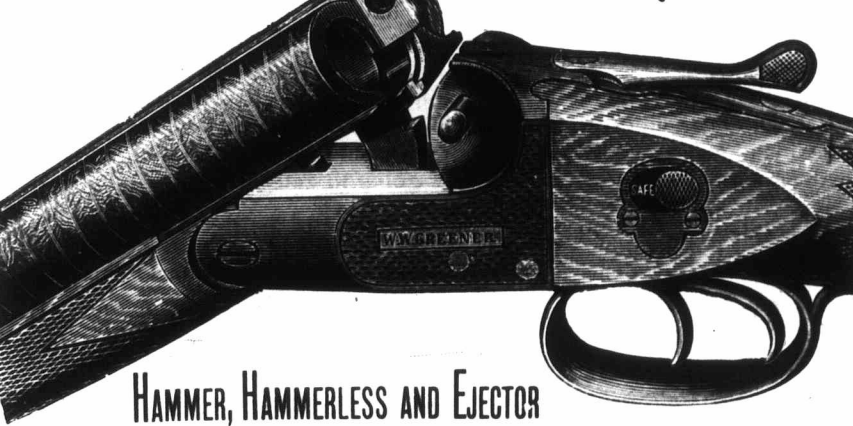


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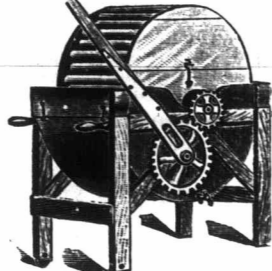
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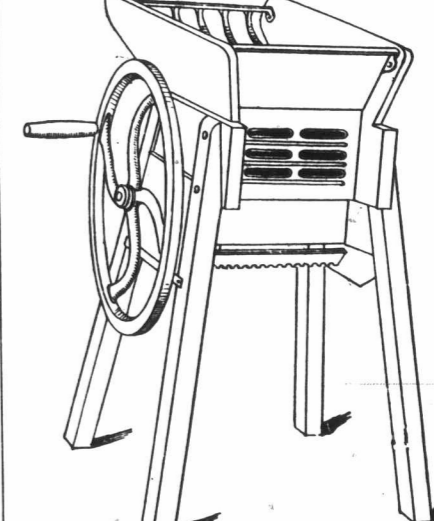

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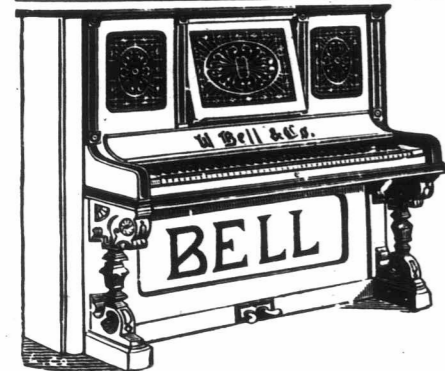
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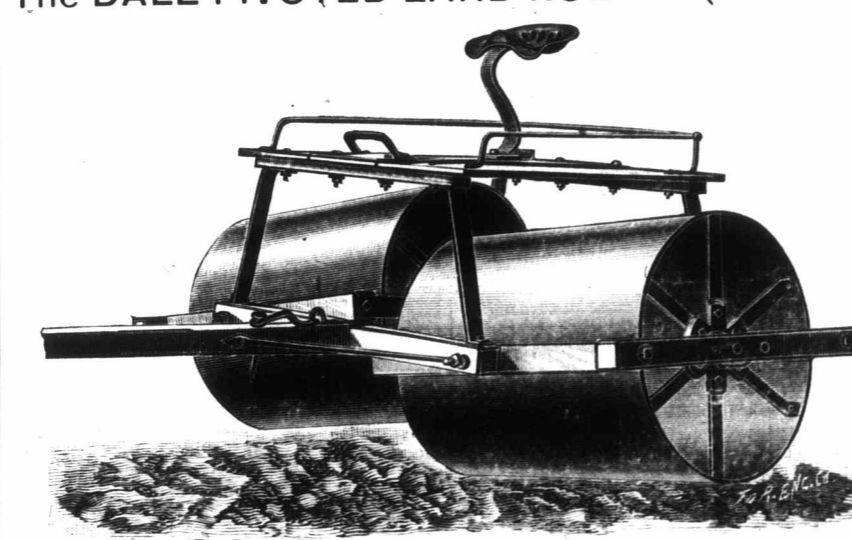


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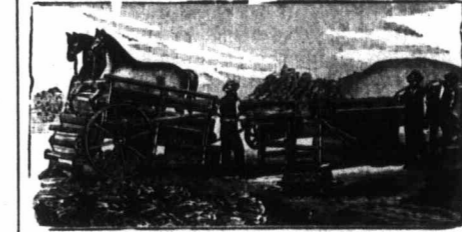
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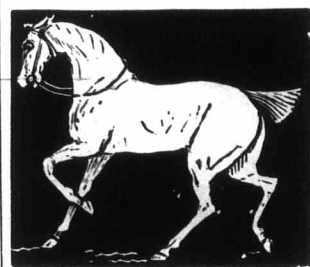
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