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# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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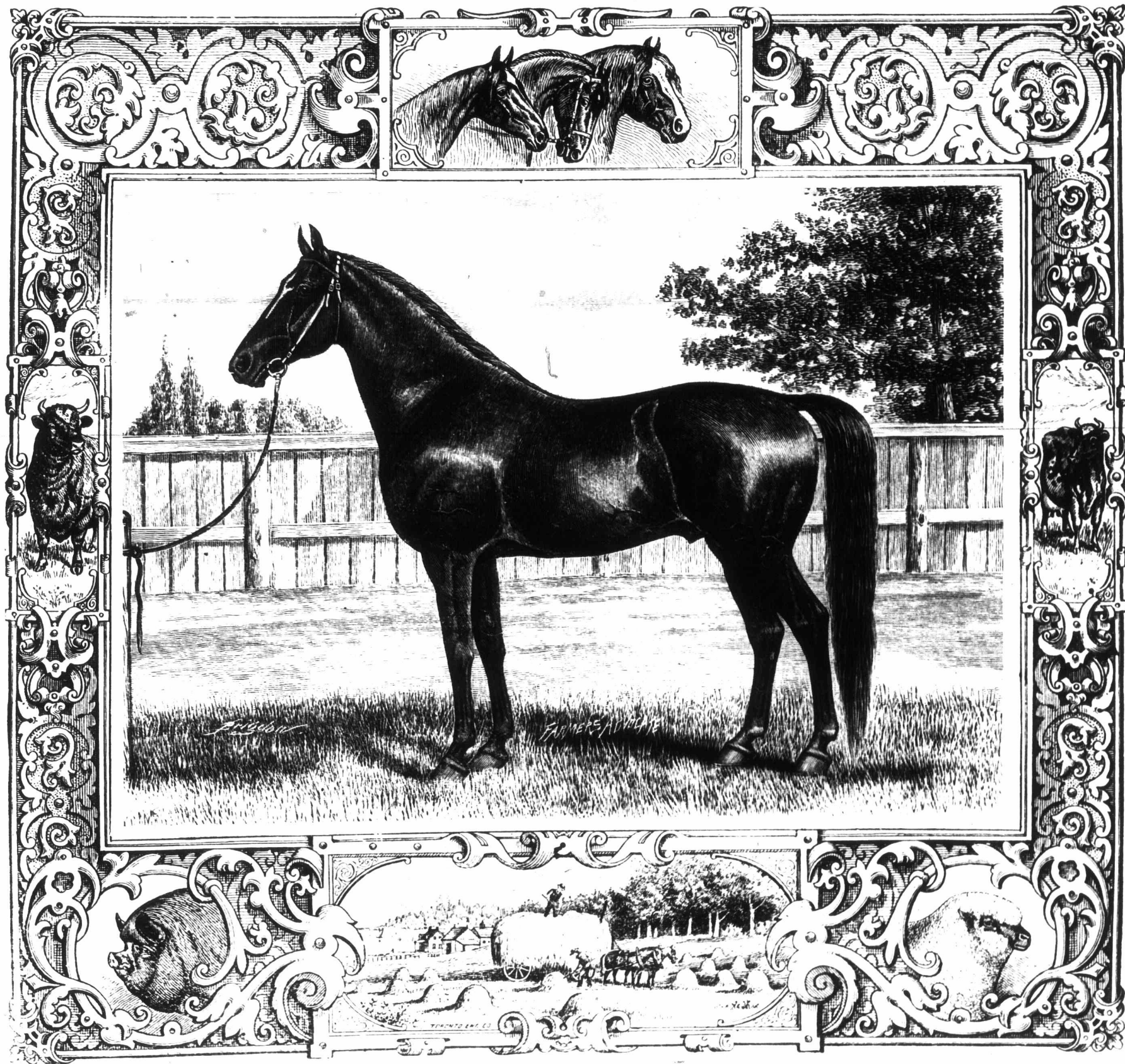
\* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.\*

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STANDARD-BRED STALLION, CLONMORE, 2:21.  
THE PROPERTY OF G. K. FOSTER, ESQ., DANVILLE, P. Q.



## EDITORIAL.

Do not allow the potato vines to lie around after the crop is dug. They should be burned off, and the fungus spores will be destroyed that would give trouble next year.

Put your harvesting machinery under shelter. Any machine that is worth buying is worth taking care of. It is a needless waste to allow it to stand out in the weather, when a little cheap lumber will cover it.

Farmers, and especially the younger members, who are not already able to detect the age of a horse by his mouth, should study carefully our series of articles by Dr. Mole, M.R.C.V.S., Toronto, on dentition, which commenced in the September 1st issue.

That was a very high compliment indeed paid to Mr. Arthur Johnson, of Greenwood, Ont., in being unanimously chosen by the Shorthorn men to award the \$1,000 premium or purse, put up by the breeders, for the best ten animals of the beefing breeds at the World's Fair bred and owned by the exhibitor.

Keep your harness in good repair. It is well to have a supply of rivets and buckles of assorted sizes, and some leather constantly on hand, ready for use at a moment's notice. A few dollars thus invested will save much time, money and annoyance from having to go several miles to the shop for trifling repairs.

The Society for the Prevention of Cruelty to Animals of New England are making strenuous efforts to suppress the practice of dehorning cows, on the grounds of inhumanity. Would it not be well for them to study the report of the commission appointed by the Ontario Government, and to take warning by the mistakes of the sister society in this province?

The Scottish Farmer, in giving an account of a recent bulletin issued in America, pays this compliment: "When our agricultural experiment stations succeed in turning out work like this they will have fully justified their existence, and there is no reason why the United States and Canada should lead the Old Country in the application of science to agricultural practice."

In speaking of the Abundance plum, which is illustrated in the August issue of the Horticulturist, the Rural New Yorker has the following: "The Horticulturist considers it 'quite too early for any trustworthy statements to be made concerning its adaptability to the Canadian climate.' But it succeeds so well in New York and Michigan that there is no reason why it should not succeed in southern Ontario. What we keep thinking of in connection with the Abundance is that, though every plum bears curculio marks, not one has dropped from any injury the pest has inflicted."

It is impossible to lay down any infallible rules as to the age at which young stock should be bred, size and a good thrifty condition being more important than age. So that the animals owned by a progressive farmer will often be fit to breed at an earlier age than those of a neighbor who does not give them the same care, but in all cases it is best to await the period of reasonably mature development before breeding, if the best results are to be secured. Breeding at too young an age is such a drain upon the vitality that in many cases the animal never fully recovers from the effect. Generally the dam suffers from too early breeding more than the sire.

The farmers who are feeding steers for the British market will do well to note the following advice given by the Scottish Farmer to its readers: "Big bullocks do not now pay the farmer. This is the doctrine believed in by the judges of fat stock at Brechin, and they have good grounds for the faith that is in them. Two of the heaviest and biggest bullocks we ever remember having seen were placed second to a pair of compact, closely coupled, well-fleshed crosses, and there is no doubt that the fashion is wholly in favor of this class. No gentleman now desires to see the same old roast doing the honors of his table for several days. The farmer who feeds big bullocks loses on both sides. They consume more food than the smaller ones, and in the second place they are far more difficult to dispose of to the butcher. What pays the farmer is the medium-sized, richly-fleshed animal."

## Clonmore, Record 2:21.

The magnificent standard-bred stallion Clonmore, No. 5288, record 2:21, whose cut appears on our front page, stands at the head of the stud of standard bred trotters owned by G. K. Foster, Esq., Rock Farm, Danville, P. Q.

Mr. Foster, who devotes his whole time and energy to promoting the breeding of standard-bred horses, is noted in his neighborhood for doing anything he undertakes well, and he certainly showed wonderfully sound judgment when he placed Clonmore at the head of his stud, for, recognizing the need of something else besides mere pedigree, he secured in Clonmore a horse who combines with the most fashionable breeding grand individuality. While his record of 2:21, made during a hotly-contested race, proves him to be a stout and game performer; his sire, Connaught, 2:24, a son of the famous Wedgewood, 2:19, having several other sons in the .20 list, while his dam, Hopeless, is by the famous Hérmes, 2:27, sire of so many fast and game performers. In appearance Clonmore is a rich mahogany bay, standing almost sixteen hands and weighing 1,100 pounds, showing a beautifully proportioned body, supported by such a set of legs as one does not meet with every day, and set off by a graceful yet muscular neck, set well into a pair of grand sloping shoulders, and surmounted by an exquisitely moulded head, with an expressive countenance. In short, in our opinion Mr. Foster has secured in Clonmore a horse who, while his superb breeding and fast record proclaim him an aristocrat among trotters, will draw the attention and command the admiration of all horsemen by his graceful carriage and exquisite proportions.

Besides Clonmore, Mr. Foster also owns the bay stallion Petruccio 1727, a very handsome three-year-old, by Patron, 2:14, and out of a daughter of Shelby Chief. This colt is very speedy, and is expected next year to enter the .20 list.

The mares at Rock Farm are eight in number, all standard and registered, and while it would take too long to describe them separately, we may do so succinctly by giving Mr. Foster's motto, which is: First, Individuality; Second, Breeding; Third, More individuality. The wisdom of this motto is shown by the success of the youngsters from Rock Farm at the Vermont Breeders' Meeting at Newport, Vt., where two of Clonmore's colts, a yearling and a two-year-old, carried off all the awards in their classes, repeating their triumph a few days later at Stanstead, P. Q., where they also took first money on the track in their classes.

The demand for Clonmore's colts has been so great lately that Mr. Foster finds it almost impossible to keep them till they mature. His stock at present consists of eleven head of foals, yearlings and two-year-olds. And to one and any who are interested in light horses, we would say: Be sure to pay a visit to Mr. Foster's establishment, which is easy of access, being within the limits of Danville village, and barely ten minutes walk from the G. T. R. station, and where the proprietor is only too glad to receive visitors and show them his favorites.

This is a good time to look after the farm fences. They probably have had little attention since spring work began. It is much less trouble to make fences which will turn your stock, if you do so before they have once gone through them.

Intending visitors to the World's Fair should without fail time their departure from Canada so as to reach Chicago in the morning. Trains are nearly all late, and to land there in the middle of the night will entail untold discomfort, annoyance, and probably a good deal of extra expense.

According to official reports of the world's wheat supply, this year's estimated production is about 1,000,000 bushels less than the average for the last ten years. This seems very little when the whole world's production is considered. Nearly all European countries have a large deficit, which is made up in other parts of the world. The estimated quantity of wheat required to be transported is 379,000,000 bushels, which should certainly cause a somewhat brisk competition and rise in price.

It is a fact that sheep pasturing on the sea coast enjoy comparative immunity from parasites. This is due, no doubt, to the regular taking of salt along with the food, conveyed to the herbage by the ocean spray. By it parasites are repelled and never get a foothold. But if sheep get salt once or even twice a week, between the saltings the stomach will be filled several times with feed in which there is not a remote trace of this useful insecticide. Keep salt within easy access at all times, and thereby assist the sheep in keeping clear of the deadly parasites.

## Agricultural Summer School for Teachers.

The FARMER'S ADVOCATE quite agrees with the President of the Ontario Agricultural College in saying that there are two things which the people of this province should not forget:—(1.) That farming is the main industry in Ontario. (2.) That whatever improves the condition of farmers and makes them more successful workers, benefits all classes of people. These are facts which no one will question, and our educational authorities, from the Minister of Education down, will do well to keep them in mind while making out our programme of studies, and preparing regulations for the guidance of trustees and teachers in our Public Schools.

The Hon. John Dryden, Minister of Agriculture, always anxious to advance the interests of the farmers, made up his mind a few months ago that the Ontario Agricultural College might possibly contribute in some measure towards the equipment of our Public School teachers for a work which, it is thought, they could do with very great benefit in the rural schools of this province—a work which would tend to make agriculture a more profitable occupation, and do something towards inspiring farmers' sons with a love for the simplicity, independence and healthfulness of farm life. The result of Mr. Dryden's decision was a short summer course in agriculture for teachers.

The course began on 3rd July, and continued till the 1st August. The number of teachers in attendance was thirty-four, seventeen male and seventeen female. It was certainly encouraging to find that ladies constituted one-half of the number, as it has sometimes been objected that they would take no interest in the subject. Such is not the case. The subjects embraced in the course were as follows: (1.) The typical animal for the production of flesh. (2.) The form and kind of cow likely to be a profitable dairy animal. (3.) The quality and relative values of the different cuts in a side of beef. (4.) The testing and handling of milk and cream, the making and marketing of butter, etc. (5.) General and agricultural chemistry. (6.) Geology, botany and entomology. (7.) The fundamental principles of political economy.

The lectures were fully illustrated by practical examples in the dairy, yards, fields and laboratories, and in two instances by excursions into the country (to Elora and Rockwood) in charge of Prof. Pantton.

The cost for the whole course, including board and lodging, was only twelve dollars. The work was done by President Mills, Prof. Pantton, Prof. Shuttleworth, Profs. Shaw and Dean, James Millar, Esq., and William Houston, M. A.

The teachers were delighted with the course. They found the professors very courteous and attentive, their surroundings at the college exceedingly pleasant, and the lectures eminently practical and suggestive far beyond their expectations.

The Minister of Agriculture and the staff of the college may be congratulated on the marked success of their venture on this new line. We have no doubt their work will ultimately be a great benefit to the country, and we are pleased to know that a similar course will be given at the college in July next.

## Hints on Horse Feeding.

The manner of feeding horses is a very important matter, but one which is often sadly neglected. If a horse is required to do more work than usual on a given day, it is a common custom to give him more food. This is a great mistake. Owing to the fatigue consequent to the increased exertion, the animal is less able to digest a large feed, and therefore should be fed less rather than more. Again, it is decidedly improper to give a horse a large feed just before undergoing any severe strain; for, if a large feed be given immediately before active exercise, the blood which is required by the digestive organs in order to carry on their proper functions goes to the muscular system, digestion is impaired, and colic is the probable result. If a large feed be given immediately after active or prolonged exercise, the animal is weak and the blood is drawn upon largely for the rebuilding of the muscular waste, and the digestive organs suffer accordingly. A change of food should be made with caution. If a change must be made, a smaller quantity of the new food should be given for several days, and the amount gradually increased. In no case should a change of food and work be made at the same time. A good rule is: Never give a horse a full feed on a change of work, nor full work on a change of food. With regard to watering, the consensus of practical experience is in favor of giving the horse drink before the feed of grain.



**The Ontario Agricultural College, Its Work and Prospects.**

Owing to the disturbance and changes caused by the "Findings" of the Royal Commission, some have been more or less anxious about the effects upon the attendance next term. We are, however, pleased to learn that the prospects for a full attendance on the 2nd October are all that could be desired. The province has confidence in the management; and, although there may be trouble occasionally, as in other colleges, the work of the institution goes on increasing in efficiency from year to year. There is no doubt that the Ontario Agricultural College at this hour is one of the strongest and best managed colleges on this continent. There is not another purely agricultural college anywhere to compare with it. The equipment in every department has been vastly improved within the last few years; and the opportunities now offered within the halls of this institution for a sufficiently broad and thoroughly practical education are all that can be desired.

Some are apt to forget the great work which this institution is doing for the farmers, and indirectly for other classes of people, throughout the province. It is not only educating young men for farm life and preparing some of them for prominent positions in connection with the agricultural interests of the country, but is doing a large amount of special work which is of great importance and should not be overlooked.

The large number of experiments conducted annually throughout the province by ex-students and other farmers are under the control and direction of Mr. Zavitz, the College Experimentalist.

The splendid series of winter meetings held by the Farmers' Institutes all over Ontario have been heretofore systematically mapped out by President Mills, and the college staff has done yeoman service in association with local talent at those gatherings. The travelling dairies are sent out from the college, and the duty of arranging for their meetings throughout the season also devolves upon the president of the college. The dairy school, begun last winter, is now one of the most popular and useful departments of the institution. Already, we understand, as many as 120 have applied for the next session of this special course, to commence on the 15th January and continue till the 15th March. Contracts for the new building have been let. And last, but not least, the summer school for teachers, which began last summer, and was in every sense a marked success. The bulletins sent out from the college are useful through the practical information which they contain, and in stimulating more systematic habits of observation and work.

As we understand it, the design of the Government and the Provincial Minister of Agriculture is to make this school and farm serve the farmers of Ontario in as practical a manner as possible. What has been stated indicates that it is being kept abreast of the times.

For the coming term every department will be well manned. Experience has shown that a certain amount of training in "English Subjects" is absolutely necessary, but this is only a secondary part of the business of the institution in our judgment. For the future the purpose of the Minister is to make a more special feature of practical instruction in the stables and on the farm, making this go hand-in-hand with the teachings of the lecture room.

**The Ontario Fat Stock Show.**

The above exhibition, to be held in Guelph on Wednesday and Thursday, December 6th and 7th next, promises to be the best winter show ever conducted on this continent. It will be under the combined auspices of the Dominion Sheep and Swine Breeders' Association, the Provincial Agriculture and Arts Association, and the Guelph Fat Stock Club. All the foremost breeders of Canada are expected to attend. The prizes for the cattle classes are exceedingly liberal, and \$1,750 cash is offered in prizes in the sheep and swine department alone, besides valuable "specials." There is ample time after the Columbian and Canadian Exhibitions to prepare for the show at Guelph, and our breeders will put their "best foot" forward on that occasion. For prize lists and entry blanks, apply to Henry Wade, corner Queen and Yonge streets, Toronto; Jas. Russell, President Sheep Breeders' Association, Richmond Hill, Ont.; J. C. Snell, President Swine Breeders' Association, Edmonton, Ont.; or F. W. Hodson, Secretary Sheep and Swine Breeders' Associations, London.

The annual agricultural and live stock returns, issued by the Board of Agriculture, indicate that in Great Britain farming is becoming less and less a national industry.

**The Montreal Exhibition.**

The Third Annual Provincial Exhibition at Montreal, Que., which opened on the 4th of September and continued during the whole of that week, was hardly up to its predecessors; a great many adverse conditions united to discourage the managers. In the first place, a mistake was made in placing the date too early in the season, for on account of the wet weather the harvest was not over, and no farmer will leave his crop in the field to attend an exhibition, however good. The competition from Sherbrooke, Toronto and several local shows was also very strong. Many of the best breeders of the Eastern Townships, who always show in Montreal, would not forsake their own show, and their absence weakened the stock exhibit considerably. Many of our best known breeders were not to be seen at all, while others had sent their best stock to Chicago. Unfavorable weather during exhibition week also lessened the attendance. Still, in spite of all drawbacks, the townspeople turned out in full force, and it is to be hoped that the Exhibition Company will come out on the right side of the balance sheet.

We would heartily commend the firm stand which the directors have taken in not allowing any gambling concerns to operate on their grounds, and hope that exhibitions further west will follow this good example and not be tempted by any fee, however large, to license such persons.

A very interesting object lesson was the practical filling of a silo. Here the whole process could be seen, including the cutting of the corn with a tread-power ensilage cutter and elevating it into the silo.

The exhibit of butter, cheese and dairy utensils was good, and was made doubly interesting from the fact that there was a regular working dairy, where the separation of the cream from the milk and the manufacture of butter could be seen, as performed by different machines.

The exhibit in the Horticultural Hall was under the management of the Montreal Horticultural Society and the Quebec Fruit Growers' Association, who deserve much credit for the tastefully arranged exhibit of fruit, flowers, plants, etc.

**HORSES.**

The entries of horses were not nearly as numerous as they were last year.

In *Hunters and Saddle Horses*, T. D. Buzzell & Co., Montreal, R. J. Cogliin, Montreal, and Osborne & Hardy, Montreal, were the chief exhibitors, and carried off the largest number of prizes.

In *Roadsters*, Jas. McVey had a fine lot, among them the three-year-old Barnum, who carried off premier honors in his class. Mr. V. Roy showed a number of capital roadsters. W. H. Trainer, Rockburn, Que., won a medal with his two-year-old filly Amy B., besides a number of firsts and seconds. The well-known firm of Graham Bros., of Claremont, exhibited representatives from their stud, and obtained most of the honors in Hackneys, winning first in the stallion class with Seagull.

*Clydesdales*.—In this class Graham Bros. also obtained the pick of the prizes, including the three medals offered for best stallion, best mare, and for mare and two of her progeny. Other successful exhibitors in this class were W. H. Craig, J. P. Davies, Thos. Irving and Thos. Cairns.

**CATTLE.**

There were not as many cattle on exhibition as last year, though some of the breeds were out in larger numbers than ever before. The falling-off was in the beefing breeds.

*Ayrshires*.—Some of the most noted Ayrshire herds being located in the vicinity of Montreal, they were out in larger numbers than any other breed. In all, there were twenty-three different herds represented, the largest exhibitors being: Jas. Drummond, Petite Cote, who showed a herd of 19 head; D. McLachlan, Petite Cote, with 23; and Jas. Johnston, Montreal, with a number just lately out of quarantine. Other exhibitors were: Jas. Cottingham, Ormston; Thos. Irving, Logan Farm; J. L. Wilson, Alexandria; D. McFarlane, Petite Cote, and others. D. McLachlan received medal for herd, and first for bull two years old. Jas. Drummond received medal for bull any age, and first for bull three years old, bull calf, and cow of any age. J. Johnston obtained first for bull one year old.

*Guernseys*.—This breed was more numerous than at any previous exhibition. The two largest herds were those owned by J. N. Greenshields, Danville, Que., and W. H. & C. H. McNish, Lyn, Ont. Other specimens were shown by Saul Seymour and the Trappist Fathers, Oka. J. N. Greenshields received medal for herd, medal for bull any age, and first prizes for bull calf, cow any age, and yearling bull. Messrs. McNish secured first for heifer, first and second for heifer calf, and several other prizes.

*Jersseys*.—In this breed the principal exhibitors were Dawes & Co., Lachine; H. A. Ekers, Montreal; C. H. Levey, Catarqui, and the Trappist Fathers, Oka. Dawes & Co. captured the medal for herd and medal for bull any age. H. A. Ekers obtained medal for best female and second on herd.

*Holsteins*. The "Hollanders" were well to the front in both numbers and quality, being chiefly represented by the herds of McDuffee & Butters, Stanstead, Que.; Smith Bros., Churchville, Ont., and J. Fletcher, Oxford Mills. McDuffee & Butters secured medal for bull of any age; also medal for herd and several other prizes. The success of this

new firm should be very encouraging to them. Smith Bros. secured medal for best female, first on year-old heifer and cow, and second on herd. J. Fletcher obtained first on yearling bull and two-year-old heifer, and a number of other prizes.

There was a large increase in the number of registered "Canadian cattle" at this exhibition, which indicates that they are growing in favor in Quebec, to which they seem peculiarly adapted.

*Shorthorns*. This favorite breed was not up to the usual standard in numbers. J. B. Watt secured the greater number of firsts, obtaining medal for herd and first for bull of any age. H. I. Elliott secured first for his two-year-old heifer and second for herd. R. R. Sangster, Lancaster, J. Oke & Sons, and D. Brims also show a number of good animals.

*Galloways*. In this class all the first and second prizes were taken by the veteran Galloway breeder, D. McCrae, Guelph. No Polled-Angus were shown.

*Herefords*.—F. A. Fleming secured the lion's share of the prizes. Dawes & Co. were also successful in winning a number.

*Fat Cattle*.—A. Armstrong, Fergus, and Messrs. Oke & Sons showed a number of good animals. A. Armstrong winning first for herd of fifteen export cattle.

**SHEEP.**

In sheep the exhibit was well up to the mark in most of the classes.

*Cotswolds*.—In this class the bulk of the prizes fell to R. Miller, Brougham. For flock bred and owned in Quebec, D. Turanne, L'Ermite, Que., was first, with A. Dennis second.

*Leicesters*.—In this breed John Kelly, Shakespeare, won all the firsts. Quebec exhibitors were R. Allen, Melburne, J. & D. Pringle, Huntington, M. Baxter, Georgetown. For pen owned in Quebec, Robert Allen secured first, and J. & D. Pringle second.

*Lincolns*.—In Lincolns W. Oliver, Avonbank, Ont., secured all the firsts. A. Rock, St. Norbert, secured a number of prizes.

*Southdowns*.—R. Shaw & Sons won all the best prizes.

*Merinos*.—In this class R. Shaw & Sons were the only exhibitors.

*Shropshires*.—In Shrops the western breeders met opposition from J. N. Greenshields, Danville, Que., who was very successful with his flock, winning, among other prizes, first on two-shear ram, shearing ram and ram lamb. Alf. Brown, Bethel, Ont., secured first for pen, and a number of other prizes.

*Oxfords*.—R. Gilmore & Co., Huntington, Que., owned all the Oxfords on the grounds.

*Hampshires*.—John Kelly, Shakespeare, was the sole exhibitor in this breed.

*Dorset Horns*.—In this class the bulk of the prizes fell to John A. McGillivray, Uxbridge, while R. H. Harding came in for a share of the honors.

**SWINE.**

There was a splendid show of swine, and though a number were away at the World's Fair the exhibit was larger than usual. H. George & Sons, Crampton, Ont., showed a herd of no less than 25 Chester Whites and 8 Poland-Chinas, and Jos. Featherstone had 20 Yorkshires and 10 Suffolks. As with the sheep, the Ontario breeders carried off the cream of the prizes. The exception to this was in Improved Yorkshires, where nearly all the prizes went to Quebec, J. N. Greenshields, Danville, winning the larger number of prizes, including the herd prize. J. G. Mair won first for boar under twelve months, and also for sow under one year. A. Tate, Montreal, secured first on sow under six months, and second on herd.

*Berkshires*.—In this class, though there were a large number shown from Quebec, S. Coxworth, Claremont, and G. Green, Fairview, succeeded in capturing all the prizes.

*Suffolks*. Here R. Dorsey, Burnhamthorpe, Ont., and Jos. Featherstone, divided most of the prizes between them.

*Poland-Chinas*. In this class all the entries were from the West, the prizes going to W. H. Jones, Mount Elgin, and J. J. Payne, Chatham, Ont.

In *Chester Whites*, the prizes were principally taken by H. George, Crampton, and R. H. Harding, Thorndale.

A. Bell, of Amber, Ont., had a fine herd of twelve Tamworths, which were the first that have been exhibited here.

**Autumn Care of Stock.**

Owing to the drought that has so adversely affected the pasture over the greater part of our country during the last few months supplemental feeding of stock is necessary. It is very poor economy to allow animals to enter the winter in low condition, as in all probability, if they are allowed to lose their grass flesh, they will continue to be poor all winter, as a pound of flesh saved during the autumn counts for more than a pound put on during the cold weather. With changeable weather, stock requires more attention. Chilly nights will demand an increase of grain food, especially for young animals. Exposure to cold rains is detrimental to the healthfulness of all stock. The fall colts and calves, with their dams, require more care, and can not, as a rule, be fed too liberally. It is better that young colts and calves be kept off the pasture, from evening milking time till nine or ten a.m., when frosty nights arrive.



**Canada's Horticultural Exhibit.**

Prof. L. H. Bailey, the well-known horticultural authority of Cornell University, and other American writers of note, have paid high tributes of praise to the display of Canadian vegetables at the World's Fair. A general idea of our exhibit may be obtained from the accompanying illustration from the Canadian Horticulturist. It has certainly attracted a great deal of attention, as also have our fruits. People from all parts of the world have been astonished at the evidences of Canada's fertile soil and its adaptability in producing such an immense variety of foods for human supply and the support of animals. A particularly fine feature of the exhibits were the collections from the Dominion Experimental Stations. That immediate practical good is to be the result of the efforts Canada has made in the World's Fair is indicated by such letters as the following from the "other side of the world":—

Malvern College, Victoria, Australia,  
July 27, 1903.

N. AWREY, M. P. P., Commissioner for the Province  
of Ontario:

Dear Sir:—I have read some reports of the

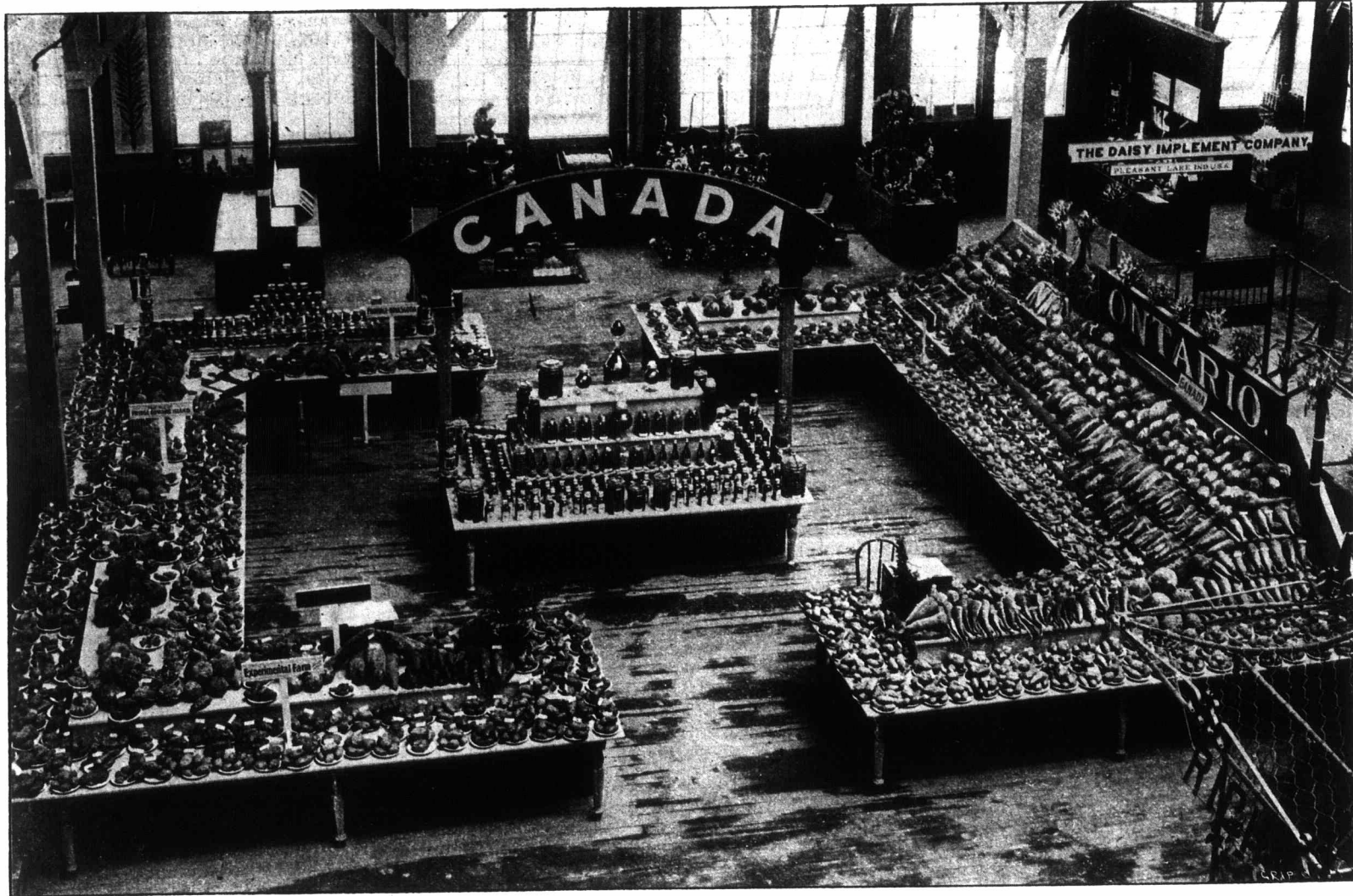
**Why is Wheat Cheap?**

There is, perhaps, no one fact of more serious financial import in Canada to-day than that wheat is cheap. Better farming may increase the yield, but economize as he may the wheat grower finds that the cost of production is not to be reduced at will. Platform orators, with a flourish of the hand, tell the farmer that he cannot control prices, and that he must cut down the cost. This is all very fine, but it affords poor satisfaction to the farmer who sees the price per bushel being squeezed lower and lower, to keep pace with which his most desperate efforts at "reducing the cost of production" are entirely futile. Inevitably, there comes a day when the farmer on high-priced lands, or with other high-priced conditions, finds that he cannot sell wheat and live as the markets have been running. Having realized this, he will then stop growing wheat, except as a stock food, and devote his attention to other lines of husbandry.

To satisfactorily answer the question "Why is Wheat Cheap?" is not easy, and to forecast prices is just as difficult, because of the many unknown factors that enter into the problem. A few years ago a Kansas statistician made an elaborate and exhaustive study of this subject, by which he con-

matizes these speculators (gamblers) as no better than highway robbers. Millions of bushels are sold daily for future delivery by men who do not own a pound of wheat, nor do they expect to deliver, but to settle for the margin at a future date. This class of dealers simply gain or lose, according to the fluctuations of the market a few cents up or down. Such sales and purchases are fictitious, but they have their effect on the market.

The United States crop of 1903 is probably all sold for future delivery already, the options being largely bought by foreign agents, and to be shipped on foreign account. That the "bears" of Chicago should put forth superhuman efforts to still batter down prices is a natural sequence. In the face of what is conceded to be a short crop the world over, the patient American farmer is thus being robbed of some \$150,000,000, prices being some thirty per cent. under the values of previous years. That he should resignedly sit down and submit without a murmur is in effect what he is told to do by those who say "grow wheat cheaper," the other end of the transaction is "none of your business." He will yet awaken and make it manifest that it is a vital part of "his business."



CANADA'S VEGETABLE EXHIBIT AT THE WORLD'S FAIR.

excellent display of fruit shown at the exhibition by your province, and am anxious to obtain the names of the choicest kinds of plums, strawberries, gooseberries, currants, cherries and pears, together with the addresses of reliable growers from whom I can purchase the plants, and who can be depended upon to pack carefully. Any information you can furnish me with on the most approved methods of preserving and packing fruit, together with the particulars of improved machinery for manufacturing strawberry and fruit baskets, boxes and crates, etc., would be greatly appreciated by me. If the firms exhibiting would send me their printed pamphlets, giving varieties and prices, it would greatly assist me. Please excuse my troubling you so much, but my great desire is to obtain the latest and best information on the above subjects, in which your province appears to occupy such an honorable position at the World's Fair. Awaiting anxiously the favor of a reply,

I have the honor to remain, sir,  
Your obedient servant,

WILLIAM REID.

Kindly address reply, care of C. T. Alexander,  
Esq., Centre Road, East Brighton, Victoria, Australia.

vinced himself and many other people that consumption had overtaken production. An era of high prices (over \$1 per bushel for wheat) was about to set in, with good times for the farmer! Instead of going up prices have steadily tumbled down, despite all his optimistic calculations. His figures lied, even though he had faith enough in them to hold his own immense crop of wheat and corn over a season for the expected boom. The farmer in Ontario and other parts of Eastern Canada has lately been dismayed at "sixty-cent wheat," and a buyer the other day cheered the Northwestern farmer by announcing that No. 1 Hard would open in Brandon, Man., at forty-five cents. For the general crop that would make the outlook ruinous.

A good many shrewd men have come to the conclusion that the natural law of "supply and demand" has not all to do with this business. The modest return that the wheat grower should get is whittled down smaller and smaller by endless commissions, exorbitant freight rates, and the like. Grain gambling, for that is what it is and nothing else, on the so-called Boards of Trade in Chicago and New York, is doubtless another factor in the present depression. A writer in the Country Gentleman regards it as the cause, and he stig-

**Shrinkage of Stored Grain.**

In these days of cheap wheat farmers are at a loss to decide whether to sell or hold their stock for a raise. While the present prices cannot be expected to fall much lower, we need not look for what is considered a remunerative figure for this cereal for some time. Before deciding to hold wheat for a chance of a raise, it would be well to consider the certain loss by so doing.

According to reliable experiments which have been conducted, we learn the following facts:—In August, of a previous year, twenty varieties of wheat were stored in small boxes, the two sides and ends of which were made of half-inch pine, thoroughly seasoned, the bottom of window-screen wire, and the top of glass. The full boxes were numbered, weighed, and buried for a year in a bin of wheat, after which they were left in one corner of the bin without any covering until the end of the third year, when it was found that six, or nearly one-third of the twenty boxes, were badly injured by insects. The other fourteen boxes were weighed in August, and showed a loss in weight from three years' storage of nearly one-tenth, or two and one-third per cent. The loss varied from nothing in the Hungarian wheat to nearly five per cent. in some other varieties.



**THE FARMER'S ADVOCATE & HOME MAGAZINE**

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

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**CONTENTS.**

- EDITORIAL—  
345 Illustration, 346 Editorial Notes; Clonmore, Record 221; Agricultural Summer School for Teachers; Hints on Horse Feeding, 347 The Ontario Agricultural College, Its Work and Prospects; The Ontario Fat Stock Show; The Montreal Exhibition; Autumn Care of Stock, 348 Canada's Horticultural Exhibit; Why is Wheat Cheap? Shrinkage of Stored Grain.
- STOCK—  
349 The Live Stock Show at Chicago; Canadian Stock at the World's Fair, 350 Chatty Stock Letter from the States; Jerseys for the Dairy; Saleigh Grange Farm, 351 Illustration of Saleigh Grange Farm, 352 Studs, Herds and Flocks, 353 World's Fair Butter Contest.
- FARM—  
353 Broaden the Wagon Tires; Clover Ensilage, 354 Agricultural Libraries; Notable Implements at Chester; Plowing Matches; Drainage Insures Certainty of Crops; Sir Walter Gilbey Honoured in His Birthplace, Bishop Stortford, Essex, England, 355 The Russian Thistle, 356 Experiments with Winter Wheats; List of Principal Fairs to be held in Canada, 1893.
- GARDEN AND ORCHARD—  
356 Autumn Bulbs; An Orchard Ladder.
- QUESTIONS AND ANSWERS—  
357 Veterinary; Legal; Miscellaneous.
- DAIRY—  
357 How to Get a Babcock Tester; Quick Churning, 358 Practical Buttermaking; Points in Dairy Practice; Branding American Cheese; Dairy Exhibits for Chicago.
- HOME MAGAZINE: 359.  
MINNIE MAY: 360, 361.  
QUIET HOUR: 362.  
UNCLE TOM: 362, 363.  
STOCK GOSSET: 364, 365.  
NOTES: 365.  
ADVERTISEMENTS: 363 to 368.

**PRIZE ESSAYS.**

**Timely Topic in Feeding.**

In view of the serious effects of drought in many parts of Canada, we will give a prize of \$5.00 for the best essay on economical methods of utilizing coarse fodders, grain, and other stock foods on the farm, in order to secure the most profitable results. Essays must reach this office not later than October 15th.

**STOCK.**

**The Live Stock Show at Chicago.**

The live stock show at Chicago is over. It was one of the best in all departments ever seen on this continent. In the horse department the Clydesdale class was very large and good; many animals of unusual merit were on the grounds. The Shire class was small, but some fine animals were shown. The Coachers were a very numerous class. French, German and English breeds were well represented. The Hackneys were not so plentiful, but the quality of many of those shown was excellent. The Percherons were out in large numbers. The Suffolk Punch breeders showed a number of large, fleshy animals—good specimens of the breed. The Kentucky saddle horses were the attraction of the horse ring to many visitors. Among them were superbly trained animals, many of which were of good quality—possessing useful qualities, and were of handsome appearance. The show of Morgan horses was disappointing. This once useful, handsome and vigorous horse has been bred for speed until it has been almost ruined as a class, if we are to judge by those shown at Chicago. The Russian Government made a display of horses, among which were some fine animals; all were light, some trotters, others used for saddle purposes or the race course. The ponies were a large class, but few really fine animals were shown; many were very small, some not larger than yearling Cotswold sheep. In type they were mixed; some were typical Shetlands, others were Welsh in appearance. The decisions of the judge in this class was often astray, several very bad blunders were made.

Cattle were out in large numbers. The quality of the animals was very even. Shorthorns were a fair class. An absence of real y prime females in the aged sections was noticeable. In this section there were no outstanding winners. The heifers and heifer calves—the latter particularly—were a good class. In bulls the breed appeared at its best. Herefords were a fine class, thick-fleshed and finely finished. The white faces never appeared to better advantage. The Dodies (Angus) were likewise very good. The best aged females on the ground were to be found here. The heifers and calves were good, smooth and thick-fleshed. A bull calf of unusual merit was also shown. The dairy breeds were out in full force. The Holsteins were a good class; some remarkable cows were shown. The Ayrshires were very good; by far the finest animals came from Canada. The American Ayrshires are very much inferior to those shown by Canadians. Jerseys were a wonderfully good class, certainly the best ever seen in America, if not in the world. The appearance of these cows in the dairy barn was an eye-opener even to the initiated. Large, handsome, smooth beasts, hearty and vigorous, they were a sight to be remembered and appreciated. The Guernseys were not a good class. The Brown Swiss cows were a novelty to many; they somewhat resemble the Jerseys in color, but are very strong in the bone, short in the legs, and thicker fleshed. They are a peculiar sort, for which their admirers claim much. The Belted Dutch are also a novelty, with nothing to recommend them over the Holsteins, which they resemble somewhat in form and color, but are not as vigorous looking.

**Canadian Stock at the World's Fair.**

[SPECIAL CORRESPONDENCE.]

Ten or twelve thousand people had a chance on Wednesday, September 6th, to form an idea of the resources of the Province of Ontario as a horse and cattle breeding country, when our stables were emptied, and all the prize-winners and those which did not get prizes—though that was no disgrace in the distinguished company in which they have found themselves for the past three weeks—paraded in the live stock pavilion. There were the massive Shorthorns and Herefords, with great promise of steaks and roasts in the future; the curly Galloways and Polled-Angus, their black hides glistening in the sunlight; the rich red Devons, the pie-ball Holsteins, and the sleek little Ayrshires decked out with the many colored badges of victory. And the horses—the proud, high-stepping American Arabs, showing their pride of birth in every movement; the trim, neat Hackneys, easy winners among the pick of the continent; and contrasted with them the heavy Clydes, Suffolks and Shires, with bones of steel and muscles of brass—the very embodiment of strength and endurance. How they pranced and curveted in the ring, and how they were cheered, each class having its admirers. It was a sight long to be remembered, and no Ontario man but felt his blood leap quicker as he realized how nobly the banner province of the Dominion had sustained her reputation in her battle with the world.

As a usual thing at cattle shows, and for that matter at public functions of every kind, one meets many a pessimistic raker-up of old memories, who recalls the performance of a quarter or half a cen-

tury ago—the Royal Cattle Show in England in such a year, the acting of the Elder Booth, or the singing of Jenny Lind, it may be, but individuals of such a kidney had no solid ground to stand upon in the White City these August and September days. Col. J. H. Pickrell, of Chicago, one of the best known old-time Shorthorn men on the continent, Secretary of the Shorthorn Association and judge in that class, is authority for the statement that never in any country has such an assemblage of horses and cattle been gotten together, nor was it ever attempted on the same scale. Those who were there say that the present exhibition of Shorthorns is fully equal, if it does not surpass, that at the Royal Agricultural at Warwick, England, last year.

The hero of this show was undoubtedly Young Abbottsburn, 11,000, 3,000 lbs. in weight, and the most massive Shorthorn that ever graced an American prize ring. Three years ago he was purchased by Col. Moberley, of Kentucky, from J. & W. Watt, of Salem, Ontario, and since then he has downed everything in sight, rounding off his career by being declared the best on the continent. It was hardly expected that he would so long remain the victor, but that he has done so proves how grand an animal he is.

Another beauty is Nonpareil Chief, 113,024, bred by Arthur Johnston, Greenwood, Ontario, a son of old Indian Chief, and also owned by Col. Moberley. He was awarded third prize, while fourth honors went to Earl Fane VIII., 107,085, bred by John Hope, of Bow Park, Ontario, and owned by Col. H. F. Brown, of Minnesota. To follow further down the prize list would take more space than I can afford, but after a careful scrutiny of the herd book, I find that Ontario blood is strong in many of the other prize-winners now in American herds. When we came to the younger cattle, our breeders showed what stuff they were made of, and established beyond a doubt that Ontario is still the nursery for Shorthorns.

Leaving the beef breeds, we find first the black-and-white Hollanders, Holstein-Friesians, as they are generally known. Though not large in numbers, the contingent was select and of high class. Ontario was represented by one herd only—that of J. C. McNiven & Son, Winona, who had no reason to feel ashamed of the position taken among their competitors. Their aged bull was a picture, with his soft hide, silky hair and rich quality and color, and ranked a good second.

Who that has read Blackmore and Kingsley does not have ever present before him the green lush meadows of Devonshire, and keep a soft spot in his heart for the rich dark-red cattle which take their name from the loveliest county in all England—large of frame, sleek of hide, soft of eye, and just the picture of an honest cow that can fill a big pail with milk while she lives, and is a good mark for the butcher when his time comes. Uniform in color and size, the Devon ring was particularly attractive, and the honor of our province was kept up by W. J. Rudd, of Eden Mills, who was a frequent prize taker.

It is hard to find a farmer in Canada who has not a kind word for the Ayrshires. Neat, clean, kindly disposed, grand pail fillers and fair beefers, especially with a Shorthorn cross, it is no wonder they have so many admirers. And in this class was where we distanced all comers, leaving but two or three money prizes to breeders outside of Canada—grand herds than those of Stewart, of Menie, Yuill, of Carleton Place, Guy, of Oshawa, and Smith, of Fairfield Plains, have never been led into the arena, and right well did they fulfil the expectations of their friends. The Quebec Ayrshires, too, were well up in the competition.

In the Jersey class Ontario was represented only by one bull, which, however, did not rank high among the winners.

Turning now to horses. The largest class in which Ontario breeders were interested was the Clydes, in which some twenty exhibitors came forward, and most of them were prize takers, though hardly so far up in the list as their friends expected. But it was a grand show altogether, in number and quality, and one which is not likely soon to be repeated. In Shires but one Ontario man, Mr. John Carr, of Trout River, came to the front, with a well-shaped stallion, War Boy's Fashion. Only two Suffolk Punch stallions were shown, by Joseph Beck, Thorndale, and Boyd Mosson & Co., Bobcaygeon.

The high-stepping Hackneys—gentlemen of the horse family, and fully aware of the fact—were very much in evidence, and included some animals of high rank. Not so large in size, but of grand fashion of body, strong in rib, coupling and quarter, with good thighs and stifles, and a beautifully arched neck, a good Hackney is the kind of horse everybody admires, and they showed it very plainly when Mr. Robert Beith's (Bowmanville) Jubilee Chief was put through his paces at the end of a halter. How his black hide did shine and his four white feet did twinkle, and he seemed to appreciate the salvos of applause from fair hands which greeted him on every appearance. Another of Mr. Beith's stallions, Ottawa, is also a beauty; dark chestnut in color, rich in all that goes to make a good Hackney, he is very near perfection, and had no rival but his black stable-mate. Winnifred and Lady Aberdeen, also from Mr. Beith's stables, make a beautiful team, and there is no disputing the decision that gave them first and second places, and the sweepstakes to the former. Mr. H. N.



Crossley, of Muskoka, sent two elegant mares, Lady Cockney and Lady Bud, into the ring, of the real nag type, such as Londoners delight in, both of which were winners. Fireworks, also owned by Mr. Crossley, is a likely colt, and will be "a good un to go" hereafter surely. Mr. George Hastings, of Toronto, took third prize with his two-year-old, Star of Maple 2nd, as handsome a light bay as ever stood in a ring, that needs only a little more training to make him as good as any of them.

The great success of Dr. J. B. Hall, of Toronto, in winning five prizes with his three American Arabs, Fez, Aldebaran and Keturah, is still a general topic of conversation among horsemen.

In the sweepstakes for beef breeds (young herds), Ontario again came to the front and finished off nicely her long list of triumphs. A finer lot of beef cattle it would be hard to find than the eight young herds (Shorthorns, Herefords, Polled-Angus and Gallows), that were ranged along the north side of the pavilion to await the decision of the judges on the second best prize of the show—\$800 in cold cash. Right at the head stood J. & W. Russell's familiar quintette—Lord Stanley, Centennial Isabella 27th and 30th, Nonpareil 50th and Ruby Prince—three of them pure white. Round and round went the judges, looking before and behind and from the side, comparing notes and shifting the herds from time to time, but never offering to move the Russell herd from their position. To the hundreds of Canadians who were waiting for the verdict it was an anxious time, and when at last the decision was given by the Marshal, congratulations were showered on Mr. Russell for his splendid victory. Mr. Russell also won sweepstake prizes with his yearling bull and heifer calf, and was third among two-year-old heifers. W. B. Cockburn, of Aberfoyle, won first with his roan bull calf, beating out of sight, with another set of judges, the little red bull that outranked him in the earlier days of the competition.

With this week close the cattle and horse exhibits for the present. The fat stock and fast horses will come on in October, and the sheep and swine towards the end of the present month. In both these latter it is expected that Ontario will be well represented.

Among the visitors of note during the present week have been Sir Oliver Mowat and Hon. John Dryden, who called in to see the wonders of the White City on their return from the region north of Lake Superior. The veteran Premier did a good deal of sight-seeing and was delighted with the show as a whole, and expressed himself as more than pleased with the exhibits of Ontario in all the departments. Mr. Dryden was especially interested in the live stock, and was a frequent visitor to the barns and the stock pavilion.

On Thursday afternoon the owners of the Canadian stock, and as many of the attendants as could get away, were entertained at the Canadian pavilion by Honorary Commissioner Cockburn, and spent an hour or two very pleasantly, fighting the battles over again, and congratulating each other on their success.

#### Chatty Stock Letter from the States.

The live stock trade is in much healthier condition than it has been for quite awhile. The panicky feeling in financial circles having been quieted, the live stock trade, which suffered considerably, has been among the first branches of business to recover. "The people must eat," they may do without finery and bric-a-brac in "hard times," but they must have meat, and the meat trade being on a cash basis, is one of the best. Profits need not be large, as capital is often turned. The embargo on eastern commercial paper has been raised, and now exporters and live stock shippers are doing a good business. Recently, Jos. Lunness, of Toronto, and M. Green, of Montreal, took out 200 and 175 head of export cattle respectively. They were shipped via New York. The gentlemen came expecting to get good export cattle at \$4@ \$1.25, but they found they had to pay \$4.50@4.70. They returned to Canada. Exporters have paid, lately, as high as \$5.15 for fancy cattle, but are getting good ones around \$4.75. Armour & Co. continue to export live cattle. They evidently like that branch of the business, which is new to them. Best fat 1700-lb. steers lately sold at \$4.90, while some fancy 1,200-lb. Angus steers sold at \$5.25. Blood and quality still count for more than weight. "Baby beef" is as much in favor as ever. Early maturity is the aim of progressive breeders and feeders.

There is increased activity among the Chicago packing houses. They are making good money, and do not find capital as hard to get as a few weeks ago. The whole financial horizon appears to be rapidly clearing. There is a decidedly improved demand for stock cattle and feeders. Iowa and Missouri men are buying a good many here now, and with what are being sent east, there is a fair trade being established. Most of the feeding sections are too dry. The number of young cattle in the country seems to be unusually light. There is quite a demand for cattle to put on slop feed. Louis Morris bought nearly 100 native feeding bulls, 1000@1200 lbs., at \$2.00@2.25. He says he wants over 1,000 to send to Indiana to put on slop. Slop feeders did not make much money last winter, but they hope for better things this season.

Hogs are selling well again, not, of course, up to the prices of last spring, but around and above \$6, and many expect them to go \$1 higher before a month is out.

The range cattle are still poor in quality, as they were thin in the spring. Winter prospects for range are bright; Maj. W. A. Towers, the well-known range cattle man, reports the range from New Mexico north as being generally good, with the exception of Wyoming.

The World's Fair live stock show was a good one, though many thought not as good as it ought to have been. There is good reason to believe that a Christmas fat stock show will be held in the new pavilion at the stock yards in December.

The sheep market continues in a demoralized condition. A lot of 67-lb. sheep sold to an Illinois feeder at \$1.00 per 100 lbs. It looks as if the feeder would not be taking many chances of loss at 67 cts. apiece. Western range sheep are selling at \$2.00@3.30 per 100 lbs., and native muttons at \$2.50@4.00, with lambs at \$3.00@5.50. The sheep men have evidently become disheartened and intend to "clean up." The result ought to be satisfactory to those who remain in the business.

Some eight cars of cattle, all the way from the State of Washington, were lately marketed at \$3, averaging about 1,350 lbs.

#### Jerseys for the Dairy.

BY KATHRINE S. HANDKE.

With the continual decline in the prices of all cereals, more farmers are gradually awakening to the fact that some other field of industry must be opened if they would lift the mortgage from their homes, or enjoy any of the comforts and luxuries which wealth alone can buy.

Many of these overburdened farmers have, along with their grain-raising, dabbled in dairying; but, from lack of care and an understanding of the laws of inbreeding, their stock has degenerated until the profits, if profits they may be called, when the cost of keeping is considered, amount to the few necessities of the table.

The fact that good butter always commands a steady price, as shown by the market reports of any paper, has led many people to enquire more closely into the nature and possibilities of this particular branch of dairying. That there must be a change in the grade of their stock most farmers are convinced, and to those beginners who cannot afford the time or means to prove which breed of cattle is best adapted to their needs the experience of open-eyed, truthful men is invaluable. Among the many breeds whose merits have been discussed and advocated by leading dairymen are the Jerseys. These cattle, natives of the Channel Island of that name, have been introduced into our country by the progressive American, who saw in them the possibilities of a grander sphere of usefulness than that of mere ornamentation. That they are particularly well fitted for dairy purposes is shown by the quality of their milk and the readiness with which they convert their food into butterfat. It has long been conceded by experienced dairymen—and this is indeed the Jerseys' strong point—that they produce more butter from a given amount of proper food than any other breed; and since economy is one of the roads to wealth, the man who feeds a dollar's worth of food to a Jersey cow and receives in return two dollars for his labor is nearer his goal than the possessor of inferior stock, who oftentimes is not repaid for the food they eat, to say nothing of his labor. Then to change these unprofitable animals, which yield three or four pounds of butter a week, for those requiring no more food or care, and which produce eight or nine pounds a week, is a question which ought to command his immediate attention.

The widespread distribution of Jersey cattle throughout the United States proves that they are not restricted to any particular climate, and their rapid increase proves that they are not more susceptible to disease than any other breed.

Consumers of milk in cities are more quick to appreciate the difference in quality between Jersey and ordinary milk than we would suppose, and they would be willing to pay a better price if they could be guaranteed the better article. That the owner of Jersey products could readily create a demand for his articles is unquestionable. Why, then, should he not? Now that the patrons of many cheese-factories are being paid according to the amount of fat found in their milk, there is an added reason why he should not hesitate to improve his stock. Many people will tell you that the high records made by some Jersey cows are exceptions; but it is not to these special cases, which you, from lack of means, perhaps cannot afford to imitate, but to the record of the general Jersey we would have you turn for convincing proof that she might be your home's salvation. It is a mistake among amateur dairymen that they seek to combine the qualities of a beef and butter producer. This invariably results in a beef producer; but if he persists in his object, let him not tamper with the Jersey, whose mission is strictly that of butter-making.

There is much for the beginner to learn concerning the proper food and care of the Jersey, and there is no better means than through the columns of some good dairy paper, rich with the experience and counsel of men who have made these cattle a grand success.

Their beauty, their gentleness, and, above all, the superior quality of their milk, justify them in their claims to the title of "dairy queens" and make them a desirable object in the eyes of the contemplative buyer. To possess a Jersey is to be inspired to nobleness, and to care for one is to be educated to gentleness and an appreciation of beauty.

#### Isaleigh Grange Farm.

In our present number we give a full-page illustration of Isaleigh Grange Farm, Danville, P. Q., the property of the well-known Q. C., Mr. J. N. Green-shields, of Montreal. This farm, which was placed under the management of Mr. J. Y. Ormsby just twelve months ago, is already making rapid strides to the front as a breeding establishment, and the stock sent out from the farm, from what we learn, is becoming more popular every day with the breeders of the province, and, indeed, not only in the Province of Quebec, for in a recent letter Mr. Ormsby writes us that their sales in the past six months have extended from Nova Scotia to the far West, and as far south as Tennessee.

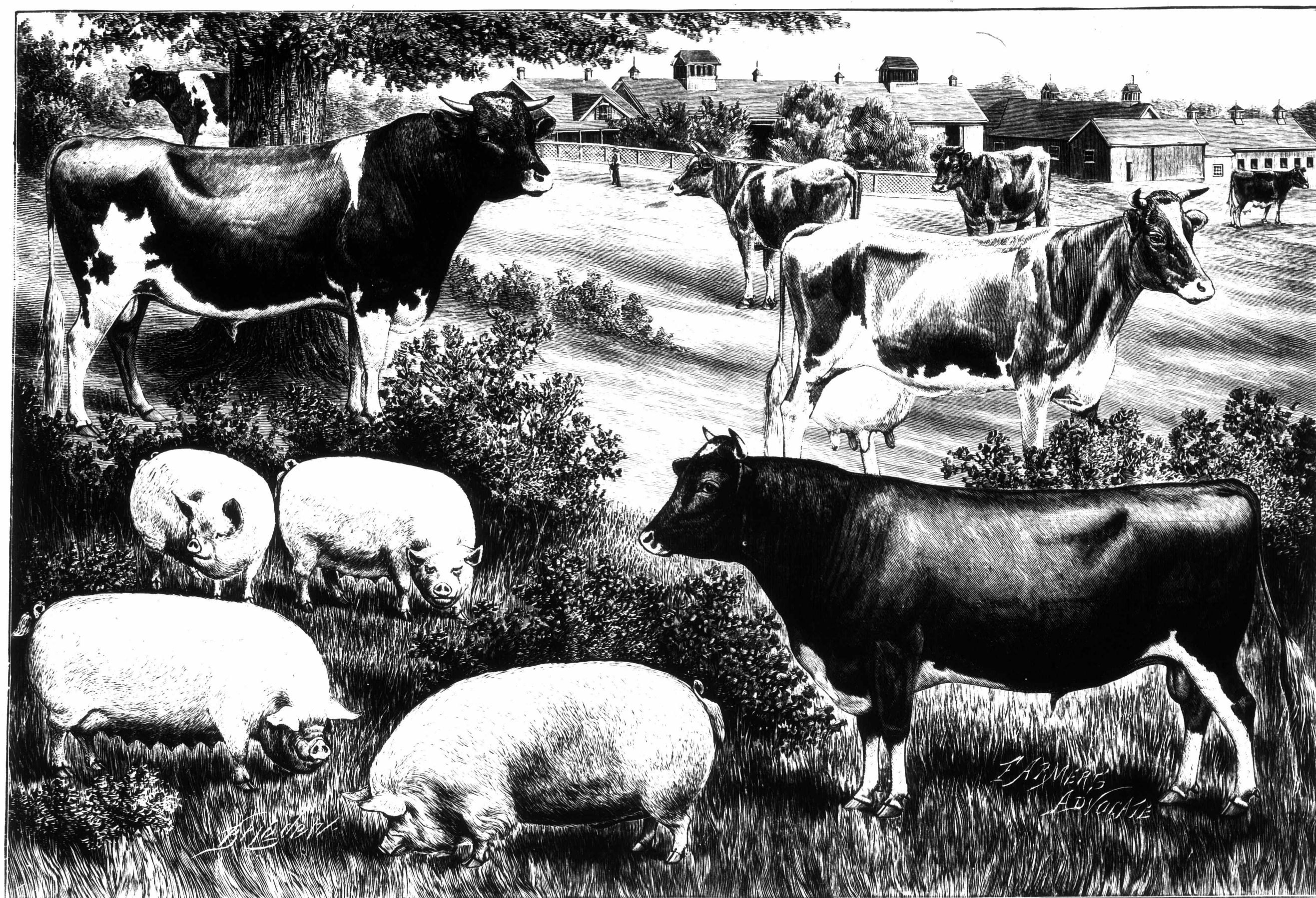
The home farm, which comprises about 800 acres, is devoted to dairy cattle, principally Guernseys, Shropshire sheep, and Improved Large Yorkshire hogs, while on the two outlying farms, which contain about 600 acres, principally of grass, a large flock of mutton sheep are kept, in addition to which a number of cattle are fed off the grass. But our readers will be most interested in the pedigree stock, and as we write this we learn, by the last reports from Montreal and Sherbrooke, that the Isaleigh Grange herd of Guernseys have added to their rapidly increasing reputation by winning the silver medal at Montreal, and the diploma at Sherbrooke, for the best Guernsey herd, Adventurer 526, the bull at the head of the Montreal herd, also winning the silver medal for the best bull of any age. This grand young bull, whose cut appears in our engraving, has just come out of quarantine, and has commenced his career in Canada worthily, having left a record of no less than fourteen first and second prizes behind him in England and Guernsey. He is a beautiful fawn in color, and shows the characteristic dairy points of the breed in a very marked degree, being pronounced by the well-known expert, Mr. F. S. Peer, of New York State, the judge at Montreal, one of the best Guernseys he has ever seen. Besides Adventurer, the well-known bull Ontario's Pride 1929, whose cut also appears in our engraving, is in use at Isaleigh Grange, and is the sire of the 3rd prize calf at the Columbian Exposition, which was bred at Isaleigh Grange, his dam, Eliza C. 2nd, by Sir George, being still in the herd. Ontario's Pride 1929, we may add, won 1st prize and sweepstakes last year at Montreal, Ottawa and Sherbrooke. The herd of Improved Large Yorkshires, of which breed Mr. Ormsby is recognized as a pioneer importer and breeder, is headed by the two imported boars Holywell Miner 2687 and Holywell Prince 2689, the former being the champion boar last year at the Royal Show in England, while the latter headed the herd that has just won the sweepstakes in Montreal, both boars winning 1st place in their classes. The sows, of which there are some twenty-five, are a beautifully even lot. Among them we especially noticed a beautiful young sow from the herd of Mr. D. Gibson, Edgebaston, Birmingham, England; this sow, we were told, won 1st at the Royal, and 1st in her class and sweepstakes against all breeds at Lincoln and Stafford last year. Last spring she raised her first litter of twelve pigs, by Holywell Prince, and the three young sows that are being kept out of this litter as breeders are certainly a most beautiful lot. Owing to an unfortunate mistake, representatives of this herd will not be exhibited at Chicago, but will compete at Toronto, London and Ottawa, where large exhibits will be made, and orders will be taken for young pigs, of which a good supply is expected this fall.

Last, but far from least, come the Shropshires at Isaleigh Grange, and no sheep fancier need ask a greater treat than a stroll through the pastures, where the bonny black faces are feeding, up to their bodies in clover aftermath. The sires in use last fall were from the flocks of Messrs. R. Brown and Geo. Thompson, the two principally used having won, respectively, 1st at the Royal as a lamb, and R. No. at the S. & W. M. as a shearing, while this year there has been imported a capital shearing ram from the flock of Mr. Wm. Thomas; this ram won 1st at Montreal, and is sired by that famous old sheep "Blue Blood."

The ewes, which are a very even lot of the good old-fashioned kind, are from such breeders as Messrs. Brown, R. Thomas, Wm. Thomas, Meares, Thompson, Thonger, Darby and Bowen-Jones; and, as may be expected from such strains of blood, the lambs are exceptionally well woolled and of the truest Shropshire type.

It would take too long here to give a detailed description of the buildings, which are very extensive. We might mention, however, that all the machinery is run by a twenty-five horse-power engine, the engine house being placed at the end of the main barn, and the steam carried underground some distance from the boiler, which is placed in one end of the pig pen, the surplus steam being carried round the pen in two pipes, thus rendering it almost entirely frost-proof. Adjoining the engine house is the dairy, where the milk is separated daily with a De Laval separator, the skim milk being carried by a pipe underground to the piggery, it being the intention to develop this branch of the farm until at least fifty or sixty breeding sows are kept, as the demand for pigs from the Isaleigh Grange herd is every day increasing.





ISALEIGH GRANGE STOCK FARM, DANVILLE, QUE., THE PROPERTY OF J. N. GREENSHIELDS, Q. C.



## Studs, Herds and Flocks.

## RIVERVIEW FARM.

This farm, owned by Mr. H. I. Elliott, is beautifully situated about a mile and a-half from the village of Danville, on the banks of the Nicolet River, which also furnishes power for Mr. Elliott's saw-mills. This gentleman is a comparatively new breeder, but has started on right lines, having secured his foundation stock from such a well-known breeder as Mr. Arthur Johnston, of Greenwood. These animals are all of the Cruickshank and Campbell breeding, and a number belong to the Nonpareil family. He has never had the time to visit any of the larger exhibitions, but has been very successful at all the shows in the Eastern Townships, such as Richmond and Sherbrooke. The animals in the herd are either imported or from imported sires and dams. It is headed by the imported bull King James, bred by representatives of the late Mr. S. Campbell, Kinellar, Scotland. This bull won first prize as calf at the Royal Northern Show before he left Scotland. Another good animal is Mimosa, by Stockwell, bred by Geo. Bruce, Heatherwick, Scotland. This cow is a beautiful roan, and is a capital milker. She won the second prize at the Royal Northern Show of Scotland. She has a heifer calf got by Sittyton Yet. Another good show animal is an imported yearling heifer, Rosella, also bred by Geo. Bruce, Heatherwick. Others are the Thirty-sixth Duchess of Gloucester, got by Indian Chief, now at the head of the Greenwood herd, one of the best breeding bulls in America; dam Thirty-fourth Duchess of Gloucester, imported, she by Dunblane. Clara is a roan of the celebrated Claret tribe; she is also by Indian Chief, and from imported Clara. Lovely Belle is a very promising heifer, got by Lowland Chief, son of Indian Chief; dam imported Lovely, bred by A. Cruickshanks. We also noticed a pair of bull calves, one by Indian Chief out of Nonpareil Countess, the other by Simcoe Chief, son of Indian Chief. Mr. Elliott has also added to his pure-bred stock business the breeding of Yorkshire swine, having obtained his first animals from the Isaleigh Grange herd.

Mr. C. C. Cleveland, M. P., is stocking his farm with a herd of Shorthorns, having bought a number from S. Pearson, of Meadowvale, and Arthur Johnston, of Greenwood, among others Wimple of Trafalgar, whose illustration appeared in a late issue of this paper.

About two miles above Sherbrooke, further up the valley of the St. Francis, is the farm of W. H. Hale, who is already well-known to our readers. This gentleman is doing, as he says, what Prof. Robertson said any man is a fool to do—"selling hay," but in this case Mr. Hale thinks he is pursuing a wise course, as much of his land is hilly and hard to work. He can sell his hay the year round for a good price, and get all the manure he wants in the town. He believes that to be successful a farmer must specialize in some department, and his specialties are hay and asparagus. He has one asparagus bed older than himself, it having been planted in 1832, and is still giving good crops. He ships the asparagus to Montreal, Quebec, and some American cities. He sets the plants three by four feet apart. He is trying to weed out the female plants, as they exhaust themselves bearing seed, and will not give either as early or as strong shoots as the male plant. Judging from the plots examined, this experiment will be very successful. Besides this, he grows a considerable quantity of small fruits and garden truck and flowers, which he ships to Montreal. He has also been carrying on extensive experiments with strawberries, grasses and clovers, an account of which our readers will shortly have the pleasure of reading, as he has promised to send us a full report of this work.

While in Sherbrooke, we visited the training establishment of Dussault & French. They have a large number of horses in training, among which are Boston Globe, chestnut stallion, rec. 2.28½, by Red Wilkes; Lord Edgerton, bay stallion (full brother to Bessie P.), rec. 2.29½, by Lumps, 2.21. They also have a number of colts, two and three years old, in training, by Boston Globe; can all show from a three-minute to 2.40 gait—one, a three-year-old pacer, can show halves at a 2.25 clip. Boston Globe is now being trained, and is showing fast; should trot in 2.20 this fall. Lord Edgerton is also being trained, and should trot in 2.30 this fall.

## ELMWOOD STOCK FARM.

At Lennoxville, a few miles farther east of Sherbrooke, we find the breeding establishment of Mr. John Shuter, where we find his stud of trotting horses, gentleman's roadsters and Clydesdales. Lennoxville is prettily situated at the junction of the Missawippi and the St. Francis rivers. Elmwood farm is just in the outskirts of the town, and comprises one hundred and fifty acres on the west bank of the Missawippi. At the head of the stud stands Dodger, record 2.24½, over a half-mile track, sire Arminius, he by Ravellar; dam City Girl. He began as a green horse six years old, started in fifteen races and won ten firsts, three seconds, and a third, and a fourth, and for the first time in history brought the Vermont State record into Canada. So far this season he has only entered in one race, that at Farnum, P. Q., where he beat Factory Boy in three heats. Dodger will make a fall season after the trotting is over. Groveland, sired by Alcaender, record 2.20½, he by Alcantara, record 2.23; dam Grieves, by Waukegen. Chief Woger is a half-brother of

Dodger. He is a bay stallion with black points, foaled June 1891, sired by Boston Globe, he by Red Wilkes; dam City Girl. He is well broken, a sure trotter, and very speedy. Others are Dolly Varden, a bay mare, a full sister. There are fifteen others, all standard-bred in fashionable lines, and from such sires as Boston Globe, Arminius and Red Mac. Sir Hector heads the Clydesdale stud. He was bred by John Shuter; sire Fairwin, dam Jessie, late Reggie. Others are Dolly Bee, by Balmoral Margrette, a four-year-old bay filly by Prince of Hallin, Sally Dawson, and a number of others. Breeders from the west who are in search of well-bred horse flesh should take a trip through the eastern part of Canada, and we feel sure they will be well repaid for their trouble.

## GLENBURN STOCK FARM.

About four and a-half miles from Lennoxville Mr. John Racey is breeding Scotch Shorthorns and Berkshires. The foundation of his herd of Shorthorns was obtained from such breeders as Green Bros., Innerkip, J. C. Snell, Edmonton, and John Miller. His stock bull Strathroy, out of a Strathalian cow, was a prize-winner at Toronto in the calf class, and has proved himself an excellent stock getter. Duchess of Halton 5th, got by Red-path Prince, he by the Scottish imported bull Prince Cannymann, of noted prize-winning stock. Mr. Racey does not believe in over-feeding his animals for the sake of show, but rather in keeping them in good breeding condition. In swine Mr. Racey is aiming to produce a pig suitable for the bacon market, and thinks the best results can be obtained from breeding Berkshires. He finds the demand for his Berkshires so great that he can with difficulty keep up to it.

## WOODSIDE FARM.

About a mile from Cookshire is the farm of Col. J. H. Taylor, where is kept a small but select herd of Shorthorns.

J. F. Learned, of the same place, is breeding Cleveland Bays and Shorthorns. The Shorthorn foundation stock came from Green Bros., Innerkip. The Cookshire agricultural buildings and grounds are situated on this farm.

## HILLHURST HACKNEYS.

The stud is owned by Senator M. H. Cochrane, located on Hillhurst Farm, two miles from Hillhurst Station and four from Compton. This stud is believed to be the oldest in Canada or the United States. He has lately made a fresh importation of eight animals, comprising the yearling filly Camie, by Danegelt, out of Lady Millington, by Star of the East, bred by Mr. Robert Pringle, of Rillington, which won second as a foal at Melbourne, and first at Shipworth. Vina, a brown mare, half-sister to the above, got by Wildfire, was first at Melbourne in the three-year-old class, winner of first at Pocklington, and highly commended at London. Cannymann, dam by Lord Derby 2nd. Another is Miss Baker, a four-year-old mare, rich brown in color, by Ruby, son of Confessor. She was highly commended at London last year. She is in foal to Agility. Thus it will be seen that this importation includes the best that could be obtained in the Old Land, and will add fresh laurels to the crown of the already celebrated Hillhurst Hackneys.

## COMPTON KENNELS.

Mr. F. S. Wetherald, proprietor of the Oriental Hotel, Compton, takes a great interest in pure-bred stock, and has a small but select herd of Jerseys, as well as a flock of registered Shropshires, and has been quite successful at the Eastern Township shows. He also is a great lover of dogs, and has a number of pure-bred Scotch and Irish terriers and wire-head fox terriers.

G. W. Fuller, Capelton, is breeding Shropshires. His first were obtained principally from the flocks of John Dryden and Robert Miller.

## GLENHOLM STOCK FARM.

This fine farm of four hundred acres is owned by W. P. McClary, and is situated in the rich valley of Coaticooke, about a mile from Compton village. It is an especially good grazing and hay farm, about two hundred and fifty acres being in pasture. Mr. McClary does a large amount of grazing, and ships direct to the Old Country. Part of the best land is overflowed annually by the river, and this gives enormous crops of hay, and though he has only lately taken up the breeding of pure-bred stock he has been very successful at the different local shows. The stock, which was obtained principally from Messrs. Green Bros., Innerkip, is headed by the stock bull Duke of Halton, got by Prince Hazelwood 29, dam Duchess of Roseberry; was bred by W. S. Campbell, Brantford. In the field were Venetia 2nd, got by Earl of Mar, dam (imp.) Vain Maid, bred by Green Bros.; Venetia 5th, a full sister to the above, and Peggoty, by Lord Lochinavar, and others.

## INGLESIDE FARM.

Is the property of Mr. H. D. Smith, and comprises about fourteen hundred acres, situated about a mile from Compton village. There are about seven hundred acres in pasture and two hundred in hay, and about ninety under the plow, besides about ten of corn and ten of roots. This enthusiastic young farmer is just building himself a palatial residence, which commands the view of the surrounding country for miles, and in one direction the view extends for one hundred miles into New Hampshire

He has splendid accommodation for his stock, and one stable, which is called the school stable, has a space one hundred and fifty-two feet by thirty-six feet, which is used as a riding school and place for exercising horses. In this stable were his pair of Coach horses, one of which is a half-sister to Ontario, the noted jumper. He has four telephones on the farm, so that while working in his office he can be in direct communication with every department of the farm.

At the time of our visit the cattle were all out at pasture, with the exception of the seven that were destined for Chicago, headed by Mr. Smith's renowned medal bull of Canada, Young Tushingham 2nd (32308). This bull won sweepstakes whenever shown in Canada. He was got by Tushingham; dam, Formosa. Lady Tushingham 3rd, got by Lord Tushingham, and out of Lady Wintercott, took first at Montreal and second at Toronto and Ottawa, is a three-year-old, and has just received fourth premium at Chicago. Spot 3rd is a two-year-old, sired by Anxiety, out of Sylva. This heifer was also a prize winner last fall, and obtained a premium at Chicago. The others which were sent to Chicago were two yearling heifers, Cherry 25th and Josephine, and a cow, Amy 3rd. These were all successful in winning premiums. This herd of twenty-nine pure-bred Herefords are all from prize winners, and the most desirable blood of Horace, Anxiety, The Grove and Bredwardine. He also has a herd of choice Jerseys, which he intends enlarging and going more largely into dairying. Of horses, there were twenty-six horses and seven colts. The Clydes are all of the Prince of Wales and Darnley strains.

## MAPLE RIDGE SOUTHDOWNS.

This farm, the property of Guy Carr, Complin Station, is so named from his large maple grove, numbering about twenty-five thousand. He is breeding Southdown and Shropshire sheep, registered Canadian cattle, and Plymouth Rock and Wyandotte fowls. He considers the Canadian (Quebec Jersey) cattle a superior dairy breed, and at the same time very cheap in price. One cow, Elly Dance 191, took the prize in competition in the Dominion dairy test for highest percentage of butterfat. He is one of the first to introduce the Southdowns in the section, thinking that they were particularly adapted to the hills of this country. The foundation was principally drawn from the flocks of Robert Shaw, of Glanford. His Southdowns are very uniform in type, and are headed by the ram Sir John 5352, in American Southdown Record. All but a few are registered in this Record, and the remainder are registered in the Quebec Register.

Mr. Carr is a very enterprising young man. He has just set out five acres of Russian apples, which, in spite of the predictions of his neighbors, have done exceedingly well, and are just coming into bearing; and a number of farmers are changing their minds, and are following his example and setting out trees. He studies convenience in every form. His side-hill sugar-house is a specimen of this, and is very convenient; no handling of sap required. At this place we saw the most complete workshop seen anywhere during the trip; in fact, very few blacksmiths have a more complete kit. He also puts them to practical use, as he has done all his own blacksmithing for the last three years.

## BLACKWELL &amp; M'CALLUM

are the owners of two adjoining farms about a mile from Martintown post office, five from Apple Hill, C. P. R., and eleven from Lancaster, G. T. R. This farm is situated in the valley of the Aux Basin and in the midst of a splendid dairy section, where every farmer makes as much provision for his silo as he would for a granary. On these farms the milk is sent to a cheese factory in the summer, and in the winter is made into butter at home. The cows are principally Durham grades, and for some years they have been using an Ayrshire bull with good results. On the one farm Mr. Blackwell is building a new barn 4x80 feet. He has what is a rather new feature—a driveway down the side of the barn as well as across the end of the building. This gives the advantage of an end drive without the waste of room or trouble with scaffolding. They have about thirty Shropshires, a number being imported. The ram being used at present is from the flock of the Hon. John Dryden. They have found sales exceedingly good, and have shipped a number lately to Mr. Cummings, Carmon, Mass. Though these are comparatively new breeders, they cleared all the local shows in that district. They are also breeding Yorkshires, having secured their stock from Smith Bros., Churchville.

## MR. R. R. SANGSTER'S SHORTHORNS.

About half way between the last farm and Lancaster is the silver medal farm of the eastern district of twelve counties, named Springburn Stock Farm, on which are found a herd of Shorthorns of the Cruickshank and Campbell breeding, and a flock of Shropshires. The foundation of this herd came from the stock of Mr. Thompson, of Whitby. He is using an imported bull. This herd has been very successful at the local exhibitions, and also at Ottawa, while a number of animals are being fitted for Montreal. At present his herd is small, having been reduced by a large draft which was sent to Manitoba, though he still has a couple of young bulls on hand. The herd is headed by the bull Peer of the Realm, out of an imported Wimple cow. Among the females are Fanny B. 30th, a beautiful three-year-old heifer bred by Jos. Redmond.



Mr. Sangster takes a great interest in his garden, and has done considerable in experimenting with grain. He has taken a number of prizes for his grain at the leading exhibitions, and the government has sent a number of his specimens to the World's Fair.

**KINGSTON ROAD STOCK FARM.**

About two and a-half miles from the city of Belleville we find the Kingston Road Stock Farm of J. M. Hurley & Son, breeders of imported Large Yorkshire swine and carriage horses. This farm is situated on the beautiful shores of the Bay of Quinte. They have been moving their old barns and building additions to them, with the intention of going more extensively into dairying. Each animal's milk is weighed and the cows were all tested with the Babcock, so in this way they will keep only such animals as are paying for their feed. This firm have been breeding and training horses and raising hogs for years, but it was not until 1887 that they decided to go into the pure stock business, and purchased a pair of pure-bred Yorkshires from Ormsby & Chapman, from the first litter that they raised from their first importation. Mr. Hurley is the second man who registered in the Yorkshire herd book. Beginning in a small way, pigs from his stock have been distributed all over the country. Since last November, pigs have been shipped to nearly every county in Ontario, and to Quebec, Manitoba, Michigan and Kansas. The first lot of ten were shipped to Kansas, and were the means of obtaining a large number of orders from the same section. Out in the yard we saw two especially good sows of their own breeding. The older sow, Madam 2, is deep, wide and well let down; was farrowed in 1889, sire Sir Edwin, dam Madame, by Holywell Wonder. The other, Susan, farrowed 1891, sire Patsey, dam Madame. The herd is headed by the grand young boar Duke of Oxford, bred by J. E. Brethour, Burford; Sir Dauphin 3rd (imp.), dam Duchess 3 (imp. in December), by Magistrate. Another young boar, Young Hamlet, farrowed January, 1893, sired by General Gordon, dam Lady Ethel. They have never had time to exhibit at our large exhibitions, but have been successful wherever they have shown. Last year they sold fifty at the exhibitions they attended, besides sweeping everything at the local exhibitions.

**PINE GROVE HERD OF POLAND-CHINAS.**

The farm on which this herd has been established is about two miles from Tupperville on the Erie & Huron R. R., and about sixteen miles north from Chatham. For many years the proprietor, Capt. Young, has made a practice of feeding pigs for the block, and as he lives in a part of the country where corn is extensively grown, and where the farmers generally market this crop on foot through their hogs, he found there was much room for improvement in the kind of pigs that they were raising and feeding. It was, therefore, with a view to find a suitable hog to fill the bill in this particular that he undertook the breeding of pure-bred swine, and, while visiting Michigan, secured some Poland-Chinas, which already show their impress on the road to improvement in many of the pigs being fed in this vicinity.

During last year Capt. Young made two selections from two of the leading herds of the United States, and was enabled to secure specimens which are not only likely to do credit to his judgment, but will be of inestimable benefit to those who avail themselves of this opportunity he has offered them for improving their stock. As before intimated, the foundation stock was selected at different periods, and of two selections made in 1892, the first comprised the boar Wise Reubin 28279, and the sow Rebecca 1st 70906, both purchased from Mr. Levi Arnold, Plainville, Michigan, who has the reputation of being a skillful breeder. Again, another lot was brought over later in the year, when the very excellent young boar, Canada Wilkes, was purchased from Mr. J. H. Beebont, Rushville, Ind., and the sow Cora from the before-mentioned herd of Mr. Levi Arnold.

Capt. Young has collected a number of exceedingly good individuals, and, as his selections have been made with a view of supplying pairs not akin, we predict that he will be enabled to transact a large share of the business in breeding stock, and those who have not the pleasure of his acquaintance may be assured of fair dealing at his hands.

**World's Fair Butter Contest.**

The following table gives a summary of the completed ninety days' butter contest at the World's Fair, twenty-five cows of each of the three breeds competing:

Breeds.	Lbs. milk.	Per cent. solids.	Per cent. fat.	Lbs. fat.	Lbs. butter.
Guernsey	61,781.7	13.78	4.61	2,841.56	3,391.43
Jersey	73,478.8	13.82	4.86	3,113.47	4,273.95
Shorthorn	66,212.6	12.21	3.38	2,169.98	2,890.75

At this writing the cost of food consumed had not been announced, so that the comparative profits do not appear in the above.

**FARM.**

**Broaden the Wagon Tires.**

It seems inadvisable to attempt by legislative force a reform that cannot be accomplished easily, and that ought to depend upon personal intelligence and self-interest. At the same time it is useless to hope for permanent road improvements as long as the ordinary wagon tire is used. How this came to be generally adopted is a mystery, for the saving in weight of metal is easily offset by the depth to which the wheel so encircled will sink into the mire and the greater force required to drag them through it.

In all European countries where smooth, hard roads have been constructed, people would no more think of permitting them to be cut to pieces by narrow tires than they would of allowing a man to set at work digging them up with a pick-axe. There is an indirect way of getting at a change in the common custom of farmers that would be very effective. To prohibit and punish the use of the narrow tires is hardly practicable, but a tax levied on all farm wagons having tires not exceeding a certain width would soon banish them from the public highways, and such an imposition would be perfectly justified, as the receipts from it would not suffice to repair the damage which such tires cause. An accompaniment of road reform, the adoption—enforced, if necessary—of standard wagon tires is a necessity.

A recent enactment of the New York legislature provides that to every person using a two-horse or larger wagon with wheels, the tires of which are not less than three inches wide, on the public highways, a rebate of half his highway taxes shall be granted. This law was made in the interest of good roads. Dealers in wagons who have been interviewed in Albany say that since the law went into effect, on June 1st last, the demand for wagons with wide tires has shown a marked increase.

The professor of agriculture of the Missouri Experiment Station, who has conducted experiments for the purpose of ascertaining the difference in the draught of a given load on the same road, but on wagons with tires of different widths, gives his results as follows:—

"The wheel tires were respectively one and a-half inches and three inches wide, and the trial was on a partially dried mud road. The load was in each case 3,005 pounds. The draught for the broad tires was 371 pounds, and for the narrow 441 pounds, and the broad tires cut the roads less deeply than the narrow ones."

Mr. Jas. A. Bell, in his bulletin on the making of roads, has the following:—

"The width of tires on vehicles has a great deal to do with the destruction of our roads. The great defect is, that for heavy loads the tires are too narrow. It has been proved by repeated and careful experiments that wheels with tires 2½ inches wide cause double the wear of wheels which have tires 4½ inches wide. The surface of the roadway is not able to bear the heavy load put upon it by narrow tires, the tire therefore cuts through the surface and forms deep ruts.

The width of tires on wheels should be properly proportioned to the weights they are designed to carry. Wide tires have a tendency to roll the road and keep it smooth at the same time; usually it does not require the same amount of force to haul a vehicle with wide tires, as it does to haul one with narrow ones. Municipalities should consider the regulating of traffic in this regard.

Most of the European countries have laws regulating the width of tires on vehicles. In France the market wagons have tires from 3 to 10 inches in width, usually from 4 to 6 inches. Not only have they wide tires, but in most of their four-wheeled freight wagons the rear axle is 14 inches longer than the fore axle, so that the rear wheels run on a line about an inch outside of the line of the fore wheels; instead of being a road destroyer they are a veritable road maker.

In order to encourage the use of wide tires in the State of Michigan, they have a law granting a certain reduction in taxes to those who use wide tires.

Vehicles on springs are much easier on roads than vehicles without springs.

Wheels of large diameter do less damage to roads than smaller ones, and cause less draught."

Mr. John Brodie, of the Mapleton, Ont., cheese factory, who uses a Babcock to test the milk, furnished by his patrons, (though he does not pay on the basis of fat percentage), reports that he has never received such good milk and in such good condition as this year. The richness of the milk, he finds, varies greatly with the food supply. When cows are tormented with flies, and forced to roam long distances for food and drink, he found the percentage of fat much lower.

**Clover Ensilage.**

BY WM. BUTLER, DEREHAM CENTRE, ONT.

In reply to your request for a report from any one who had filled a small silo with clover, I will relate my experience. Making ensilage of clover has been long practised in Europe. We would naturally wonder why it has not become more common in America, but after giving it a moment's thought, we would conclude that: 1st. The shortness of our season has something to do with it. 2nd. Not enough clover grown. 3rd. The silos are too large. 4th. Hands and machinery are too scarce. The size of the silo has a great deal to do with it, because after it is once opened it should be fed immediately, as it so soon rots and dries out on the top after the air gets to it. The size of the silo which I filled was 10x12 and 20 high, which will hold about 54 tons of corn or 36 tons of clover ensilage. The silo is built of wood, which I do not recommend; for this purpose I think stone or brick would be preferable. A silo this size will answer the purpose very well for about thirty-five head of stock. Care should be taken not to have too much outside surface in proportion to the amount it holds. A round or square silo would be the best shape. The more there is exposed to the air the more will waste.

The hands and machinery required will not be large. The nearer the field to the barn the less will be needed. Six men are all that will be required. One mower, two wagons and racks, an engine, horse or tread-power to run a cutter with carrier, are sufficient.

The time required to fill a silo of the size mentioned with the number of hands stated will be about two days. The silo may be filled without interfering with securing the other hay; indeed, the time spent in filling this year was never missed. After a shower, or in the morning when the other hay is drying, is a good time, although, after once commencing to fill, the sooner it is done the better.

**YIELD OF CROP.**

A heavy crop of clover will yield as much per acre as from ½ to ¾ of an acre of corn. Four acres filled a silo of 2,400 square feet, this being a little above an average crop. The kind used was the common red clover, *Trifolium Pratense*, but if clover was grown especially for the silo I would recommend Lucerne, being better for producing milk and muscle. Alsike is good, but will only produce one crop and no aftermath. Lucerne is a more sure crop, and will produce more in bulk and two or three cuttings in one season. Dry weather will not affect Lucerne as much as it does other clover, on account of it being a deeper feeder. The principal objection raised against Lucerne by the farmers is the amount of care which has to be exercised in harvesting it, on account of it getting woody so quickly. This would be obviated in utilizing it for the silo. I have no doubt if rye or other green fodder was mixed and cut at the same time it would give good satisfaction. This would be better done if the clover had got a little old.

**FILLING.**

Filling should commence when the clover is green, especially if the silo is made of wood. The greener the clover the better it will pack, and the less waste there will be from air-rotting. Drying or wilting does not improve the quality of the ensilage; the fresher it is when fed the more it will be relished by the stock. Tramping in the silo should be thorough—better still if done with a horse, which should be used most around the outside. About three feet in the silo that we filled this year didn't get tramped. When we came to feed it out the ensilage was good almost to the wall where it was tramped, but where it wasn't tramped it had decayed in about nine inches to one foot. A good covering can be made of the rakings. We commenced filling this year on the third of July and finished on the eleventh.

**FEEDING.**

Feeding may commence in a couple of weeks after being filled. It is better to let it settle down perfectly before opening, to prevent the air working in it so quickly after opening. If pastures remain good, it would be better to delay opening a little longer. Commencing feeding on the 30th of July, we have fed about one-third of the amount up to August 24th. The amount of stock fed on this was 5 horses, fed all they would eat, and 30 cows twice a day. The horses don't care for dry hay now, and I think it preferable to hay; at least they are doing better on the clover than when fed hay. Clover ensilage is principally used for feeding horses in England. I cannot say how pigs will thrive on ensilage, but I think wheat at 55 cts. per bushel would be cheaper and give better returns. I would recommend bran or wheat chop rather than pea chop to be fed with the clover.

**COST.**

The cost of filling was about \$20. Being hard to figure on the profits, I will leave that with the reader to judge for himself. Had it not been for the fly pest coming on about the same time as the pastures failed, I think my cows would have held their own in milk.

The advantages of making ensilage of clover are as follows:

- 1st. It saves a great amount of labor in curing clover, especially so if the season is wet and the crop is heavy.
- 2nd. There is less loss in feeding.
- 3rd. No loss of leaves.



- 4th. Prevents the escape of ammonia and loss of starch and ash constituents due to exposure.  
 5th. The crop can be cut and harvested before weeds in a meadow are ripe.  
 6th. It is one of the best substitutes for pasture and green fodder in a dry season.  
 7th. So much clover can be put in so small a space.

#### Agricultural Libraries.

As winter approaches and the evenings lengthen out, it is well to prepare a profitable means of spending this long season of comparative rest from the ordinary operations of the farm. We know of no better employment than reading and seeking fuller knowledge of our own business—farming.

Several of the institutes have wisely invested in some of the standard agricultural works, forming small circulating libraries open to all members of the institute. Wherever adopted, this plan has proved satisfactory, and the example might be followed with advantage by others. Many who are not fortunate enough to have an institute in their district would like to have the latest standard works on their own shelves. The following list of works will be found helpful in making selections for this purpose:

Practical Poultry Keeper.....	Wright.
Poultry Culture.....	Felch.
How Crops Grow.....	Johnson; latest edition.
How Crops Feed.....	Johnson; latest edition.
Chemistry in the Farm.....	Warrington.
Science in Farming.....	Thompson.
Feeding Animals.....	Stewart.
Cattle Breeding.....	Warfield.
Horse Breeding.....	Sanders.
Cattle, Sheep and Pigs of Great Britain.....	Coleman.
Practical Shepherd.....	Randall.
The Hog in America.....	Shepherd.
Swine Husbandry.....	Coburn.
Harris on the Pig.....	Harris.
Veterinary Adviser.....	Law.
Cattle and Their Diseases.....	Murray.
Barn Building.....	Sanders.
Insects Injurious to Vegetation.....	Harris.
Insects Injurious to Fruit.....	Saunders.
Farm Drainage.....	French.
Grasses of North America.....	Beal.
Gardening for Profit.....	Henderson.
Fruit Gardening.....	Barry.
Manual of Apiary.....	Cook.
Practical Farm Chemistry.....	Greiner.
The Dairyman Manual.....	Stuart.
First Principles of Agriculture.....	Mills & Shaw.
How to Make the Garden Pay.....	Greiner.
Sheep, Breeds, Management and Diseases.....	Youatt.

Many others might be mentioned, but these will suffice for the present. All or any can be obtained at publisher's price by addressing this office.

#### Notable Implements at Chester.

There was a large and more than usually varied display of implements at the Royal Agricultural Show this year, the entries numbering about one hundred over those of Warwick, says the Farmers' Gazette.

The special competitions for 1893 were trials of self-binding harvesters and sheep shearing machines for power and hand. The first must be deferred to the harvest; the latter were publicly tested in the show ground. Only two firms entered for this competition, Messrs. Burgon & Ball, of Sheffield, and the Newall-Cunningham Syndicate, of London. Sheep were shorn in periods of from six and a-half to nine minutes, but the work did not seem to give complete satisfaction to the onlookers, although in Australia they are said to be very successful. The judges eventually gave their award of £20 prize to Messrs. Burgon & Ball for the power machine, but the Newall-Cunningham hand machine, which seemed hard to work, and to shear the sheep roughly, did not possess sufficient merit to secure a prize. No doubt much better work would have been done apart from the hurry and excitement of the show-yard. Certainly the prize machine did better after the competition was over than when the judges were watching it. It is expected that there will be a very keen competition for the binder prize, for which all the important makers, English and American, are entered. If the weather continues as it is, there will be a good opportunity of testing the respective merits of the elevating system against the non-elevating, as represented by the Adriance, about the patents of which the patent courts of America are so much occupied.

Messrs. Hicks & Co., of London, exhibited a novel form of butter pat machine, which is said to be capable of turning out as many as 2,500 pats in an hour, stamped with any required impression. The price, however, £15 15s., renders it only suitable for large concerns.

The new "Era" disc churn was a constant source of interest to the farmers, who watched intently the man at work, and checked off the time of churning, which is generally about five or six minutes. The construction is simple enough—a disc of hard wood, revolving at a rather high speed in an oblong, narrow chamber. The cream is carried up, and driven up against the cover until it is turned to butter. When this is effected the butter will not rise on the disc, so that the inventor claims that over-churning is not possible. We fancy that this article could only be made in small sizes, as the chamber in which the disc works must of necessity be narrow, or all the cream would not be treated.

#### Plowing Matches.

BY W. A. HALE, SHERBROOKE, QUE.

(Continued from Page 47.)

Where the association is formed in a county having one or more large towns and villages, a very large portion of the prizes can be secured in produce and useful articles of various kinds, by giving the donors in return the benefit of the advertising resulting from the publication of their names and prizes in the local papers, and on the posters announcing the prize lists and matches. At the large central fairs held each autumn prior to the dates of the matches, useful farm implements can often be secured and introduced in this way; a horse rake, hay tedder, plough, harrow, or cultivator, etc., will often be given by an exhibitor upon the association paying, say \$5 on a \$15 plow, the plow is advertised as coming as a prize from the manufacturer, and the association advertises it as a prize, the winner either to pay the \$5 or not, as the association sees fit. In some cases, too, manufacturers of agricultural implements, or large agencies of the same, will give silver cups, in some cases to be won twice before final ownership. County members of parliament, too, are often willing to contribute annually in this way, and millers, storekeepers, fertilizer manufacturers and tradesmen generally, breeders of thoroughbred stock, etc., will help to make up a useful and creditable prize list, while few are the friends of so important an organization who would refuse to subscribe from \$1 to \$2 a year. In the association in which I have held various offices for thirteen years, we have lately made a very important addition to the prize list. Certificates for services by the best stallions in the district are secured and given as prizes for the "best team and neatest harness," the first prize winner to take first choice, and so on. In preparing the prize list, which is done by the committee appointed for this purpose, assisted by the secretary, we have found it best, in order to keep our cup-winning plowmen with us as an example to the younger men, to make No. 1 match open to the district, the first prize in this match being an annual medal. Any plow allowed, including wheels and gauges, etc., into this match. The cup winner in No. 2 match, so soon as he has finally won his cup, must enter there to compete, if he so wish, for all time. This No. 2 match is practically for Scotch plows, no wheels nor gauges allowed, but imitation Scotch plows may compete if so desired; first prize always a cup, to be twice won before final ownership. No. 3 match is practically for imitation Scotch plows, no wheels nor gauges allowed; first prize always a cup, and the final cup winner to be sent up to match No. 2. During the last few years, we have left out the match for "broad points" (the old wooden or heavy cast-iron beam plow), and match No. 4 is for boys under eighteen years of age, any plow, wheels and gauges allowed; first prize an annual cup if possible, and the winner to be sent up to match No. 3, no matter what his age, or in case the cup has to be won twice and the boy wins it first in his seventeenth year, he to be given one more chance before being sent up. Whenever a cup is won the association gives \$2 or more with it, to enable the winner to have his photograph taken with his cup, and in case he does not finally win it, he has the satisfaction of a photograph as proof of his having taken it for one year. Cups in this way serve as prizes for at least two years, and the name and date of each winner should be engraved upon them at the cost of the association. In this way an annual prize list of the value of from \$150 to \$300 ought easily to be worked up, and be the means of bringing out from twenty-five to fifty or more competitors each year, every one of whom should receive a prize in the order of his merit, thus grading each one's work, and showing his improvement from year to year. Proper judging, of course, is of vital importance, and here I would like to lay particular stress upon the necessity of getting the best talent and experience possible, even if you have to pay liberally for it. The land committee should lay out the field, and stake and number the lands if possible the day before the match, eight acres being enough for forty competitors, besides headland, etc.; and by ten o'clock all should be in place, the bell rung, and the plows started, the order being for each man to first form his crown-ridge six furrows wide, and then by plowing out to his neighbour's crown-ridge as well as his own, finishing his work with an open furrow. At noon a rest of an hour will delay the work sufficiently to allow people to arrive in time in the afternoon to see the last of the competitions, and yet give the judge time to complete his work; supposing he begins at two o'clock, he may require some one appointed or approved of by the directors to assist him, as well as the secretary, who should be in attendance to place the prize tickets as soon as the awards are made, and to keep an accurate record of the same. Separate judges should be at this time awarding the prizes for the best teams, and where time and the resources of the association will allow of it, and particularly if there are a number of people who have come too late to see the teams at work, a very interesting competition for some nominal prize can be made between a few of the first prize-winners for the best feasting and forming of a crown-ridge. The proprietor of the land usually furnishes the plowmen with bread and cheese and coffee in the field at noon, and gives a more substantial meal to the directors and judges in the house, the plowmen bringing their own hay and oats. Between

the finishing of the match and the meeting in the evening, the secretary should write up his minutes and prepare all certificates of prizes, etc., and, if possible, submit a balance sheet of accounts. Of late years we have dispensed with the plowmen's dinner in the evening, to the satisfaction of every one; it was an unnecessary expense, and delayed the business meeting to a late hour. At this meeting the first business should be the distributing of the prizes, either in kind, in cash, or in certificates; after this the election of the new board of officers for the ensuing year should be proceeded with by open votes of the whole meeting, during which, if the subscription committee would quietly send round a subscription list headed by the president, etc., it would probably insure a better result than could be obtained at any other time. Appropriate addresses, songs, and even music by a band, will be in order, and tend much to enliven the meeting and insure an enjoyable, instructive and successful ending to a most useful and important year's work. The books of the secretary cannot well be audited till after the meeting, inasmuch as he has been receiving and distributing money up to the time when he and the old board go out of office: this audit can be made and submitted at an adjourned meeting, or published in the local papers. Our own county association was established thirteen years ago; the first match brought out twelve competitors, three of whom were really good men; now we average thirty-five competitors, thirty of whom might be classed as remarkably good workmen, and with a strongly marked degree of improvement year by year. In addition to this, the noticeable change throughout the whole surrounding country, not only in the plowing and general cultivation itself, but in every branch of farm work, together with the better style of tools employed and the greater interest everywhere manifested in farm life, tells, I think, only too plainly the good work that a well-conducted plowmen's association can do; and the vital importance of having one of these pleasant and profitable associations established in every county in the country must be my excuse for thus giving in such detail the easy method by which they can be maintained.

#### Drainage Insures Certainty of Crops.

The cultivator of level undrained lands is continually harassed in mind about the uncertainty of his business. He must wait until the season is well advanced to plow his land. Then if he plants he is uncertain whether the weather will be favorable. It may "turn out wet," and the constant evaporation, keeping the land cold, causes the seed to rot. If the season be favorable for the germination of the seed, and the young and tender plants appear, then it may "turn out showery," and the land become so wet as to place it out of his power to cultivate it, and the crop turn out badly; or, if the season be dry in the after part, the land, which is naturally wet, will dry out and become hard, and the crop damaged. Hence it is that such a farmer must plod along and scratch, wet or dry, and depend on uncertainties, accept his fate, and blame Providence.

But the farmer who cultivates land which is thoroughly underdrained, can break it earlier in the spring; the soil is loose and friable; and he can plant earlier with a positive certainty that the seed, if good, will germinate; he can cultivate sooner, with a third less labor to both man and beast; can be stirring the soil in twenty-four hours after a heavy rainfall. The soil is warmer, and promotes the more rapid growth of the crop and is less liable to damage from late frosts in spring, or early frosts in autumn, practically lengthening the season for growth and maturity fully thirty days, or if the weather should be dry, the roots, descending deep into the earth, bring up the moisture from below, producing an abundant yield. Whether the season be wet or dry, the farmer on drained land has a certainty of an abundant yield which enables him to mature his plans without liability to failures. The experience of past seasons of extreme drouth in some localities has fully demonstrated the fact that drainage protects against damage from this cause also.

#### Sir Walter Gilbey Honoured in His Birthplace, Bishop Stortford, Essex, England.

Sir Walter Gilbey has been entertained by the inhabitants of Bishop Stortford to a congratulatory banquet to celebrate the honor of a baronetcy recently conferred upon him by the Queen. About two hundred and fifty persons sat down to dinner in the great hall, under the presidency of Mr. T. N. Miller. The toast of the evening was "The Squire of Elsenham," and the chairman in proposing it spoke of the genuine sympathy which Sir Walter Gilbey had always shown in the prosperity of the farmers of the district and with the welfare of his neighbors. Sir Walter Gilbey, who was enthusiastically cheered, replied with much emotion, remarking that sixty years had passed since he first saw the light at Bishop Stortford, and his heart has retained an unwavering allegiance to his native place.

One of the greatest joys of his life had been realized when he was able to come back, after an absence of some years, and make his home amid the scenes where his childhood had been spent. He appreciated highly the good wishes of his neighbors and his friends across the seas, particularly friends in Canada, and regrets that he cannot avail himself of their kind invitation to visit them.

In the afternoon Sir Walter gave a tea and entertainment to 1,400 aged poor and school children in the town.

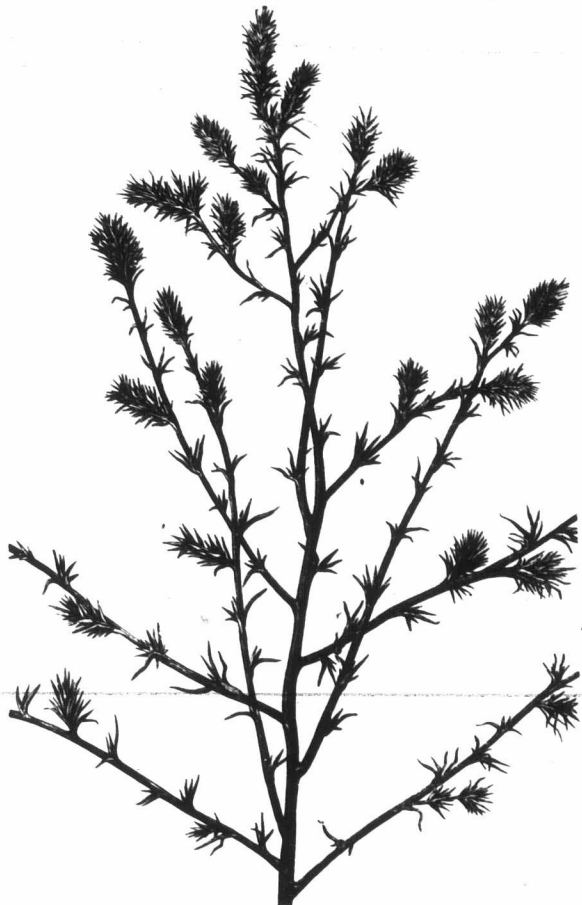


**The Russian Thistle.**

In many parts of Dakota and Minnesota, the above-named weed seems to be causing considerable trouble; we do not know of its existence on this side of the line, although its near relative, the tumbleweed, is very bad in some parts of the West. We recommend a careful perusal of the following quotations from Bulletin No. 10., U.S. Department of Agriculture; all should be on the lookout for it in their fields or elsewhere.

**NAME.**

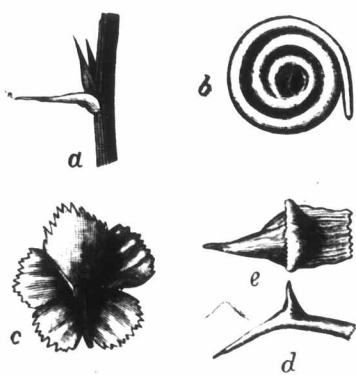
"The Russian thistle or Russian cactus is really neither a thistle nor a cactus. It is a saltwort, closely related to the tumbleweed, goosefoot, lamb's-quarters, and pigweed. Under any name, however, it is one of the worst weeds ever introduced into the wheat-fields of America. To the botanist it is known as *Salsola Kali* L. var. *Tragus* D. C. In some parts of Russia it is known as Tartar weed and Hector weed. Saltwort is its true English name, but to the farmers of the Northwest, who are best acquainted with the troublesome plant, it will probably continue to be known as the Russian thistle until finally exterminated."



RUSSIAN THISTLE BEFORE FLOWERING.

**DESCRIPTION.**

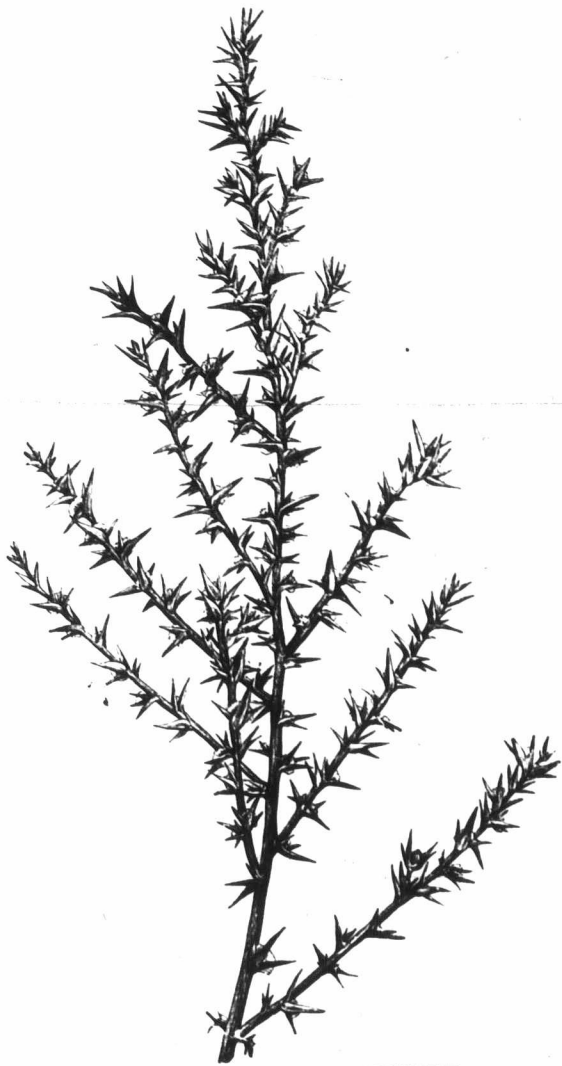
The Russian thistle is an annual, coming each year from the seed. It grows from a single small light-colored root less than half an inch in diameter and 6 to 12 inches long to a height of 6 inches to 3 feet, branching profusely, and when not crowded forms a dense bush-like plant 2 to 6 feet in diameter and one-half to two-thirds as high. When young it is a very innocent-looking plant, tender and juicy throughout, with small, narrow, downy, green leaves. When the dry weather comes in August



this innocent disguise disappears, the tender downy leaves wither and fall, and the plant increases rapidly in size, sending out hard, stiff branches. Instead of leaves these branches bear at intervals of half an inch or less three sharp spines, which harden but do not grow dull as the plant increases in age and ugliness. The spines are one-fourth to one-half inch long. At the base of each cluster of spines is a papery flower about one-eighth of an inch in diameter. If this be taken out and carefully pulled to pieces a small, pulpy, green body, coiled up and appearing like a minute green snail shell, will be found. This is the seed. As it ripens it becomes hard and of a rather dull gray color. At the earliest frosts the plants change in color from dark green to crimson or almost magenta, especially on the more exposed parts. When the ground becomes frozen and the November winds blow across the prairie the small root is broken or loosened and

pulled out. The dense yet light growth and circular or hemispherical form of the plant fits it most perfectly to be carried by the wind. It goes rolling across the country at racing speed, scattering seeds at every bound, and stopping only when the wind goes down or when torn to pieces, for there are few fences or forests to stop its course in the Dakotas.

The saltwort or Russian thistle appears more like the common "tumbleweed" (*Amarantus albus* L.) than any other plant in the Northwest. It may be readily distinguished from the tumbleweed by the sharp spines in clusters of three each, the absence of flat leaves, denser growth, darker color, and by the red color in the fall.



MATURE RUSSIAN THISTLE.

**TROUBLESOMENESS.**

A weed is only a plant out of place or a useless plant taking the place of something useful. The Russian thistle, although rather pretty when reddened in the fall, and useful for forage when young, is always a weed. It will take possession of a field to the exclusion of everything else, and it draws from the land a large amount of nourishment that might otherwise go to make useful plants. In these respects it merely partakes of the properties of all weeds, except that it spreads and multiplies more rapidly, and hence takes more space and more nourishment.



Some of its special characteristics render this thistle much more troublesome than other weeds. It is armed with spines quite as sharp and much stronger than those of common thistles. Because of these it is difficult to drive horses through a field where the plants are abundant. In some sections the farmers find it necessary to bind leathers about the horses' legs while at work. Horses running in the pasture are often injured by having the skin on their legs badly lacerated. The spines breaking off under the skin cause festering sores.

These sores are caused by the irritation, however, not by any poisonous property as is frequently supposed. Hunters find difficulty in getting their dogs to work well for prairie chickens in the stubble, and the dogs are sometimes injured by the sharp spines. Threshers find it almost impossible to get gloves thick enough to keep the spines out of their fingers, yet thin enough to work with.

The Russian thistle is the worst rolling tumbleweed on the prairie, and in time of prairie fires is easily blown across a fire-break of any width, carrying fire to stacks and buildings. The weeds bank

up against wire fences, causing them to be blown over by the force of the wind, and are sometimes carried into the groves on tree claims, making it impossible to cultivate. In this way, by forming a mulch, often several feet deep, they may do some good. When large and well developed they are bulky and stiff, making it very difficult to run harvesting machinery or even a plow. On railroad grades they prevent the growth of grass and other plants that would keep the banks from washing.

**ORIGIN.**

The Russian thistle originated in eastern Europe or western Asia. It has been known in Russia many years, and has quite as bad a reputation in the wheat regions there as it has in the Dakotas. It was introduced in Bonhomme County, S. Dak., about fifteen years ago. Reports differ as to the method of its introduction. There is little doubt, however, that it was first brought there in very small quantities in flaxseed which was imported from Europe. There is evidently no foundation whatever for the theory, which is too often related as a fact, that it was first sown in South Dakota by immigrants either for forage or to inflict an injury on an enemy. The few plants grown from the foreign seed grew, produced seed, and increased slowly and almost unnoticed until about seven years ago (1886). They were then thoroughly acclimated and naturalized, and seem to have partaken of the conquering spirit of the West.

**CONDITIONS FAVORABLE OR UNFAVORABLE TO GROWTH.**

Russian thistles grow best on high and dry land, where they are not too much crowded by other plants. They are seldom seen in sloughs or low land, and make no progress in the native prairie, except where the sod has been broken by badger burrows, or by overfeeding and tramping of cattle on some of the ranges. They are less numerous and robust in wet seasons than in dry ones, not so much because they can not stand wet weather, but because they are more crowded by other plants. Some Russian thistles growing on the bank of an irrigating ditch, with their roots almost in the water, made a larger and more vigorous growth in the dry season of 1891 than others about them in dry soil. At Minneapolis, in 1892, the rainfall was 45 inches before the end of September, yet the few thistles there were growing well.

The thistles appear to grow equally well in alkaline soil and in soil that is not alkaline at all. So far as the amount of rainfall or alkaline quality of the soil is concerned the Russian thistle may grow anywhere in the temperate zone.

The absence of trees and fences, the strong winds, and the methods of farming are particularly favorable to its distribution and growth in the Northwest. Wheat after wheat, with an occasional barren (or weedy) fallow, but no cultivated or hoed crops, gives but little opportunity to clear the land of troublesome plants. A few very profitable crops have induced the farmers to break up more land than they can work well. Wheat is sown over a large number of acres, sometimes merely drilled in on the furrow, or even in unplowed stubble land, and very frequently sown with insufficient cultivation of the soil. Where whole sections or even townships are one continuous wheat field, an acre here and there grown up to weeds, so as to be not worth the harvesting, does not seem to cut much figure in the total amount, and the weeds are allowed to grow and ripen seed to cover a larger area the next year. The thistles begin to grow large and coarse and to ripen seed soon after the harvest; but at this time, when they most need attention, the farmer finds it difficult to get help enough to secure his wheat crop, and the weeds are left to take care of themselves, which they do to perfection.

Plowing in the spring or early summer is especially favorable to the growth of the Russian thistles, since they can get a good start in July, and, being able to stand dry weather better than other plants, they take complete possession of the soil. Land broken up in spring or early summer is liable to be covered with the plants in August, for the seed is everywhere in the prairie grass and only waits for the sod to be broken that it may grow.

A hard frost early in the fall kills many Russian thistles before the seeds are ripened and therefore reduces the number of plants the following season. The comparative decrease in the number of plants during the present season is doubtless due to an early frost in the fall of 1891. The small size and less vigorous growth is due to the excessive rains early in the season.

**WILL NOT RUSSIAN THISTLES DIE OUT OF THEMSELVES?**

This question is frequently asked, and there really seems to be some grounds for the hope. In every locality the plant is less troublesome in 1892 than it was the year before. Causes for this have just been given. In many instances it has been noticed that in small patches, where the ground has become thoroughly seeded with the pests, they come up too thick to grow in their ordinary spreading habit, and, becoming slender and spindling, are quite unfit to roll about as tumbleweeds. There is no record, however, of their becoming so thick over any large area that some plants did not find room to develop into very good tumbleweeds. What is true of small patches is only partially true of large areas.



There are a few examples known where foreign weeds have been introduced into this country and have spread so rapidly as to cause considerable alarm for a few years, and afterwards have died out of themselves, or at least have ceased to cause trouble. There are numerous instances where weeds have been troublesome for many years and are still causing trouble in all infested regions, except where the farmers, by combined action and determined effort, have exterminated them. There is indeed a possibility that the Russian thistle may die out of itself, but there is a greater probability that it will not only continue to grow, if allowed to do so, and to cause much damage in its present area, but that it will spread elsewhere. There is a certainty that if thorough measures be taken to stamp it out of existence, it may be killed and will cease to be troublesome anywhere.

REMEDIES.

Plow in August or early September, before the Russian thistles have grown large and stiff and before they have gone to seed, using care that all weeds are well turned under. If the season be long and weeds come through the furrow it may be necessary to harrow the land before winter. Burn over stubble fields as soon as possible after harvest. Cut the stubble with a mowing machine, if the fire does not burn everything clean without cutting.

Cutting the stubble and thistles before the latter have gone to seed will help, but is not thoroughly effective without fire, as the thistles will send out branches below where the mowing machine cuts them.

If the weeds have been neglected and have grown large and rigid, as they do by the middle of September, especially on neglected barren fallow or spring-plowed breaking, they may be raked into windrows and burned. The old-fashioned revolving hayrake or any rake made especially strong so as to pull the weeds, and especially good at clearing itself in dumping, will answer the purpose. An ordinary wheel hayrake with a set of strong teeth has been used successfully. This method is to be recommended only as a last resort, for by the last of September some of the weeds will be ripe enough to shell out and will escape being burned with the plants. If left until October, when many of the plants are certain to be fully ripe and dry, the land where they are growing will be well seeded anyway; but raking together and burning the weeds will prevent their being blown across neighboring fields during the winter. Of course care should be taken to do this work when there is little wind, for a burning Russian thistle before the wind will jump any fire-break and carry both seeds and fire.

Barren fallowing does very well if kept barren by thorough cultivation. It gives but little benefit to the land, however. A much better method is to sow clover, millet, or rye, pasture it and plow it under green. This will be beneficial to the land, especially if a comparatively large proportion of clover is used, and the weeds will be choked out. Millet and oats combined may be grown and cut for hay. This crop will choke out nearly all the weeds, and the few that do grow will be too slender to cut any figure as tumbleweeds.

Corn, potatoes, beets, or any cultivated crop, well taken care of, will in two years rid the land of not only the Russian thistles, but nearly all other weeds.

Sheep are very fond of the Russian thistle until it becomes too coarse and woody. By pasturing the sheep on the young plants they may be kept down, and the only valuable quality the plant has may be utilized.

In fields where the weeds are thick drag with an iron harrow, hitching the team on by a long chain. As soon as the harrow is full of weeds set fire to them and keep dragging and burning. This scheme, although apparently somewhat chimerical, has actually been tried with success.

If the Russia thistle is to be kept out of the cultivated fields it must be exterminated along roadsides, railroad grades, fire-breaks, waste land where the sod has been broken, and, in fact, in all accidental places where it may have obtained a foothold.

The ordinary road machines may be used to advantage along the roadsides, the scraper being set so as to take as thin a layer of earth as possible and throw weeds and all to the middle of the track. A single trip each way with the road machine would be sufficient in nearly all places to take the weeds between the beaten track and the prairie grass, so that 15 to 20 miles a day could be easily cleaned. If this work be done in August, before the Russian thistles become too large and stiff, the work of the road scraper will be sufficient. Going over with a heavy roller, however, would not only improve the road, but would crush the weeds so that no occasional mature plant would be blown away. If the work is put off until September the weeds should be raked together and burned.

On fire-breaks, railroad grades, and odd places, these and other noxious weeds may be killed by a judicious use of the mowing machine, scythe, hoe, rake, and fire.

RECOMMENDATIONS.

Place a Russian thistle in each school-house, so that the pupils may become familiar with it, and teach them to kill it wherever they find it as they would kill a rattlesnake.

Permit no Russian thistle to go to seed. The plant is an annual: the seeds are evidently short-

lived; hence if no plants are permitted to go to seed for two years the weed will in all probability be exterminated.

Let no one break up more land than he can take care of, or more than he can properly cultivate.

Let each farmer first keep down all the weeds on his own farm, and then insist that his neighbor do likewise.

A little careful legislation that will touch up the careless farmer, the non-resident landowner, and the railroad companies, would aid considerably in the solution of the question.

Be careful that all seed sown be as pure and clean as the modern fanning-mill can make it. Use especial care in regard to flaxseed and millet, or any of the smaller and lighter seeds.

We have not heard that this plant has yet reached the East, but as seed grain, especially wheat and oats, is yearly imported from the Northwest into Ontario and Quebec, we advise the farmers of these provinces to be watchful so as not to let this pest obtain a foothold.

Experiments with Winter Wheats.

According to the report of C. A. Zavitz, of the Ontario Experimental Farm at Guelph, we learn that the work which begins at the Guelph Farm extends over all parts of Ontario, through the agency of the Experimental Union, and is growing year by year.

The eleven most productive varieties of winter wheat, which have been grown by sixty experimenters in different parts of the Province, have made average yields as follows:—

Dawson's Golden Chaff.....	34.9 bush. per acre.
Golden Drop.....	34.4 " "
Early Red Clawson.....	32.6 " "
Bulgarian.....	31.4 " "
American Bronze.....	31.3 " "
Mediterranean.....	30.8 " "
Surprise.....	30.7 " "
Jones' Winter Fyfe.....	30.0 " "
Fulcaster.....	27.4 " "
Fultz.....	26.4 " "
Red Wonder.....	24.9 " "

The following facts have been obtained from the average results of sixty reports under consideration:

1.—The Fultz, Dawson's Golden Chaff, Golden Drop and Early Red Clawson proved to be the earliest maturing varieties, and Jones' Winter Fyfe and American Bronze the latest.

2.—The Bulgarian, Fulcaster and Red Wonder were the least affected by rust, and the American Bronze and Jones' Winter Fyfe the most.

3.—The Dawson's Golden Chaff, American Bronze, Jones' Winter Fyfe and Golden Drop possessed the greatest strength of straw.

4.—The Mediterranean, Bulgarian and Fultz possessed the longest straw, and the Surprise and the Golden Drop the shortest.

5.—The Dawson's Golden Chaff, American Bronze and Early Red Clawson varieties seemed to be the most in favor with the experimenters, and the Fultz and Red Wonder the least in favor.

The plots were one rod square, with a three-foot path around each one.

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

ASSOCIATION.	PLACE OF FAIR.	DATES.
Prince Edward County A. 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.	Guelph	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.	Belleville	19 to 22
Huntley Agricultural Society.	Carp	20 and 21
Great Northwestern.	Goderich	20 to 22
Fitzroy Agricultural Society.	Mohr's Corners.	22 and 23
Central Canada Exhibition.	Ottawa	23 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.	Milverton	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
Southern 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	Uttersen	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
Tilbury West and North.	Comber.	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.

GARDEN AND ORCHARD.

Autumn Bulbs.

BY J. W. HUNTER.

The culture of bulbs, both for winter blooming in the house and for early spring display in the garden, is greatly increased in this country, showing that this most elegant class of flowers is rapidly gaining popularity. It is an established fact that those who once try them will never again be without them, and will increase their collection as rapidly as possible. No class of flowers are so sure to succeed and please beyond expectations as hardy bulbs. Cultivated in pots, they bloom profusely in any window, and brighten the most dreary mid-winter days. Planted in the garden, they are the first flowers to greet us in the early spring, and with their masses of bright colors they make gay and fragrant our garden and yards, which would otherwise be dreary enough.



DOUBLE HYACINTH.

Any garden soil will grow bulbs well, but it must be drained so that water will not lie on the surface for any length of time, or the bulbs will be likely to rot. After planting, and before winter sets in, cover the beds with a good dressing of leaves, say five or six inches in depth, over these throw a little brush to prevent blowing off. If the leaves cannot be obtained readily, coarse manure will answer. In the spring, rake off the covering, taking off about half at first and then wait a week before removing the remainder. Nothing more is required except to destroy the weeds.

The following varieties will all give the greatest satisfaction with the least care and attention:

**Hyacinths.**—Perhaps it is not too much to assert that the Hyacinth is at once the most useful and popular bulb at the present day. It affords support to thousands, pleasure and delight to millions of the human race. From its eastern home it has spread west, south and north until its beauty and fragrance delight all civilized people.

**Tulips.**—The tulip is so perfectly hardy, flourishes so well under the most ordinary care, and is so varied and brilliant, that it never fails to give the greatest satisfaction. It is adapted to garden culture in nearly every country. Nothing in the floral world can equal the dazzling brilliancy of a bed of tulips.

**Crocus.**—A bed or border of crocus is very gay in the very early spring just as the snow melts, and is a gracious reminder of the coming season of buds and blossoms.

**Narcissus or Daffodils.**—Their season of bloom continues about two months, from the earliest to the latest varieties. They are varied and beautiful in form and color, and their delicious fragrance is unexcelled.

**Snowdrops.**—The first flower of spring is the delicate snowdrop, white as snow. Its appearance about the first of March is a joyful surprise.

**Lilies.**—The lily is a favorite flower everywhere, a queen of flowers, and only the rose can dispute its claim to queenly honors. The lily abounds everywhere in the humid vale and on the lofty mountain-top, and truly no earthly monarch was ever arrayed as one of these simple, yet beautiful flowers.

There are also such well-known varieties as the following, which should have a place in every garden:

The **Colchicum** or **Autumn Crocus**, which throws up its flower in the fall—a very interesting and beautiful flower.

**Iris** or **Flowering Flag.**—What a great improvement has been made in these from the old-fashioned flag.

**Crown Imperials.**—Very curious and interesting. The **Scilla.**—The brightest and prettiest and hardiest of our early spring flowering bulbs.

We might go on and name a host of other early flowering bulbs, but space will not permit. For a list of other varieties, write or call on some responsible seedsman, who will gladly furnish you with a catalogue which will give full and complete instruction as regards varieties and their treatment.

An Orchard Ladder.

A cheap orchard ladder is described by A. P. Sampson in the New England Farmer.

He says: "Last year I took a cedar tree, fifteen feet long and five inches through at the butt, down to the factory in the town, and had it sawed lengthwise in the middle about twelve feet from the butt upwards. I took it home and stretched it three feet apart at the butt end, and sawed notches eleven inches apart, in which I nailed flat steps, leaving the top held close together by an iron hub band. It is the best apple ladder I have ever used. The small end goes into the heart of a crotch, and the broad foundation prevents a turnover of the picker. I made it in an hour and a-half after I got home, and paid fifteen cents for sawing at the factory."

[Farmers who depend on their neighbors for ladders in the apple picking season would do well to try this economical and convenient device.]



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.  
SURGERY NECESSARY.

A. H. R., Gladstone, Man.:—"I had a one-year-old colt castrated last spring; about a week after something like a cord appeared hanging from the wound; it was about an inch long, and remained for ten days; then a small swelling came in the back part of the sheath just in front of the wounds, it continued swelling until now it is as large as one's fist; swelling is quite hard, one of the wounds is not yet healed, colt seems healthy and is thriving well. Please advise."

Your colt was probably castrated by the clamping method, which, by prolonged tension of the cords, is frequently productive of the trouble you have mentioned. The ends of the cords, having to remain so long in contact with the tissues of the scrotum, become attached thereto, causing extra irritation, inflammation and consequent tumefaction. The proper remedy is to remove the tumor by surgical means, but the operation should be undertaken only by a qualified person.

WORMS IN HORSE.

HARRY DELF, Indian Ford, Man.:—"I have a seven-year-old horse that is run down in flesh and seems weak; when walking he crosses one leg over the other; he is full of worms, both long and short. I gave a physic of one pint linseed oil, and one ounce of aloes, which brought away a good many worms. He feeds well now and has a sleek coat. What can I give to strengthen him?"

Give, morning and evening, in mash, for one week: Nux vomica and sulphate of iron, of each one drachm; areca nut pulv., four drachms. Give a moderate ration of dry grain (oats) at noon.

MARE SUFFERING FROM GENERAL DEBILITY.

"VERITAS VINCIT," Reaburn, Man.:—"I have a mare which foaled about two months ago all right. She was allowed to run with her foal on the prairie, but gradually fell off in flesh until she became very thin, and not coming home at night, was found, next day, lying unable to get up. Getting assistance, we got her home and thought it better to keep her in the hay yard instead of in the stable. Have had her only since 1st June; looked all right when she came, but have since learned that she was poorly fed and hard worked to within two days of foaling. Since I got her she has been regularly fed oats, and, since finding her lying on the prairie, her feed has been chiefly bran-mash, with boiled barley or oats scalded mixed in it. There is a discharge from her nostrils, which may have resulted from getting cold, being kept out, as when she lies down she is yet unable to raise herself, and seems powerless to do so, and we were afraid she might injure herself in the stable. When on her legs she seems all right, and walks around, although rather timidly. Of course we took the foal off her. Aged 13. Seems to want power in the hind legs, or weakness over the loins. Has improved in flesh somewhat since taking care of her and feeds well. What is the best treatment in this case?"

The symptoms you have mentioned are indicative of general debility, arising, probably, from an insufficient supply of nutritive food. It is also quite possible that the animal, being in a weak condition, may have, in attempting to rise, injured the muscles of the loins. Put the mare in a large box stall (one with an earthen floor preferred), where she will be protected from the hot rays of the sun and the cold atmosphere of night. Keep the stall clean, well ventilated, and give plenty of dry bedding. Carefully examine the teeth and see that there is nothing to prevent the proper mastication of food. Give, every morning for two weeks, in boiled grain: Bi-carbonate of potassium, two drachms; and, for the same period, give at night, in a bran mash made by boiling, a tea cupful of flax-seed in sufficient water to scald four quarts of bran, powdered nux vomica, sulphate of iron and capsicum, of each half a drachm; powdered cinchona, two drachms. Rub over the loins once a day, until the skin becomes quite sore, the following liniment: Sweet oil, four ounces; turpentine and strong ammonia, of each two ounces.

ANSWERED BY DR. MOLE, M.R.C.V.S., TORONTO.  
LAMINITIS, OR FEVER IN THE FEET.

J. THOMPSON, Barrie, Ont.:—"Will you kindly advise me what to do with my mare. She was foundered some time ago. Her soles have dropped and she is walking on the bones of her feet. There are also large rings or hollows around the feet, as if she is going to lose her hoof."

The mare has what is known as laminitis, or fever in the feet, and descent of the pedal bones has taken place, causing the dropping of the soles. She cannot be cured, as the changes are too great for nature to replace the position of the pedal bones. Shoe her with what is known as the "Quoit Bar Shoe," slightly thicker at the toe than heel, give plenty of frog pressure, and apply a smart blister around the coronets.

SCHIRRUS CORD, THE RESULT OF CASTRATION.

"QUACK," Turtle Lake.:—"I had a colt castrated last spring. Since that time I have noticed a lump grow as big as a man's fist; it breaks every two weeks, runs matter for a day or so, and then heals. What can I do for him? Several of my neighbors' colts are in the same way; one had the lump cut away, but it almost killed the horse."

This condition is one of the results of unskillful castration, is a very troublesome and unlooked-for complication, and due in most cases to rough handling or dragging upon the cord during the operation. These tumors give rise to a stiff, straddling gait and the constant discharge of matter; often grow to an excessive size, one that has been brought under our notice exceeding ten pounds in weight. The horse must be prepared as for castration, and the spermatic cord will be found in a hardened condition, from which the word "schirrus" is taken. The tumor must be removed and the parts properly attended, when no doubt a good recovery will ensue. There is no great difficulty in the operation to anyone who understands the anatomy of the parts. The details cannot be described, as so many conditions may be present that could not be foretold. Get a qualified veterinary surgeon to recastrate, when all the above conditions as described in your letter will disappear.

Legal.

FARM RAILWAY CROSSINGS.

JAMES JOHNSON, Marden.:—"A railway company having constructed a farm crossing and placed guards leading from the gates to the track, for the purpose of preventing cattle or other animals from going along the railway lands by the side of their track, and for the purpose of preventing wagons, etc., from going over the bank, the guards being now very old and having become very dilapidated and useless, is the company bound to repair the guards, etc., and what notice are they entitled to that the repairs are required?"

When the railway company constructs a farm crossing they must make it convenient and proper for the purpose of passing or driving over the same; and if the guards were necessary in the first place (as the company must have considered them to be), so they are, we suppose, just as necessary now. The company must keep the crossings, culverts, as well as all fastenings to the gates, etc., in repair; and it is the company's own business to ascertain when repairs are required, and consequently you are not required to give them notice.

RIGHTS UNDER LEASE.

GEORGE COUSINS, Guelph.:—"I have rented a farm for seven years, and am told that my landlord, by his will, proposes to leave the farm to his wife to take it at his death, and after her death to his children. How would the will affect me? Would I still be entitled to occupy the farm for the unexpired portion of the seven years?"

They will could not take away any of your rights under the lease, provided it is properly drawn and signed by your landlord.

My mother died, and by her will bequeathed certain money to me to be received by the sale of land. The payments made for the land were from time to time, as they became due, paid to the executor named in the will, and the moneys were by the executor appropriated to his own use, I being under twenty-one years of age. The executor was my mother's husband, and he has since married again. What would be my rights, in case of the executor's death, to recover my moneys as against the widow and children of the executor, and as against a mortgage of the executor's own property?

[Any moneys received by the executor belonging to you should be paid to you as directed by your mother's will, and the executor must account for and pay over these moneys to the parties entitled, and a judgment may be recovered against the executor; and to satisfy the judgment, of course the executor's property is liable, no matter whether he has a wife or children or not. As against the holder of a mortgage on the executor's estate, the mortgagee is to the extent of his mortgage a purchaser or owner of the property, and, consequently, if the mortgage is bona fide and the money was actually advanced upon it, the mortgage would be entitled to priority.]

Miscellaneous.

COW STABLE CONSTRUCTION.

G. M.:—"How many cubic feet of air should be allotted to a cow in a properly ventilated winter stable?"

2. "What is the best method of ventilating cow stables?"

3. "How to build a cow stable that the walls may be dry in the coldest weather?"

1. From 450 to 500 feet.  
2. For perfect ventilation the flues should be built in pairs, one for egress of foul hot air, the other for ingress of cool fresh air: the former from a point immediately underneath the joists up to the cross. Thence the latter from a point just above the floor of the barn above, should reach nearly down to the level of the basement floor in the feed passages. Thus a perfect current will be created. As the cold air is heaviest it will all come down the latter, while the hotter and lighter air will all ascend through the former.

3. Moisture on the inside of walls of any kind in very cold weather is often due to lack of proper ventilation, in order to keep the stable warm enough. Precautions may be taken, however, to good effect. Proper drainage and eavestroughing has a marked effect in keeping the stable walls and surroundings dry. If stone is used in building, care should be taken not to have single stones to reach through the entire thickness, as in such a case frost would have a good conductor. If bricks are used, and built into a hollow wall, moisture will give very little trouble at any time when properly ventilated. Wooden walls having air spaces seldom become damp. The outside of studs should be boarded and battened; the inside boarded, then a layer of tar paper, fastened on by nailing on laths in perpendicular lines from top to bottom; then a lining of boards, which will give an air space from top to bottom.

PROTECTING CLOVER.

C. E. PICKET, Andover.:—"If young grass and clover seeds are covered lightly with buckwheat straw in the autumn, can it be burnt off in the spring without injury to the plants?"

We would not recommend burning off the mulch, as it is probable that the clover will be lifted in places, and would be damaged by the fire. Raking off with a horse rake, if not allowed to become too full, would be a much safer plan.

FEEDING FROZEN TURNIPS.

M. LESSER, Dog Creek, asks if frozen turnips are injurious to cattle.

Frozen food of any kind is very unsafe to feed to any animal. It is almost certain to produce scours, and is liable to induce colic and inflammation of the bowels.]

ANSWERED BY J. W. WHEATON, SECRETARY OF WESTERN ONTARIO DAIRYMEN'S ASSOCIATION.

MILK FERMENTS.

A patron of a cheese factory asks for the cause of the "alkaline ferments," or ferments producing the bad flavors in milk.

All fermentations in milk are produced by very minute forms of life or micro-organisms, generally known by the general name of "Bacteria." They are now considered to be forms of plant life, and can only be seen by means of a powerful microscope. These minute forms of life are in the atmosphere, and more particularly around cess pools, dead carrion, dirty whey-tanks, badly ventilated stables, etc. They do not thrive so well when exposed to a pure atmosphere, and consequently thorough aeration of the milk will put it in a condition to withstand the growth of these germs to a great extent. If the atmosphere is not pure where milk is exposed, germs will find their way into it. If milking could be done so as to exclude the air from the milk, the difficulty would, at least, be partially overcome. Sterilizing has also a marked effect in diminishing the effects of these microbes. Comparatively little is known of bacteria in milk. We only know something of their effects and a few counteracting agents as given above.

DAIRY.

How To Get a Babcock Tester.

Farmers engaged in dairying are finding it absolutely necessary to test their cows for quality of milk as well as quantity. For this purpose nothing equals a four-bottle Babcock Tester, which retails at about \$9. We have completed arrangements enabling us to offer one of these, with pipette, measuring glass and acid, as a premium to every one sending us eighteen new yearly subscribers (accompanied by the cash) to the FARMER'S ADVOCATE. One dollar pays from now till the end of 1904. Canvass your neighborhood, and at the fairs, and you can easily secure a "Babcock." No dairyman should be without it.

Quick Churning.

BY PROF. H. H. DEAN, O. A. C., GUELPH.

A great many people are anxious to have the churning done in a few minutes. From ten to fifteen minutes exhausts the patience of the average man or woman. I saw an exception to this while out with the Travelling Dairy in the eastern part of the province in the month of June. As we drove along over the hills and through almost impassable roads, it being the time to do "road work," we passed a log house, and on the shady side was a man and two women. The man was exercising the muscles of his arms in a perpendicular manner, his hands tightly clutching the top end of a dash-churn. From appearance I should judge that when the man grew tired churning, first one woman and then the other took a turn at it. They had evidently made up their minds to a half-day job, and did not seem to be at all put out at it. Possibly one was the man's best girl, and in that case he would not object to the churning lasting for a long time. As a rule, however, the churner wants it to "come quick" and have done with it. Some apparently good authorities recommend quick churning, but our experience goes against this, especially in hot weather. The trouble we have had with rapid churning in summer is that the butter is usually soft, and the churning is not so effectually



done as when a longer time is taken. At present we take from forty to fifty minutes to churn, and as a result the butter nearly always comes out of the churn nice and firm and in granular form. This, we think, pays us for the extra time taken, and if we wish it may be salted, worked and printed ready for market at once, which cannot be done if the butter comes out of the churn soft. Another cause of soft butter is allowing the cream to become too warm while it is being collected for churning. It should never be above 65° in hot weather. The time required to churn depends upon:—

1. *The Temperature of the Cream.*—The warmer the cream to about 70° the more quickly will it churn and the softer will be the butter. The lower the temperature at which the butter will come in from forty to sixty minutes (or less time) the firmer will the butter be. The right temperature for churning each churner must find out for himself. From 56° to 60° in summer will be a fair range for most cream; at present we are churning at about 58°.

2. *The Temperature of the Churn and Room.*—These have quite a marked influence on the time required to churn. The warmer the room (other things being equal) the more quickly will the cream churn. The same may be said of the temperature of the churn. If it is wished to churn at 58° the churn should be about that temperature when the cream is put in. In nearly every case the temperature rises after churning for some time, due to friction.

3. *The Relation Between the Size of the Churn and the Amount of Cream to be Churned.*—The larger the churn, or the smaller the amount of cream to be churned, the more quickly will the churning be finished. A box or barrel churn, without dashers of any kind, ought not to be filled much over one-third full.

4. *The Ripeness of the Cream.*—In reference to this latter point we have found that by raising the temperature a few degrees sweet cream may be churned in about the same time as ripe or sour cream. The loss of butter, however, will be considerable, as sweet cream to be effectually churned requires a temperature of from 50° to 55°, and one to one and a-half hours to churn.

5. *The Character of the Cream.*—Cream from strippers' milk usually takes a longer time to churn than that from fresh cows.

The lesson to be learned is, that it will pay to take a little more time at the churning and have it completely churned, and the butter firm and granular when lifted from the churn. Quick churning and soft butter nearly always go together.

#### Practical Buttermaking.

BY C. C. MACDONALD, SUPERINTENDENT EXPERIMENTAL DAIRYING.

I have had occasion to notice many mistakes in buttermaking in the province of Manitoba, and feel that I would not be doing my duty well did I not bring my observations along this line before the buttermakers and would-be buttermakers of Manitoba.

Having the equipment proper for buttermaking, the first matter to be considered is *cleanliness*, ever keeping in mind that cleanliness is next to godliness, and without cleanliness there can be nothing wholesome nor healthy. I feel that I cannot say too much on this subject of cleanliness and tidiness. He is a worthless being who says "anything will do, we don't have to eat it anyway." The buttermaker should exercise woman's pride in being neat and tidy about his work, and entertain a creepy dislike for anything greasy—a greasy dishcloth, a yellow strainer. My remarks as I proceed will bring out the terrible mistakes that I have actually seen and smelled during my tour through the province.

#### SETTING MILK FOR CREAMING.

Where a separator is not in use, great care must be exercised in handling the milk in order to recover all the butterfat. The milk should be properly strained, and set immediately as it is drawn from the cows. A delay of fifteen or twenty minutes between milking and setting will cause a loss of one per cent., and often one and a-half per cent. of butterfat that will not be recovered, and will be retained in the skim milk. I have had people say to me, "Oh, well, the calves got it"; quite true, but no intelligent dairyman will feed calves and pigs butterfat worth 25 cents per pound, if they are making butter for profit, when there are cheaper foods that will answer the purpose of raising a calf, after it has had a start of three weeks in springtime, just as well as butterfat.

In order to get all the cream to the top of the setting-can the milk must be set at a temperature of from 94° to 98°, the temperature surrounding the milk should be as low as at least 45°, and a lower temperature is better. The milk should be set twelve hours, and all the cream should be raised in that time, if the above rules are carried out. It is a mistake that many dairymen make to think they must have the milk setting until it is sour, and some have it until it shows some of the colors of the rainbow. No cream rises after the milk has become *sour*. The cream should be taken off while the milk is sweet. The atmosphere of the creaming room should be moist; if not, the top of the cream will become dried out and tough, and thereby cause a serious loss in moisture. This toughness in

the cream is often considered by some dairymen as richness on account of its being tough, but a great deal of the richness and flavor have gone out of it, caused by a dry atmosphere in the room.

The skimming should be done with a conical shaped dipper, which is far superior to a perforated skimmer. The cream when removed from the milk should be placed in a pure, sweet, clean vat or can to mature before churning. Where the churning is done every day, the cream should be set for twelve hours at a temperature of 68° to 70° for summer buttermaking. When the churning is done twice or three times a week, the cream should be thoroughly mixed for twelve hours before churning, in order that the cream from the different days' milk will all be matured alike. If *sweet cream* be added to the *sour* just before churning, there will be a loss in the buttermilk of nearly all the fat that the *sweet cream* contained. It takes longer to churn sweet cream than it does to churn sour cream, and when the sour cream butter has broken and formed into butter the fat of the sweet cream is still held in suspension in the buttermilk.

The temperature of the churning should be 58° for summer and 60° to 62° for winter. The cream should in all cases be strained into the churn—the straining will do away with white streaks in the butter to a very great extent. The churning should not last more than fifteen minutes, *i. e.*, the cream should be in such a condition at such a stage of maturity that the butter will come in fifteen minutes. When the butter appears in the churn as granules about the size of clover seed, the contents of the churn should be cooled about 2° by adding ice water, then the churning continued until the grains of butter are as large as plump wheat, then the churning is done. I wish to emphasize this: *Never churn butter past the granular stage; keep this always in mind as thoroughly as your duty to Heaven.*

When the churning is carried so far that the butter is in one solid mass in the churn, the grain, the texture of the butter, is ruined, and the article is inferior.

The buttermilk should be drawn off, and about the same quantity of water at a temperature of 45° should be added, and then give the churn half a dozen rapid turns, and then draw the water off; usually one washing is sufficient, but should the first water appear milky, add a second washing. The water should be pretty clear when it is drawn from the churn.

After the butter is thoroughly drained, it may be taken out and salted—use nothing but pure salt of the best brand. In salting butter just put the salt on and work the butter enough to mix the salt through it; this will take but one or two workings. Salt at the rate of three-quarters to one ounce to the pound of butter. Never put salt on by guess, or you may get "pound for pound," and I have often tested butter that had nearly that indication. Salt is heavy stuff, but large quantities do not taste good. Weigh every thing, and test all temperatures with a correct thermometer. (The finger is not nearly so sensitive as mercury, and, therefore, is not a safe guide.)

After the salt is mixed through the butter, the butter should be placed in a tub or something of that sort, and set aside for four or five hours to allow the salt to work through it. Never try to force the salt into the butter, for in so doing the grain of the butter is injured. Now the butter may be again placed upon the worker for the last time. It should not be worked very much—the best butter is made by least working. Never *claw*, or *paw*, or rub the butter, but work it by pressure until the color all is uniform and then stop. Perfect butter when broken down on the trier will break like steel, having a grainy appearance, and when it is cut through it will be smooth and all of the same color. There are thousands of pounds of butter spoiled every year by harsh treatment.

#### PACKING BUTTER.

When packing butter, learn what sort of a package suits your customers best, and give it to them as they desire it. A square brick of butter is always suitable, and neat and tidy in appearance. These bricks are made by the use of a square printer; they usually weigh one pound. They are wrapped in parchment paper, which can be obtained from anyone dealing in dairy supplies. This paper can be printed in nice letters, with the name of the farm or dairy on it. It preserves the butter in every respect, the air is excluded, and I have seen butter kept in this paper fully as good as it was in tubs.

The pound package is just the size that a family in a city would want to buy at a time, in order to have fresh butter on the table every time, and any one would pay more for butter put up in that way than they would for butter that has been dragged out of a tub and has a mangled appearance.

Avoid putting butter up in fancy, funny little packages; they do not please the eye of the consumer any too well, and besides it takes too much working and will make the butter greasy, which is very objectionable.

I trust that if I have "hit" any one in this article, that they will take it earnestly and mend their ways. If there is bad butter made in Manitoba it is wholly the fault of the buttermaker, as the natural advantages of the province for dairying are equal to any in the Dominion of Canada.

NOTE.—Most buttermakers will not agree with Mr. Macdonald's idea of 15-minute churning.—ED.

#### Points in Dairy Practice.

Two of the most important items of a cow's diet are an abundance of good, clear, wholesome water and a constant supply of salt. If possible, let them have full access to both.

These alleged dairy experts who are taking such pains to impress upon their hearers that food has nothing to do with the quality of milk, are inculcating an erroneous doctrine that will work serious mischief if acted upon. Said a milkman to the writer recently:—"Within a day or so after I begin to feed my cows certain watery foods, my customers begin to complain about the quality of the milk, and some have actually charged me with watering it." No greater nonsense was ever talked than that food does not influence the quality of milk.

Robert McAdam, of Rome, N. Y., writes:—"Three years ago an old friend of mine, Mr. Hugh Taylor, of Kaimshill, Kilmarnock, Scotland, told me that he had learned of an almost certain cure for milk fever, if taken in time, viz.: Half pound doses of carbonate of soda in tepid water, drenched every two hours, as soon as milk secretion is seen to fail, and continued until it is restored. I have the most implicit confidence in Mr. Taylor's statement. He supplies several thousand (late calving) cows annually to cow-keepers in large cities, and these mostly come in upon his home premises; and what was once a dread and heavy loss to him, is now only trifling from the use of carbonate of soda."

The Dairymen's Association of Western Ontario employ Mr. T. B. Millar to visit the cheese factories in their territory, to inspect the milk, and give instructions in making first-class cheese. Since the beginning of the season a number of factories have been visited, and reported to be gradually improving in the quality of the milk, due, no doubt, to the never-failing detective—the Babcock Tester. A number of patrons who ventured a step beyond covetousness, by skimming, stripping, or adding water, when questioned about their crookedness, acknowledged their faults and paid the penalties of fines and costs. There is a noticeable improvement in the quality of cheese made. The dairy school work and the system of travelling instructors are tending to bring about uniformity in the different localities. There are some makers who are loth to adopt new ideas that would have a tendency to detain their work a little later in the day. We regret to see this slackness, as the quality of their cheese would, in some instances, be raised a grade or two.

#### CAN BE BUILT UP.

There is one decided advantage in dairying, whether in the form of making butter on the farm or of selling the milk or cream to a creamery, and that is, the business can be commenced on a very small scale at first, and then be gradually built up as the profits and experiences warrant. It is an exceptional case when it will warrant the farmer to make a radical change in his plan of work. With dairying, as with fruit growing, the better plan is to grow into it rather than go into it. There is much that can be learned from others—the feed and care of the cows, milk and cream—but only what may be considered in a general way. The details as best suited to your condition can best be learned by experience, and in nearly all cases it will be more economical to get this experience on a small scale at first and thus profit by it when branching out. No matter how well one may understand the theory of management, either with the cows, milk or butter, there are many little details of management that must be learned that can only be learned by experience, and in a majority of cases those who have made the greatest success are the ones that commenced in a small way and gradually worked up as their business warranted. Understand thoroughly how to manage a few cows so as to derive the largest amount of profit, and then it will be much easier to succeed with a larger number. In many localities, one of the chief causes of failures with creameries is commencing the business on too large a scale before the farmers know or understand what is required. Be sure of your position, and then make the additions.—[Creamery and Dairy.]

#### Branding American Cheese.

It has in the past been a practice to ship American cheese to Britain by way of Canada, as Canadian goods, thus injuring the good reputation which Canadian cheese has won by its excellence. The Customs department have now under their supervision the branding of United States cheese passing through Canada in bond. So far, we have heard of no difficulties arising of a serious nature, though at first there was a little grumbling and irritation on the part of some of the shippers.

#### Dairy Exhibits for Chicago.

The exhibits of cheese and butter from Canada at the World's Fair, in October, are likely to be very large, and we trust excellent. The magnificent success which attended the exhibition in June has stirred up the factorymen and private dairymen throughout the whole Dominion to take a more active interest in the closing competition. Applications for address labels and entry forms are coming in to the Dairy Commissioner and his representatives in large numbers every day.





The World's Fair.

BY MARY M. REID, MIDDLEMARCH, ONT.

In writing about the World's Fair, the chief trouble will be to sufficiently condense, and yet leave interesting an account of what was seen in the six days spent there. When there is so much that seems worthy of note it is hard to determine what will be of most interest to the public, but as it is those who have not yet visited the "Fair" that will be the most likely to read about it, we shall try to mention briefly such exhibits as we think will give a good idea of the general character of the contents of each building.

The buildings themselves and their surroundings are admittedly one of the chief, if not the chief, charms of the whole. Their coloring, their architecture, the frescoes and sculpture with which they are adorned, make them each "a thing of beauty," while their grouping, combined with their surroundings, greatly enhances the effect.

I cannot take time to describe all the buildings, but must be allowed to say a few words regarding the Administration building, which is pre-eminently the most beautiful. Viewed externally, it is an ideal of strength and symmetry, with its massive base, its graceful dome, and its rich and varied ornamentation of pillar and sculpture. Its interior is equally impressive. As the eye travels upward some two hundred and fifty feet to the centre of the great dome, we notice in large medallions encircling the rotunda the names of all the countries represented at this exposition. Above them is a series of panels, on which is recorded the date of important inventions and discoveries, such as the invention of the steam engine, the discovery of the laws of gravitation, the invention of the electric telegraph, etc. Beyond these again are given the names of great discoverers and inventors, while the painting on the dome surmounting all is emblematic of the triumph of art and science. The view from the eastern entrance of this building is unsurpassed on the grounds. Directly in front is the statue of Columbus; beyond it lies the great basin, at the entrance of which is the famous MacMonnies fountain, one hundred and fifty feet in diameter, flanked on either side by electrical fountains that at night throw up to a great height hundreds of jets of many colored waters. At the eastern extremity of the basin is the statue of the Republic, a female figure sixty-five feet high, and beyond it the lofty columns of the Peristyle, surmounted by the "Columbus Quadriga," a group of statuary representing Columbus being honored by his countrymen on his return from his first voyage.

The first building visited was that of the Manufacturers and Liberal Arts, the exhibit in which is the largest and most varied on the grounds. Here are collected, from the different countries of the world, articles manufactured from an almost endless variety of materials into a still more endless variety of objects. In the very centre of the building stands the "Columbian Clock Tower," rising to a height of one hundred and fifty feet. It has a dial-plate seven feet in diameter, facing each of the four main entrances, and it shows the day of the month, the hour, minute and second. In this building each country's exhibit is in a separate pavilion, and as a medal was offered to the country making the most attractive display, all of these pavilions are fine, some of them very imposing. In Great Britain's section were shown very old tapestry, and beautiful carpets and rugs, also old oaken furniture of the Elizabethan period, very substantial but rather gloomy-looking. In pleasing contrast were the modern brass beds, brightly and gracefully draped. Here, too, we noticed a great display of china and porcelain, some of it said to belong to Her Majesty, a reproduction of the noted Jubilee vase, and a clock showing the time in London, Paris, Madrid and Chicago.

Germany shows some handsomely furnished rooms, tapestries (including the famous Gobelin tapestry), stained glass (said to be the finest in the world), statues, etc. One group of statuary, "Germania," designed for their new parliament buildings, was loaned by the Emperor.

France, too, shows beautifully furnished rooms, tapestries, costumes designed by Worth, vases and statuary. Russia shows court costumes that rival those of Paris, costly furs and tapestries. A parlor suite in this pavilion is unique. The legs and armrests are horns, and the covering is the fur of the seal. A pattern is produced by dying parts and leaving the rest uncolored. Austria exhibits rich brocades, beautiful porcelain and Bohemian glass-ware. Belgium displays lamps and fancy stands, in

china and gold, that surpass anything we saw of the kind in the building.

Japan has a very large exhibit of chinaware, of vases of all sizes, of wood and ivory carvings, silks, muslins and embroidered screens and robes that are marvels of beauty and skill. A large iron eagle, each feather of which is said to be made separately, also attracts considerable attention. Ceylon has a pavilion built of their choicest woods, beautifully carved. Their exhibit also contains fine specimens of carving in wood and iron. They show a large collection of native curiosities, and, of course, tea and coffee. The former is served in their pavilion by native waiters.

Cape Colony has a characteristic display of ostrich feathers and ivory. One tusk is said to be valued at \$1,300.

The United States makes an extensive display in this building, their exhibit including specimens of all the many classes of manufacture carried on in that country.

Among the most interesting of Canada's exhibits is a large collection of Indian curiosities. Her display of manufactured articles is good, and her educational exhibit is worthy of special mention, comprising, as it does, photographs of buildings, and specimens of work from her public and high schools, collegiate institutes, universities, agricultural college, and the various art schools and mechanics' institutes. There is, too, a very interesting exhibit of the work of the pupils in the school for the blind, Brantford, and also a fine display of work done by pupils of Indian schools. The Singer Sewing Machine Company have an exhibit worth seeing. They show two rooms, a dining-room and bed-room, all the furnishings of which, including the tapestries, were made on their machine.

Machinery Hall is another very interesting building. Here can be seen the different processes employed in manufacturing many articles. It is

Washington shows, in miniature, a western farm, farm house, barn, fields, with plows, self-binder and threshing machine at work. Pennsylvania has a "Liberty Bell," made of grains. To digress, how much the Americans make of their Bell! There is the original to be seen in the Pennsylvania State House, the one we have mentioned here, one made of oranges in the Horticultural Building, and fac-similes of it made of glass are for sale at the glass works. All the European countries make large exhibits in this building.

From here it is not far down to the Dairy Building, in which, besides the exhibit of all dairy products, can be seen the workings of the model dairy. The process of butter-making, as explained to us by a Nebraskan exhibitor, is similar to that employed by our travelling dairies. The Stock Yards are near here, too, but the stock was not in when we were there, excepting that in the Dairy Barns, which are not open to the public.

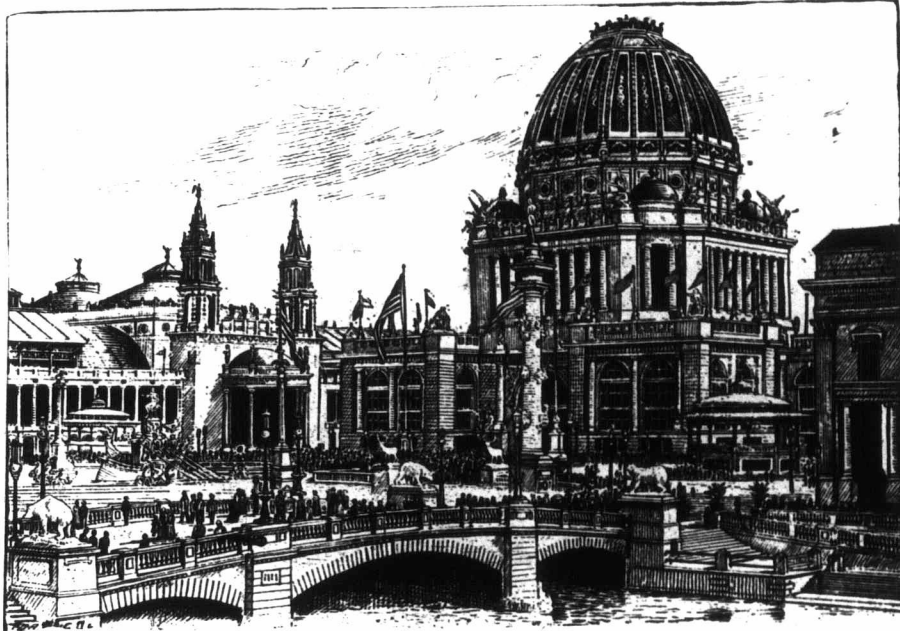
In this south-eastern corner of the grounds is found the Anthropological building, which, as its name indicates, is devoted to man and his works. When, on entering the building, we found ourselves confronted by a colossal mammoth, surrounded by other monsters of the land and sea, we were rather surprised, and doubted the appropriateness of the name given to the building, but on further examination learned that many of these were really the work of our enterprising neighbors across the line—exact representations of animals, now extinct. The objects collected are as interesting as they are numerous. Particularly interesting is the large display of relics of the North American Indians—numberless idols, rudely-fashioned vessels of earth and stone, articles of dress, old canoes, and many other curiously constructed objects. One old chief, whose head-dress of feathers extended down his back until it rested on the floor, wore a garment fringed with 700 scalps—his trophies in war. An Indian princess wore a necklace composed of 1,500 elk teeth, representing the slaughter of 750 elks. To further illustrate their habits, they have Indians living in wigwams and huts on the grounds. They are dressed in native costume and make baskets and bead-work, which they are quite willing to sell to visitors. Most of the countries of the world have large exhibits in this building. The casts of old Greek statuary are very interesting. To this exhibit belongs the Viking ship, lying at anchor near.

Across from this building is the Forestry building. No iron has been used in the construction of this rustic palace, wooden pins taking the place of bolts and nails. The sidings are slabs and the roof bark, while the pillars, supporting the verandahs that run all around the building, are the trunks of trees in their natural state and represent the forests of the various countries and states. California shows here a redwood plank, sixteen feet long and twelve feet wide, said to be the largest plank in the world. She has also a good display of native woods, as indeed all the states and countries have. The specimens of ebony-wood, rosewood, mahogany, olive wood, &c., are very fine. Canada, too, has a fine exhibit in this building.

Adjoining this is the Leather Building, in which are shown leathers of all kinds, among them an elephant's hide said to weigh eight hundred pounds, and to have taken two years in tanning. Boots and shoes, trunks, valises, and all articles made of leather, are shown here. The machines in the gallery are said to manufacture one thousand pairs of shoes daily. But the most interesting exhibit here is the collection of shoes of all nations. Some are very curious. The Greek shoe showing the foot, the Turk's with narrow pointed toe, the Tartar's with long iron hooks on the sole to use in climbing the mountains, the heavy fur-lined boots of Russia and Sweden, the flat leather sandals worn in South America, those of Palestine roughly made of skins, fancy gold-spangled slippers from India and Tartary, sandals worn in Japan to save the turf (suppose they have no signs "keep off the grass"), wooden shoes, raised two or three inches from the ground, worn in Corea, an infant's shoe made in the U. S. in 1765 (we pity the baby feet that wore the heavy coarse leather), and others that bore an early date. These and many more make a collection well worth seeing. A crazy-work drape of fine, many-colored leathers was also shown.

Having gone through the chief buildings in that part of the grounds, we return to the Court of Honor and enter the Electricity Building. Here we see much to admire, but very little that we really understand. However, there is something very fascinating in this exhibit. You will not soon tire of seeing what is being done, even if how it is done is beyond your comprehension. The tower of light and the revolving globe of prismatic lights attract the attention, and if they do not enlighten will at least dazzle you.

From this building we pass into the Mines and Mining Building. Here again Canada is conspicuous. She shows specimens of almost all the ores. Ontario's exhibit includes fine specimens of marble



THE ADMINISTRATION BUILDING.

interesting to watch the weaving of silk in patterns of carpets, of cotton and woollen goods. Here, too, we see paper manufactured and the printing press doing its work, even to the folding of the papers. Near the modern press stands the oldest printing press of America—151 years old. Of course, we carry away and carefully preserve the advertisement that is handed to us, because we saw them printing it with this old hand press. We look with interest at a sewing machine which can be wound up to run for some time, thus leaving the operator nothing to do but guide the seam. Quite as interesting is a carpet sewing machine. The two pieces to be sewed together are placed on the top of each other on a long table, their edges even with the edge of the table. The operator is on a bicycle that has fastened to it an attachment that is to do the sewing, and he operates this as he rides along. He says he can sew thirty yards in four minutes. What woman will not be willing to let him do it?

From Machinery Hall we pass to the Agricultural Building—one of the most interesting of the buildings. Here Canada makes a particularly fine display; without being considered partial, we think we may say that her pavilion is one of the most striking in the building. The grains and grasses of which it is composed are most artistically arranged, and Canadians may well be proud to see their national emblems surmounting it. Of course, the cheese is the biggest thing shown, but there is besides an exhibit of agricultural products that must dispel the illusion that Canada produces little but cheese, or that it is, as others believe, a land of almost perpetual frost and snow. One thing that makes this building so attractive is that in many cases the pavilions themselves show the staple products of the countries they represent. Iowa shows a corn palace; New South Wales is made of wool. Illinois is of corn and other grains. Cape of Good Hope shows wool, ostrich-feathers and elephant tusks. One tusk is said to be seven and one-half feet long and to weigh 100 pounds.



and granite, copper and silver ore, asbestos and a coarse nickel. She shows a piece of nickle ore weighing six tons, and an ingot of nickel weighing 4,500 pounds, and valued at \$2,250. Iowa shows a coal mine with miners at work, and New Mexico a model of a miner's cabin. The petrified wood shown by Arizona is very beautiful, and takes a fine polish. All the foreign countries make fine displays, Cape Colony showing a very large collection of diamonds.

From here we go to the Transportation Building, the only colored building in the group, and one of the most beautiful. The arches that form the grand portal are overlaid with gold-leaf and surmounted with beautifully carved figures. On one side of the entrance is depicted the rudely-made vehicle of the past, drawn by oxen, and on the opposite side the luxurious railway coach of to-day. Within are shown, either by specimen or model, the various conveyances used in ancient and modern times by the different nations of the earth. Very striking is the contrast between the old sailing vessel and the present steamship, the first railway trains and those now in use. The C. P. R. shows a train of cars finished in mahogany, finely upholstered, and lighted by electricity. The Pullman cars on exhibition seem like a succession of beautifully furnished parlors. Many fine models are shown, among them one, 30 feet long, of the ill-fated man-of-war, Victoria, the Nicaragua canal with water in it, and one of the Forth bridge, 20 feet in length.

We next enter the Horticultural Building. Here in the central dome is a miniature mountain, its sides covered with plants and shrubs, among which a stream of water makes its way down, while under the mountain is a large cave. All kinds of tropical plants can be seen here; palms of many varieties, tree-ferns under which you can walk with ease, orange trees bearing fruit, bananas, pine-apples, the rubber tree, and many others of which we have read but now see for the first time. The exhibits of fruit, natural and preserved, from the different countries are also shown here. Of course there is also a large exhibit of plants and flowers outside, in the adjoining grounds and on Wooded Island, which is in the lagoon near, and contains some sixteen acres.

The Children's Building is near here, and is worth visiting. In it is shown everything likely to amuse or instruct children, and also the work of the children in various schools. Here, too, we see children employed in the kindergarten, the moulding room and the gymnasium, while in the creches very young children are taken care of while their mothers are at the Fair. But the most interesting room is the one where children who have been born deaf are taught to talk. Here, by watching and feeling the movements of the vocal organs of their teacher, they are taught to articulate distinctly.

Just beside this building is the Woman's Building. The exhibit here is interesting, chiefly because it is woman's work, showing, as it does, the many departments of labor in which she is engaged, and the excellency of the work done in all. The building itself was designed by a woman. Its marble fountain, its statuary its paintings, and all the work exhibited in it are the work of women. We need not attempt to describe the exhibit, as it covers much the same ground as the department of Liberal Arts, of Fine Arts, etc., in the other buildings.

Not far from the Woman's Building is the one devoted to Fine Arts. It will be impossible in this to mention many of the pictures displayed in those long galleries. In Canada's section we of course noticed Read's, "The Foreclosure of the Mortgage," which has since been awarded a diploma; "The Visit of the Clock-Maker," by the same, is very natural. We remember having often seen, just as it is shown in the picture, the old man with the works of a clock scattered around him on the table. "The Venetian Bather," by the late Paul Peel, is another that attracts attention.

Russia exhibits five or six large paintings, representing scenes in the life of Columbus, the coloring of which is very fine. In the British section, "The Forging of the Anchor" and "The Passing of Arthur" are pictures one will not soon forget. Japan shows a large number of pictures; some are painted and others worked in silk, with stitches so fine that it really looks like painting. She also shows here three vases, each eight feet in height, and valued at \$50,000. It is said to have taken thirty men three years to make them. This building also contains large exhibits of sculpture, casts, models, etc.

From here we go to the Fisheries Building, where are collected both fresh and salt water fish from all parts of the world. Some of them are very valuable, so much so that a hospital, with doctors in attendance, is established in the building, and here the sick fish are brought to be treated. In the centre is a large fountain, containing a great number of fish of various kinds. The tanks are in the walls, and the fish can easily be seen as you walk along. It is very interesting to watch the gold and silver fish, the lobsters, sea anemones and others. A pure white seal from Norway is shown, and also a white whale from the Gulf of

St. Lawrence. Russia, Norway, Sweden and Holland make large exhibits of cured fish.

Just across the lagoon from the fisheries is the U. S. Government Building. All the different departments of the government have very large exhibits here; and besides, there are shown specimens from nearly all the departments of the Exposition. This is interesting, as showing collectively the various products of the U. S.

In a short visit to the Fair one cannot spend much time in the state buildings, but it is well to take a walk among them. Most of the states have fine buildings, and those of foreign countries are specially interesting, displaying as they do their native architecture. Many of them contain exhibits of their products and manufactures, and by leisurely walking through them you get a good idea of the general resources of each country.

We have heard Canada's Building spoken of disparagingly, but think it answers very well the purpose for which it was designed. It contains no exhibits, and is not very large, but it is tasteful in appearance, has comfortable parlors, the necessary offices for each province, reading-rooms, etc., while placards in the halls locate her exhibit in each department.

Of course, a visit to the Fair would be incomplete if it did not include a day on the Midway Plaisance. Here you may see Moors, Javanese, Turks, Persians, Japanese, Egyptians, Chinese, Hawaiians, Bedouins, Dahomeyans and Cannibals from the South Sea Islands, all living and dressing in native style. The Ferris Wheel is one of the popular attractions of the Plaisance. As it slowly revolves, the passengers ascend 250 feet. The ice railway seems to be well patronized, probably by those who have never before had the chance to have a sleigh ride. In the Japanese, the Turkish and the East Indian Bazaars, native goods in great variety are offered for sale. The Street of Cairo is as amusing as interesting, with its foreign-looking buildings, its camels and donkeys, its native pro-

## MINNIE MAY'S DEPARTMENT.

MY DEAR NIECES:—

In a few short weeks the great Columbian Exposition will be a thing of the past, leaving, however, many broadened views and happy memories with those who have been privileged to visit the great White City. Those of you who have not yet done so, I would urge to make every effort in your power to spend a few days at least within its gates. Such an opportunity will never be within your reach again during this generation, and, now that railway fares are reduced (with a prospect of being lower still), by careful management the trip need not be an expensive one. Deny yourselves in other ways, but by all means visit the Fair, for it will furnish you with food for pleasant and profitable thoughts for many months to come, and give you a clearer idea of the thought and advancement of the nations than you can gather by much reading. If you ask me what impressed me most, I can but answer: The immensity of it all, the lofty design and the accurate execution. One cannot but be struck with the order which prevails on every side, it being quite possible for ladies to go alone without suffering either annoyance or inconvenience—at least, such proved our experience during a recent visit to Chicago.

Apart from the great exhibition proper, we were interested in strange people, in foreign people and their ways, so that we paid two or three visits to some places and streets in the Midway Plaisance. Here one is apt to forget that one is really in America, there are so many Egyptians, Hindoos, Cingalese and Wild Arabs in swathed heads, Soudanese, Algerians, Persians and Dahomeyans, and in such great numbers—the place is alive with foreigners in queer dress and living after their own peculiar custom. In the streets of Cairo alone there are three hundred and fifteen—is it not Cairo indeed, one is apt to think, for although the walls and the fashion of them are artificial, yet they are built on the exact model of the real. A street in Cairo, with its donkey rides, its camel rides, of which you are given a perfect description in this number, its confused, shouting, noisy, good-natured crowd, cannot fail to interest. Here, as well as in the streets of Constantinople, we were much amused with the natives disposing of their wares and displaying to the best advantage their few English phrases.

There was no attraction on Midway Plaisance that so interested us as the Javanese Village, where the habits and customs of these people are fully exemplified and their everyday life faithfully portrayed. In this village there are one hundred and twenty-five from the Island of Java living in prettily shaped houses, as you will observe in our illustration, made of bamboo of various colors. They are a gentle-voiced people, with merry, laughing eyes, ready to converse, or try to do so, with all who come along. The little dress they wear is not beautiful; some of them go barefooted, but the majority wear sandals which are always left at the door when entering a home.

In the centre of the village you will notice a larger house, where one evening a party of four of us sat and rested and sipped a delicious cup of real Java coffee. It was so enjoyable to sit there seeing and hearing these queer folks—not enjoyable to hear their music though, for of all the hideous, unearthly sounds it was the worst, and this was supposed to be a drawing card and so was placed near the entrance. I fancy it may have kept many out, as the village was fairly empty, fortunately for us. We made the acquaintance of a little girl who calls herself Maud in the meantime. How she would laugh, and how pretty she was bedecked in her own peculiar costume, and wearing a huge silver American watch and a paste diamond ring—new toys which pleased her. She could not tell the time, but was willing and proud to learn how. We left her saying "Chicago good!" "Java good!" "nice ladies!" "nice gentleman!"

The best place to say good-bye and to take leave of this beautiful exhibition is in the grand Court of Honor, where, looking upon a group of buildings so entirely beautiful in themselves and in their arrangements, and down the great basin and upon the Peristyle with its magnificent columns surmounted by its exquisite groups, one's whole being is filled with delight. And later, when all the beauty of the night's illumination flashes out, and the beading of light runs up the golden Administration dome, around every white roof, and about the dark water basin, while the electric fountains flash their jets in green, purple, crimson, gold and green again, a kaleidoscope of color in the air, and over all the great search lights thrown upon the different groups of statuary, and at last resting upon the beautiful statue of the Republic, one is thrilled with the vision of enchanting beauty.

MINNIE MAY.

P. S. Minnie May offers a prize of \$5.00 for the best original Christmas Story—not to exceed one page in length. All communications to be in our office by 1st December.



THE JAVANESE VILLAGE.

cessions, and its noisy Egyptians, crying out their wares. In the Libby Glass Works you can watch the workmen making many of the different articles shown, and can also see them manufacturing it into cloth. There are many other side attractions in connection with the Fair that are worth seeing, but as I fear this is already too long, I shall now close. Before doing so, I would like to say, that we, as Canadians, have certainly reason to be proud of the exhibits made in the different departments by our country, and particularly by Ontario. That we are able to successfully compete with older and more populous countries should surely encourage us to go forward and develop to the utmost the vast resources of our Dominion.

### Enormous Search-Lights.

"How far that little candle throws his beams," said the poet; but if he had lived to visit the Chicago Exhibition and see the enormous search-light in the Electricity Building, he might have expatiated upon that also. This gigantic electric light is fitted with a reflecting lens mirror sixty inches in diameter, with a total illuminating intensity of 375,000,000 candle-power. The largest search-light hitherto upon this continent is on Mount Washington, and has a luminosity of 100,000 candle-power. There is being constructed at Penmuck, France, the most powerful search-light in the world. It will have an illuminating capacity of 45,000,000 candle-power, and be capable of sending a double ray of light a maximum distance of 248 kilometres in fair weather. The light at Cape la Heve, at the mouth of the estuary of the Seine, formerly the largest in the world, has a capacity of 23,000,000 candle-power, and throws a single ray of light in clear weather 230 kilometres, 94 kilometres in average, and 37 kilometres in foggy weather. Estimating by the power of the Cape la Heve light, that at the Exposition should be capable of throwing a light-ray over a thousand miles, the kilometre being equal to .62137 miles.



**Fun on a Camel's Back.**

COMEDIAN OF CAIRO STREET AT THE WORLD'S FAIR.

Did you ever ride a camel? His getting up is like nothing else under the sun. When he lies down, the man on his padded back feels as though he were on the roof of a collapsing house, as though the structure was teetering and going to pieces. It is the wonder of a day how a camel, after folding himself together and dropping on a mat, can untie his lank and limber parts and get to his feet once more.

The camel is the comedian of Cairo street in Midway Plaisance. He keeps the sunny street



THE FIRST CONDITION.

in a bubble of excitement and laughter. The best part of it is that, like a true comedian, he never enters into the fun. He seldom opens his eyes, and he never ceases that long, awkward swing of his lower jaw. While he is tipping people into all sorts of frantic attitudes, causing women to shriek, and sending an idle crowd into roars of laughter,



A FORWARD, ROTARY MOVEMENT.

he always maintains that slow and homely dignity which is natural and not acquired.

Great is the camel. He has made a hit at the Exposition.

THE CAMEL ON HIS NATIVE SANDS.

In Egypt a camel is worth from \$60 to \$75, but the highest-priced camel is moth-eaten, sheef-worn, faded and rickety. At points where he is not



SUDDEN SHOOT UPWARD.

angular he is lumpy, his hair is worn off in patches of square feet, and no one can count the joints of his tremulous legs. If anything is needed to further disfigure him it is a soiled and tattered saddle of carpet and cheap ornaments. This is fastened over the lean and irregular ridge of his back by numerous straps. His long and mournful head is



A FLAYING MOVEMENT.

bound in a halter. Then you have the camel as he is found in Cairo—a sight to frighten children and tempt stout women to reckless feats.

This riding of camels has become almost a craze. The buzz and clatter of Cairo street breed a contagion of nervous daring. Other people are rocking up and down the streets on the camels. Donkey-



AND THE CAMEL IS UP.

riders dash through the halting crowds followed by exulting yelps. The shrill and martial pipes and the pattering tom-toms assist in the hurrah. All Cairo is shouting, jabbering, offering wares. The holiday is perpetual. He who gets into it feels a sudden desire to be a part of the hurrah to ride a camel.

And so the lumbering ships of the desert are kept on the move all day. It costs 25 cents to go



THE CAMEL LIES DOWN.

to the end of a street and back. In one week the camel pays for itself more than once.

The drivers are large black men with loose gowns and twisted turbans. They are strong and willing men, too. One of them will grasp a heavy woman around the waist and lift her from the saddle as though he were handling a sack of rice. If she loses her hat and shows a desire to fall off, as the camel weaves and staggers in rising, he grasps her firmly by the ankles, and, in a volley of hot Egyptian, begs her to keep cool and lean back. Although he has seen people lurched and tossed around on camels for a great many years, he enjoys it as much as any one, for he wears a broad and sympathetic grin. Every moment or so, just to keep the beast from going utterly to sleep, he whacks it with his stick like a man beating carpet, and says something, to which the camel pays no attention.

MADE SPORT FOR THE CROWD.

The camels were sprawled on the mats one day when a young man and a backward girl approached one of the drivers and began to parley. Then the one hundred or more people who had been standing there an hour just looking on and having a good time crowded a little closer and prepared for another exhibition. The young man asked the price, if the saddle ever slipped, if the camel was tame, and if there was any danger. Of course the driver knew his business and said they would enjoy themselves.

"Will he bite?" asked the girl, when the camel shifted his long and sinewy neck toward her.

"Noa bite, good camel," said the driver, as he put the yellow tickets in his mouth and reached for the young woman. She was a trifle pale and glanced at her escort with a weak smile, as the dusky man in the gown lifted her to the saddle and showed her how to hold on. The young man, laughing in a nervous way and evidently bored by the gaze of the crowd, climbed up behind her, and, reaching around her waist, took a death grip on the rope hand-hold. The driver took a good long look on both sides to see that the two were fastened all right. This seemed to excite suspicion in the mind of the young woman, who had ceased to smile, and was a trifle paler than before.

"Is there any danger?" she asked, noticing a shake and tremble of the dumb mass underneath them. It was too late to begin asking questions. The driver was tugging at the halter and thumping the camel over the neck with his stick. At first the camel merely shook his head in drowsy protest; then all of a sudden his hind-quarters began to lift. They kept on lifting. It seemed as though he was using one end at a time. The young man was tilted forward on the girl. Both threatened to slide over the saddle and down the sloping neck to the ground below. The girl's hat fell over her eyes and she screamed, but she knew enough to keep a tight hold and lean back.

As they clung to this steep incline, the camel paused. Then he swung to the right and left in a drunken motion as he untangled his front legs.

This jolted the two passengers, and the girl once more screamed. While they were tipped back to save themselves from sliding the front half of the animal came up with a bump, and they might have fallen backward if they had not been grasping the

ropes. As it was, both plunged forward and the young woman let out a third scream. The young man was too busy preparing for another tip to reassure her. But it was all over. The camel had shaken the kinks out of all his legs, and was slowly turning around with a wabbling motion like a boat caught in a trough of waves. The young woman had recovered her hat, and from fright she had passed into a giggle, the young man assisting. All this time the men and women who stood around had been yelling and tittering with glee and saying to each other: "Well, did you ever?"

THE UNLOADING PROCESS.

Then they waited to see them come back and unload, for that is half the fun. Usually the rider takes kindly to the trip down the street. To be sure, the animal rocks back and forth and seems always on the point of falling down, but the sensations are mild compared with the shake-up of mounting.

Whatever may be his way of folding up, he finally settles in complete repose on the dirty matting and waits for another cargo of strangers.

**Mollie's Problem.**

There's lot of things I cannot understand,  
It really makes no matter how I try,  
One's why the brown comes on my little hand  
Because the sun is hot up in the sky.

I never understood why birds eat worms  
Instead of pie and puddings full of plums,  
I can't see why a baby always squirms,  
Or why big boys are 'fraid of little sums.

I cannot understand why doggies bark  
Instead of talking sense like you and me;  
And why the sun don't shine when it is dark,  
Instead of when it's light, I cannot see.

I wonder what it is makes children grow,  
And why they have no wings like little flies,  
But puzzlingest of all the things I know  
Is why grandma wears windows on her eyes.

John Kendrick Bangs, in Harper's Young People.

**Fashion Notes.**

Women lay aside, without a sigh, the light, pretty garments of summer, for the quieter toned and more comfortable wraps of early autumn. The new material, are in endless variety. Homespun are still favorites for costume cloths, but their extreme weight being an objection to many, lighter makes are offered this season. Hop-sacking is to the front again in every variety, even to shaded surface. Fulness in sleeves, skirts, overgarments and flounces is a characteristic of the season, and very deep flounces take the place of several narrow ones; but no short woman must wear those deep flounces, if she does not want to be still shorter.

There is nothing positively new in cut or shape; all sorts of dresses are worn, from the empire gown to the reformed dress, and the sensible woman will examine her last year's dresses and find, to her delight, that they are as fashionable as ever this winter. Perhaps a new neck-band or cuffs can be added.

Bright flowers always are worn on hats and bonnets in early autumn, and the very large buds and blossoms seem to be preferred, judiciously mixed with black lace, which is always softening and refining.

The empire cape, tight-fitting basque, the favorite "blazer" and semi-long cloak are all to be seen among the latest imported goods, and all peculiar looking or eccentric garments are conspicuous through their absence.



Man-afraid-of-the-soap (as member of Army Bicycle Corps dashes by) Much lazy sojer. Walk sittin' down; Ugh!

**The Courtesy of Love.**

There is a false idea afloat in the stream of life, which is that when people love us we can be rude to them, that because they know we love them they will forgive every lack of courtesy. Now, this is absolutely untrue; the closer two people are united by the bond of love the more necessary is it for them to observe every law of politeness. Love is not so very difficult to gain, but it is very difficult to keep. You can better afford to be rude to everybody else in the world than to the people who love you. Love is a flower that needs constant attention, and the very minute it is neglected, left too long in the glaring sun of indifference, or in the cold wind of selfishness, it dies.



## THE QUIET HOUR.

## Ejaculatory Prayer.

BY E. M. GOULBURN, D. D.

"Ejaculatory prayer is prayer darted up from the heart to God, not at stated intervals, but in the course of our daily occupations and amusements. The word "ejaculatory" is derived from the Latin word for a dart or arrow, and there is an idea in it which one would be loath indeed to forfeit. Imagine an English archer, strolling through a forest in the old times of Crecy and Agincourt. A bird rises in the brushwood under his feet, he takes an arrow from his quiver, draws his bow to its full stretch, and sends the shaft after the bird with the speed of lightning. Scarcely an instant elapses before the prey is at his feet. It has been struck with unerring aim in the critical part, and drops on the instant. Very similar in the spiritual world is the force of ejaculatory prayer. The Christian catches suddenly a glimpse of some blessing, a longing after which is induced by the circumstances into which he is thrown. As the archer first draws the bow in towards himself, so the Christian retires by a momentary act of recollection into his own mind, and there realizes the presence of God. Then he launches one short, fervent petition into the ear of that awful presence, throwing his whole soul into the request. And, lo, it is done! The blessing descends, overtaken, pierced, fetched down from the vault of Heaven by the winged arrow of prayer. Do you require Scriptural proof that such immediate answers are occasionally vouchsafed, even as regards mere earthly blessings? Nehemiah, the cup bearer, stood with a sad countenance before Artaxerxes the king. The king seemed offended by his sadness, "so he was very sore afraid," having a large request to make, which might seem extravagant and presumptuous. The cup-bearer was in a great strait. What did he do? He entered into the closet of his heart, and shut his door, and prayed to his Father which was in secret. "I prayed," says he, "to the God of Heaven." Not many seconds can elapse between a question in conversation and the answer to it: it is hardly conceivable that he can have said more mentally than "Lord, help me according to my need," but then he said it with such an entire faith that God would help him, that it was as successful as if he had spent a whole night in prayer. He candidly explained his wishes, and down came the blessing immediately. The king illuminated Gondolas, electric and steam launches filled with happy parties—upon which glide past took the request very graciously, and the all-important crisis for Nehemiah and for the city of his fathers passed off well. One short act of the mind, one strong shaft of prayer, had won the restoration of the Holy City.

More things are wrought by prayer  
Than this world dreams of. Wherefore let thy voice  
Rise like a fountain for me night and day.  
For what are men better than sheep or goats,  
That nourish a blind life within the brain,  
If, knowing God, they lift not hands of prayer,  
Both for themselves and those who call them friend?  
For so the whole round earth is every way  
Bound by gold chains about the feet of God."

But ejaculatory prayer is to be used not simply in difficulties, and when our affairs are in a critical posture, but from time to time all along the course of the day. Look from without upon the Christian's life, and you will see divers occupations and employments, many of which, it may be, call for the exercise of his mind. But beneath the mind's surface there is an undercurrent, a golden thread of prayer, always there, though often latent, and frequently rising up to view, not only in stated acts of worship, but in holy ejaculations. Like the golden thread in a tissue it is woven into the texture of the Christian's mind, extending through the length and breadth of his life.

The every-day cares and duties which men call drudgery, are the weights and counterpoises of the clock of time, giving its pendulum a true vibration and its hands a regular motion; and when they cease to hang from the wheels, the pendulum no longer swings, the hands no longer move, the clock stands still. Longfellow.

## UNCLE TOM'S DEPARTMENT.

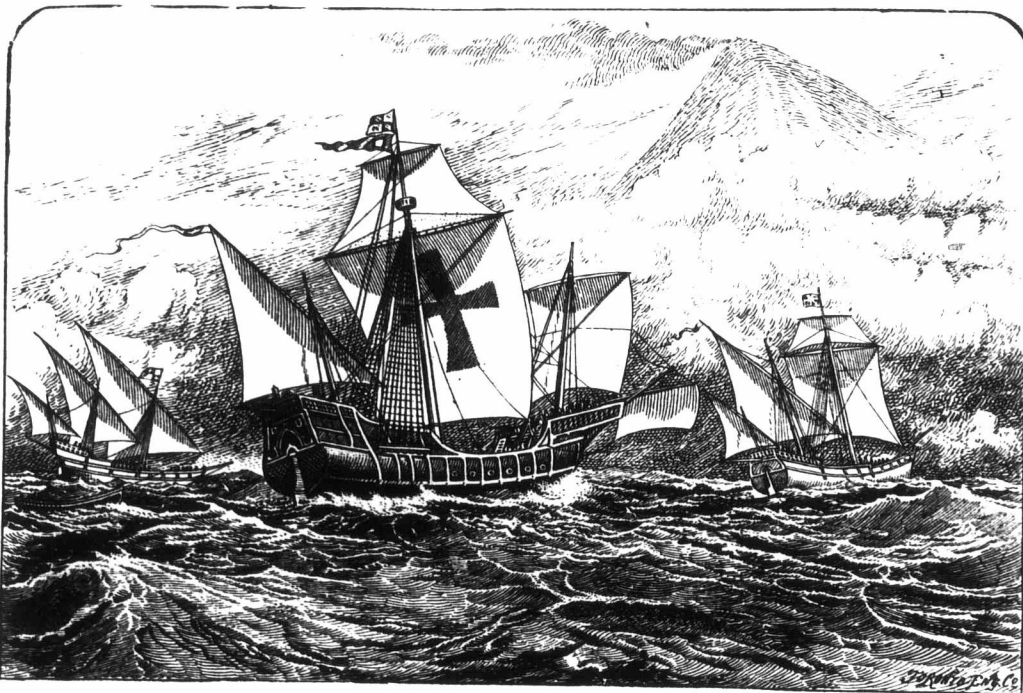
MY DEAR NEPHEWS AND NIECES:—

You have done well in sending in selections for the "Poets' Corner," and I hope you will continue to evince your interest in the competitions we may have from time to time. "Word Pictures" will be the subject for next month, with a view to bringing out the descriptive talent which I am sure many of my nephews and nieces possess. Choose what subject you will, a beautiful scene in your own neighborhood, or if you prefer it, the lovely character of some one near and dear to you—your choice is unlimited—you may even take an historical groundwork, but let the word painting be as clear and finished as possible, so that all who visit Uncle Tom's picture gallery may be pleased and profited.

The first prize will be \$1.50, the second \$1.00, and the third 50c. All communications to be in our office by the 8th of October. UNCLE TOM.

## The Three Ships of Columbus.

In this the year of the Columbian Exposition, everything in connection with the great discoverer receives an added interest in our eyes. Our illustration represents the three ships with which he set sail on his eventful voyage—that voyage which was destined to be one of the turning points in the history of the world. The Santa Maria, Pinta and Nina have been reproduced under the authority of the Spanish Government, and are now on exhibition in Chicago, no effort having been spared to make them the exact fac-similes of the vessels that left the port of Palos four hundred years ago. Curious documents were unearthed, libraries were searched, and everything concerning sea-life in the writings of early historians carefully studied. Calculations to determine the strength, sailing capacity, height



THE THREE SHIPS OF COLUMBUS.

of masts, details of rigging and extent of sail of the Santa Maria, were made by Senor Bona, head of the naval construction department of Spain, and the vessel was completed in July, 1892. There are three masts, fitted with strange rigging, and a considerable area of canvas. The armament consists of two cannon and six falconets, while the furniture of the cabins is like that of the ancient ship, which was fully described by Columbus. On August 3rd, 1892, the Santa Maria took part in the great Spanish naval review at Palos, commemorative of the sailing of Columbus. She left Cadiz to follow Columbus' old tracks to the West Indies, February 11th, in tow of a Spanish gunboat, and, together with the Pinta and Nina, formed one of the most interesting features of the New York naval display, which preceded the formal opening of the World's Fair.

## Inference.

A Savannah drummer says a drummer who has a great many dealings with the Marcon lawyers went out recently to Rosehill Cemetery and amused himself reading the inscriptions on the tombstones. He finally came across one that read, "Here lies a lawyer and an honest man." Turning to his friend, he said, "Bill, what made them bury those two fellows in the same grave?"

A sleeper is one who sleeps. A sleeper is that in which the sleeper sleeps. A sleeper is that on which the sleeper which carries the sleeper while he sleeps runs. Therefore, while the sleeper sleeps in the sleeper the sleeper carries the sleeper over the sleeper under the sleeper until the sleeper which carries the sleeper jumps off the sleeper and wakes the sleeper in the sleeper by striking the sleeper under the sleeper, and there is no longer any sleeper sleeping in the sleeper on the sleeper.

## The Breathing Cure.

A writer in the "Nineteenth Century" is responsible for the statement that almost all the ills which flesh is heir to can be cured by a system so simple that "rolling off a log" would be difficult compared with it. He stumbled upon his wonderful discovery accidentally, whilst climbing a mountain, and has, it would seem very selfishly, been profiting by it himself for almost a lifetime without letting the world into his secret. In order to avoid suffocation whilst going up the mountain side on account of the decreased amount of oxygen inhaled, the discoverer of the breathing cure was compelled to breathe twice as quickly as usual, by doing which the normal amount of oxygen was secured. It occurred to him afterwards, when feeling somewhat depressed, to see what effect fast breathing would have on the system under normal atmospheric conditions, and learned that he was able to get rid of headache and pain of various kinds simply by taking long and fast breaths of air. For insomnia, he claims that it is the best possible specific; and states that owing to his use of the system he has kept in perfect health for over thirty years, having been, since he commenced to use his cure, entirely free from coughs, colds, sore throats, and other ailments from which he formerly suffered. One of the best things about the cure is that it does not require any special conditions, even exercise being unnecessary, since the breathing can be done in an easy chair by the fireside as profitably as on a mountain top. Like many other valuable remedies, this will probably prove too simple for the majority of mankind, the average run of mortals preferring to dose themselves with nauseating nostrums which originally cost little more than the air, but are sold at a fabulous profit, to meet the demand of hypochondriacs on the question of health. Whatever virtue there is in the cure can easily be tested without any cost; and it is gratifying to know that nobody can get a patent on it and create a monopoly. Let us breathe away!

## Good Manners.

Sydney Smith said that the "manners are the shadows of virtue." Certainly a man's behavior is, in a large measure, the outward expression of what he really is. Coarse speech and uncouth dress tell of the coarse character. The Tattler said that the "appellation of gentleman is never to be affixed to a man's circumstances, but to his behavior in them." That is true, and, therefore, whatever a man's circumstance, he can be a gentleman, and the fact that he is a gentleman will manifest itself in his good manners. There are persons who seem to think it impossible to be cordial and hearty in manner without being boisterous or almost rude. Delicacy of behavior and gentleness in speech are not impossible to thorough cordiality. As a good heart expresses itself in good manners, so good manners react to increase goodness of heart. Good manners are possible to every one who is true, kind and considerate. These inward qualities need to be nurtured and their outward forms of expression cultivated. Study of the characters of good people and observation of their manners will do much to aid in acquiring a knowledge of the ways of really good society. Let the heart be right first and the rest is easily learned. Good manners, in a high sense of the word, helps a man far along in life. "If you meet a king he will recognize you as a brother," was said concerning a man who would possess himself of the manners of a true gentleman.

Who misses or wins the prize?  
Go, lose or conquer as you can;  
But if you fail or if you rise,  
Be each, pray God, a gentleman."

## Puzzles.

1—CHARADE.  
Good morning, dear cousins, every one.  
"I have only a minute to stay."  
Like friend "Edwards," but I'll not forget  
To call again some other day.  
Friend "Banks" appears quite thankful  
To be admitted to the crew;  
Yes, there's room in the front ranks, "Thomas,"  
And with pluck you'll get there too.  
A "Blythe" young man, a winsome man,  
Down last Marden there doth dwell;  
He lives complete a honeycomb,  
And fuses his *Fun* out a swell.  
There! "Devlin" is after the girls again—  
Miss *Lily Durg*, I'll be bound!  
Instead of the frog that sat on a log,  
And sang its merry "go round."  
"Miss Armand," they say, is after a jay,  
In January, July and June;  
But to get one to-day, in autumn,  
They say, she'd better go off and spoon.  
Come, "Reeve," sit down, explain yourself.  
You Dutchman, you, and "crank";  
Limburger cheese I've left for one  
Whose friends all call him "Hank."  
My friends—down east I'll not forget,  
Though my letters may not be so "bright  
And cheerful" as those I never get  
In reply, and now I'll say good night. FAIR BROTHER.



2-CHARADE.  
 One fine midsummer day,  
 A new friend called to say  
 A few words; he was T. W. Banks.  
 This puzzle I send  
 Is to that dear friend,  
 To welcome him into our ranks.  
 As you all can see,  
 A good puzzler is he,  
 Yet sometimes we cannot see his name,  
 You can see, if you try.  
 It is he, and not I,  
 Who is worthy of the great fame.  
 It was really bad fate,  
 That he came so late,  
 And not taken with the rest of the crew;  
 A TOTAL I would be  
 His portrait to see,  
 I am FINAL you all wish it so too.  
 Why has Lily Day  
 Forsook us, I pray?  
 What her PRIME was I cannot tell,  
 For she has of late  
 Left us in a sad state,  
 Without her we do not succeed very well.  
 As you can perceive,  
 Our friend, Mr. Reeve,  
 Stands at the head most all the time,  
 I know you enjoy  
 His puzzles so coy,  
 And they never are bereft of rhyme.  
 And now let's see,  
 Your motto must be  
 Always "Perseverance is Success."  
 Press on apace,  
 And win the race,  
 It is sure you will that honor possess.

ADA SMITHSON.

7-RIDDLE.  
 Two conjunctions and a preposition,  
 But letters six in all,  
 Will tell what Roman Brutus was  
 The time of Caesar's fall.

ADA ARMAND.

3-SQUARE WORD.  
 My first is not a minister,  
 Yet "a holy person" I aver,  
 My second is worn by soldiers brave,  
 When fighting hard their country to save.  
 "To tincture deeply" is my third,  
 I hope you will not doubt my word.  
 My fourth in grammar is defined,  
 As being "names" of any kind,  
 My fifth and last's "a lock of hair,"  
 And oft adorns our ladies fair.

GEO. W. BLYTH.

4-DECAITATION.  
 I received the Photo. Group to-day;  
 That I was pleased to get it, 'tis needless to say.  
 A happy crew we appear to be,  
 Ranged round our beloved Uncle T.  
 Cousin Charlie's in my line, I perceive,  
 Tho' I lean on Henry Reeve.  
 Miss Armand is my prop and stay,  
 While she remains I can ne'er go away.  
 Our Cousin Blyth is blythe indeed,  
 And high up in the van,  
 Tho' uppermost and centre-top stands A. R. Borrowman,  
 Our Fair Brother looks out alone,  
 But tho' you seem you're not, I own.  
 While a diamond gleams—set secure between  
 Uncle P. and Devitt, 'tis you know who I mean.  
 Then at Devitt's right George Rogers is placed,  
 Where does LAST come from, I wonder.  
 First Snider boys like sentinels are,  
 Pray, Miss Graham, is that a blunder.  
 While "Pretty May" and A. B. Pickett,  
 Cling to one veteran, Miss Ada A.  
 Two other cousins below them are  
 H. Thobier and Miss Clara.

LILY DAY.

5-TRANSPOSITION.  
 A stranger and poor unto you I ONE,  
 I meant fame's ladder to climb,  
 Before me since then has the TWO been borne;  
 Of course it took some time,  
 But little by little I upward went,  
 Nor grieved if slow the pace,  
 The THREE of my hopes at last I've reached,  
 And I hope to keep my place.

ADA ARMAND.

6-CHARADE.  
 While FIRST a town one-day,  
 Walking down the street,  
 A nasty little two  
 It was my fate to meet.  
 In size he was but very small,  
 In color he was THREE;  
 He tore my dress, and that is how  
 He WHOLE the displeasure of me.

ADA ARMAND.

Answers to August 15th Puzzles.

1-Inscribe. 2-Forget. 3-Thankful. 4-Bright, right.  
 5-Lily Day. 6-The letter J. 7-The letter M.

Names of Those Who Have Sent Correct Answers to August 15th Puzzles.

Joshua Umbach, I. Irvine Devitt, Ed. A. Fairbrother, Thos. W. Banks, George W. Blyth, Oliver Snider, Addison Snider, A. R. Borrowman, Morley Smithson, Josie Sheehan, Mary Morrison, Ada Smithson, Lily Day, Irene M. Craig, Henry Reeve.

"Uncle James," said a Boston young lady who was spending a few days in the country, "is that chicken by the gate a Brahma?"  
 "No," replied Uncle James, "he's a Leghorn."  
 "Why, certainly, to be sure!" said the young lady. "How stupid of me! I can see the horns on his ankles."

SCALES

Every farmer in the land ought to be the owner of at least one of the scales for which we quote prices in this issue. All of these scales are stamped and inspected by government officials, and the price includes the cost of inspection. The government certificate accompanies each scale.

- 4-lb. Side Beam Scale..... \$ 2 25
- 10-lb. Side Beam Scale..... 3 00
- 240-lb. Scoop and Platform Scale..... 5 00
- 500 lb. Platform Scale on wheels..... 10 00
- 1000-lb. Platform Scale on wheels..... 12 90
- 2000-lb. Platform Scale on wheels..... 22 00
- 2000-lb. Platform Scale, with lever..... 25 00
- 3000-lb. Stock Scale, with railing..... 43 00

Our terms are cash with the order in all cases.

If you live in Ontario, and your order is ten dollars or over, then we pay the freight. If you live outside of the province of Ontario, we allow a rebate of three per cent. in lieu of the freight, if your order is over ten dollars. Our "Shoppers' Guide" explains all. Send for it to

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- Five Shire Stallions, . . . . .
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- Two Two-Year-Old Fillies (in Foal),

AT REASONABLE PRICES.

Copies of Pedigrees and Full

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Elmcroft Stables,

Lachine, 312-a-om Quebec.

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BULBS! BULBS! BULBS!

FOR FALL PLANTING.

BEAUTIFY THE HOME IN WINTER and the Garden in Early Spring.

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- Offer No. 2 - For TWO new subscribers (\$2), we will send: 4 HYACINTHS, Double and Single, Mixed. 4 TULIPS, Duc Van Tholl, mixed. 6 CROCUS, choice mixed. 3 SNOWDROPS, double. 2 FRESIAS. 2 SCILLAS. 1 BERMUDA or True EASTER LILY.
- Offer No. 3 - For THREE new subscribers (\$3), we will send the "Beautiful" Collection of Hyacinths, for pot culture: Single Varieties. AMY, very dark red. NORMA, pale waxy pink. GRANDEUR A MERVILLE, beautiful bluish. LA PUCELLE D'ORLEANS, pure white. CHARLES DICKENS, porcelain blue. UNCLE TOM, blackish-purple. ALIDA JACOBEA, clear yellow. Double Varieties. ROUET TENDRE, fine crimson. PRINCE OF ORANGE, pink, carmine striped. LA DEESE, pure white, yellow centre. PRINCE OF WATERLOO, pure white, rose centre. BRIDE OF LAMMERMOOR, fine lilac. GARRICK, dark lavender.
- Offer No. 4 - For FOUR new subscribers (\$4), we will send: 12 HYACINTHS, Double and Single, named. 15 TULIPS, Double and Single, mixed. 18 CROCUS, mixed color. 8 SNOWDROPS, Single and Double. 3 GRAPE HYACINTHS, assorted colors. 3 NARCISSUS, assorted. 3 JONQUILS, Single or Double. 1 LILIUM ACRATUM. 6 LILY OF THE VALLEY, pips. 1 CROWN IMPERIAL. 3 ANEMONES, Double, mixed.

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FIFTY PURE-BRED HEREFORD CATTLE

A Few Shorthorn Cattle, 50 Cotswold and Southdown Sheep, and 25 Berkshire Pigs.

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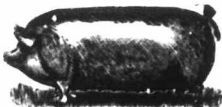
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At the MORETON LODGE FARM (Next the Ontario Agricultural College, one mile from GUELPH. Send for Descriptive Catalogue, ready October 2nd, 1893.

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MR. GRAINGER, Lonsdale, Ont., offers for sale some exceedingly good cows and heifers (Fair Maid of Hullett 2nd, now at test at Chicago, is only a fair specimen.) Dams made thirty pounds of butter in seven days. Come and see them; they are good ones. 338-2-y-om

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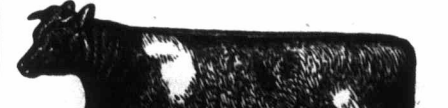
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ADDRESS: JOHN HOPE, Manager,

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New Importation!

ARTHUR JOHNSTON, Greenwood, Ont.



Reports his recently imported Cruickshank-bred safely at home, seven young bulls and six females, all of which will be sold at moderate prices. I have also exceedingly good young bulls and heifers of my own breeding for sale. Send for Catalogue, Greenwood P. O., and Telegraph Office, Claremont Station, on the C. P. R., or Pickering Station on the G. T. R. Parties met at either station on shortest notice. Come and see my cattle. 332-2-y-om

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Scotch-Bred Heifers, Imported Shropshire Rams, Imported Ewes, Home-bred Rams, Home-bred Ewes. FOR SALE!

In any number. All of very best quality, and at the lowest prices. We want 500 recorded rams for ranches. Correspondence Solicited. John Miller & Sons, Brougham, Ont. Claremont Station, C. P. R., 22 miles east of Toronto. 306-2-y

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A few good, useful, young bulls for sale. PLYMOUTH ROCK FOWLS - Pilgrim strain; choice cockerels and pullets at moderate prices. Also registered Berkshires. W. T. WARD, Birchton Farm, Birchton P. O., P. Q. 321-2-y-om

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6 Choice Young Bulls

And the Imported Cruickshank Bull ABERDEEN HERO, Their sire. Also some nice Young Heifers, From one year old up. Prices to suit times. 322-2-y-om SHORE BROS., White Oak.

Shorthorns, Coach Horses and Berkshires.

Our herd is headed by Daisy Chief 1364, sired by the famous Indian Chief 1108, and was highly successful in the various Western Ontario fairs of the past season. A few choice young Bulls and Heifers for sale. Also registered Berkshires and a few extra choice Cleveland Bay mares and fillies, the get of Disraeli, Dalesman, etc. Write for prices, or come and see us. A. J. C. SHAW & SONS, Camden View Farm, Thamesville. 336-2-y-om

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N. B.—Mr. Shadwell has now a stable especially fitted up for boarders, which will be taken at the usual rates and well cared for, besides having advantage of veterinary inspection at all times.

STOCK GOSSIP.

McNish Bros., of Lyn, Ont., place their advertisement of Guernseys with us this issue.

J. G. Mair, Howick, advertises his prize-winning herd of Improved Large Yorkshires in this issue.

At Mr. Bowen-Jones' annual Shropshire sheep sale, at Ensdon House, Shropshire, Eng., there was a strong competition among noted breeders for an extraordinary shearing ram. It was purchased by the well-known breeder, Mr. Richard Thomas, The Buildings, Baschurch, and his son, Mr. Wm. Thomas, the Beam House, W. Shrewsbury, at two hundred guineas.

The American Southdown Breeders' Association announces the following programme for their meeting to be held in Assembly Hall, World's Columbian Exposition, Chicago, Ill., on Wednesday, September 27th, at 10 o'clock a.m. To this meeting all sheep breeders, and those interested in the sheep industry, are cordially invited. Address, Hon. J. H. Potts, President; Reports, S. E. Prather, Secretary, D. W. Smith, Treasurer. Southdown sheep, their treatment, and why preferred to other breeds. W. W. Chapman, Secretary Southdown Sheep Breeders' Association, London, England; "As found in England," John Hobart Warren, Esq., Hoosic Falls, N. J.; "Their claims to public favor," John Jackson, Esq., Abington, Ont., Canada; "For Market," Geo. McKerron, Esq., Sussex, Wis.

NOTICES.

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

A LETTER FROM NEBRASKA.

Buffalo County, Nebraska, has had its drawbacks as well as the rest of the counties in that and other states. But this year it is fully equal in prosperity to the best of them. Small grain has not been up to the standard, but corn is a good crop. The northern part of the county has suffered from the dry weather, but in most places a good crop will be the result of a summer's work. It will be wise for those who contemplate a trip west to avail themselves of the opportunity given by the C. B. & Q. R. R. in the Harvest Excursions, September 12 and October 10, and see the country for themselves. Those who have not been in the state for two years will be surprised at the great improvements made, and the extent of ground put under cultivation during that time. Do not forget the date, and come and see the great State of Nebraska. H. A. KELLS, Ravenna, Mt., Buffalo Co., Nebraska, August 18, 1893.

Those interested in hay harvesting machinery should pay particular attention to the exhibit of Mr. James W. Provan, of Oshawa, who has paid great attention to pitching machines. There are special features about his mode of putting up an iron track which has many advantages. He can also place a number of stop blocks at different points along the track, and when required the car passes them all without tripping.

We would call the attention of our readers to the special list of goods advertised for sale by R. V. Manning. Certainly no better opportunity was ever offered of obtaining articles in first class condition at such low prices.

Below we publish an excellent testimonial for Saskatchewan buffalo robes:

Mr. A. MANNING,  
Care of Newlands & Co.,  
Galt, Canada.

DEAR SIR: After a careful and thorough examination of the Saskatchewan buffalo robes sent to me some few weeks ago, I am satisfied that they are warm and durable, and just the article to fill the place of the original buffalo that has disappeared so rapidly in the last few years. When known how well and doubtless be a large demand for them, and I am certain that they will give entire satisfaction.

Yours truly,  
W. F. CODY.

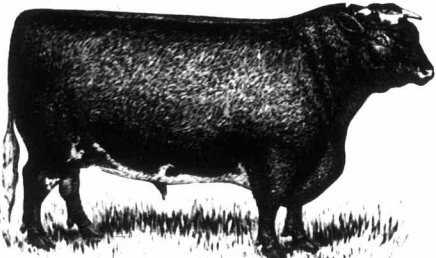
Mr. Cody is, no doubt better known to our readers as "Buffalo Bill."

Mr. F. W. Stone, Guelph, announces in this issue an auction sale of a large herd of Herefords, besides other stock. Mr. Stone's Lodge is now ready to be used as the home of a long and successful herd.

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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,  
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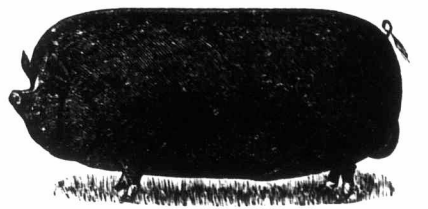
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AYER'S Cherry Pectoral. Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

Prompt to act, sure to cure

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Stallion, five years and over. First premium, Gold Medal, W. P. Matthews, Judds Chief, m. S. C. John, Boston, Mass.

Stallion, three years and under four. First premium, Ross, W. Booth, third, H. M. Crossley, Fireworks, Montreal, two years and over. Third premium, Guy H. Hastings, Toronto, Star of Maple.

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Heifer, one year and under two. First premium, Wm. Stewart, jun., Tom Glen, second, Thos. Guy, Salisbury, third, Thos. Irving, Lorne of Rockfield, fifth, R. Robertson, Howick, Que., Lord Rollo.

Bull calf, first premium, J. Yuill & Son, Leonard Meadowside, second, R. Robertson, Pure Gold, third, Wm. Stewart, jun., Orphan Boy, fifth, Wm. Smith, Wm. Smith, Gurta Eighteenth, eighth, Thos. Irving, Woodside, ninth, Wm. Stewart, jun., Fife of Meads.

Cow, three years and under four. First premium, D. Drummond, Jessie of Burnside, third, Wm. Stewart, jun., Nell of Faint Hill, fourth, Thos. Irving, Mine of Rockfield, seventh, W. M. Smith, Dolly, tenth, J. Yuill & Son, Perfection of Meadowside.

Heifer, two years and under three. First premium, D. Drummond, White Floss, second, J. Yuill & Son, Meadowside, third, Thos. Irving, Mabel of Burnside, fourth, D. Drummond, Eva, Brookside, fifth, Wm. Smith, Betty, seventh, J. Yuill & Son, Lady Meadowside, fourteenth, Wm. Stewart, jun., Liza Bell.

Heifer, one year and under two. First premium, Wm. Smith, Gurta Nineteenth, second, Wm. Stewart, jun., Ayrshire Maggie, third, D. Drummond, Bonnie of Osbawa, fourth, Thos. Guy, Dolly of the Lake, sixth, Wm. Smith, Gurta Eighteenth, eighth, Thos. Irving, Bell Handson, ninth, Wm. Stewart, jun., White Lily, eleventh, T. Irving, Dickson, twelfth, Thos. Guy, Wallace, thirteenth, J. Yuill & Son, Polly of Meadowside, sixteenth, J. Yuill & Son, Lass of Meadowside, eighteenth, R. Robertson, Mine of Burnside.

Heifer calf, first premium, R. Robertson, Bud of Burnside, second, Thos. Guy, Dolly of Ontario, third, Wm. Stewart, Hibernia, fourth, J. Yuill & Son, Mary Meadowside, fifth, W. M. Smith, Fairlie, sixth, T. Irving, Sherbrooke Lass, seventh, Wm. Stewart, jun., South Lassie Jean, eighth, D. Drummond, Silver Blossom, tenth, J. Yuill & Son, Louise Meadowside, twelfth, D. Drummond, Imp. Eva, thirteenth, Wm. Smith, Ada MacIntosh, fourteenth, Thos. Irving, Duchess of Fife.



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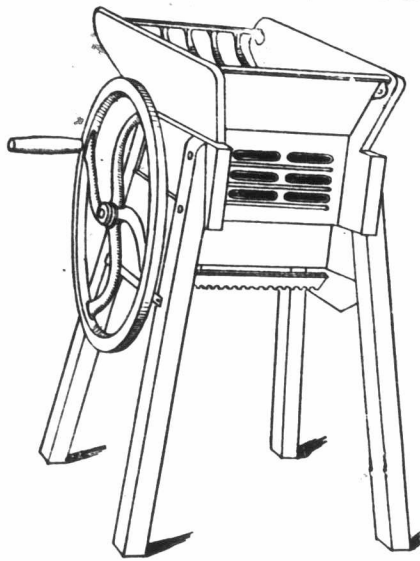
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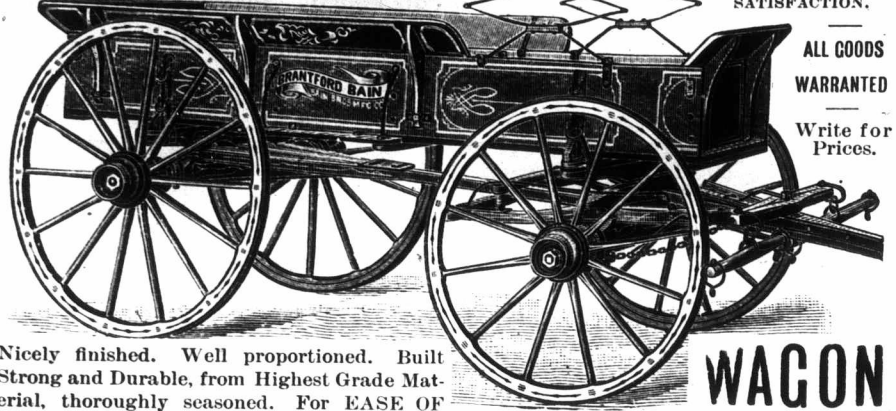
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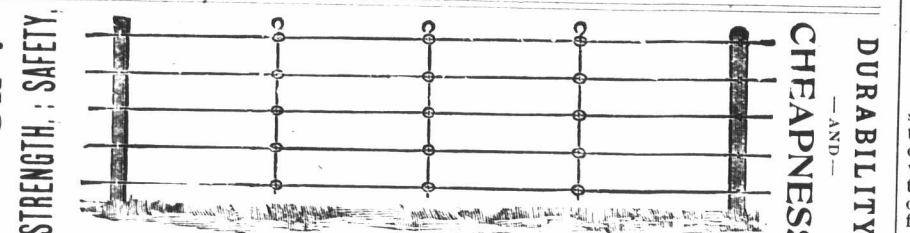
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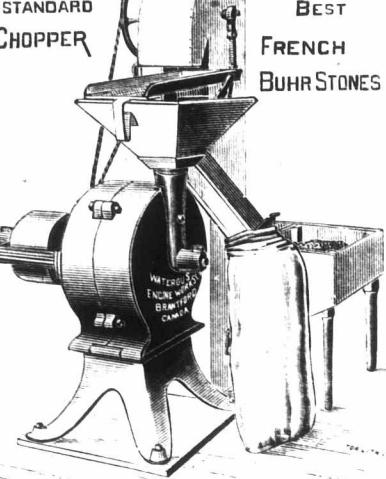
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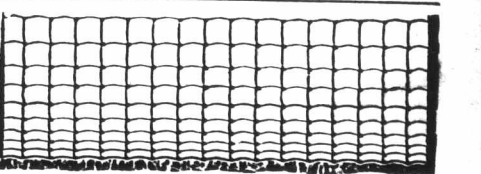
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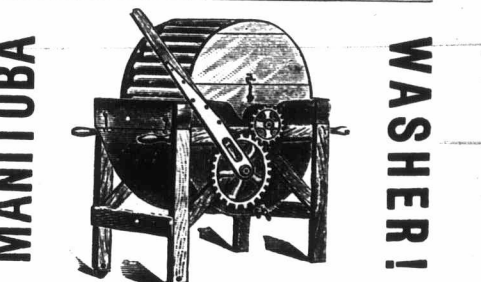
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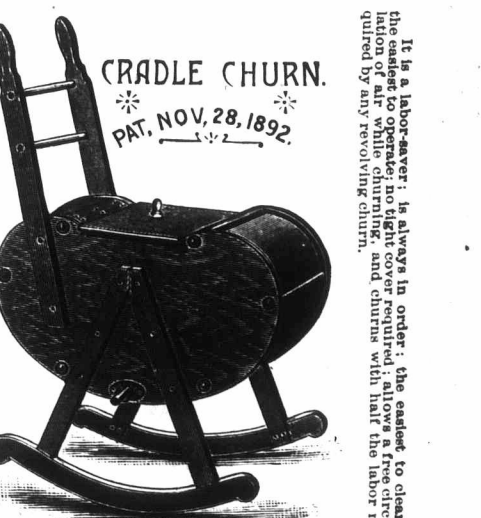


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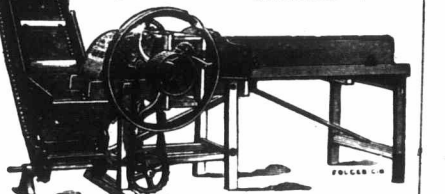
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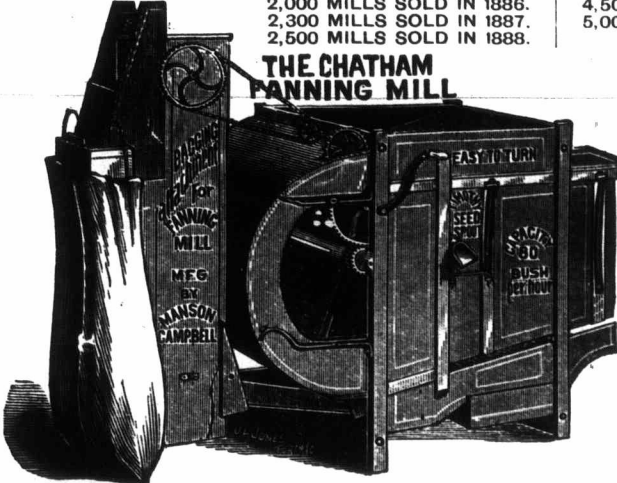
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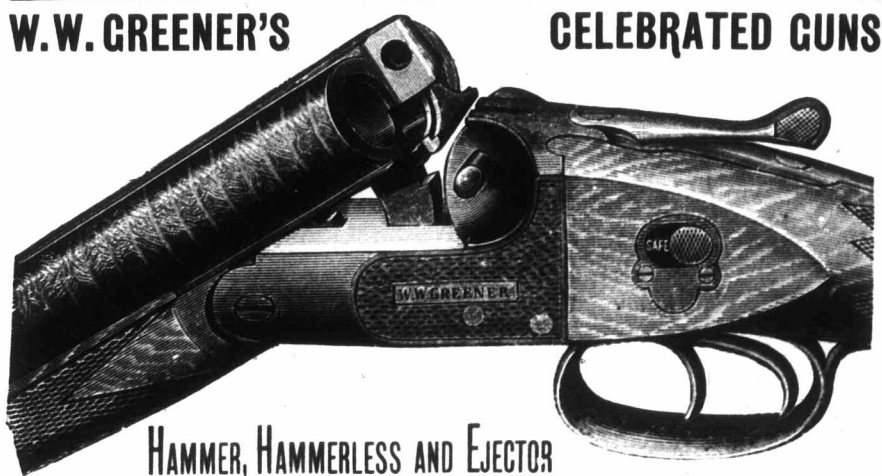
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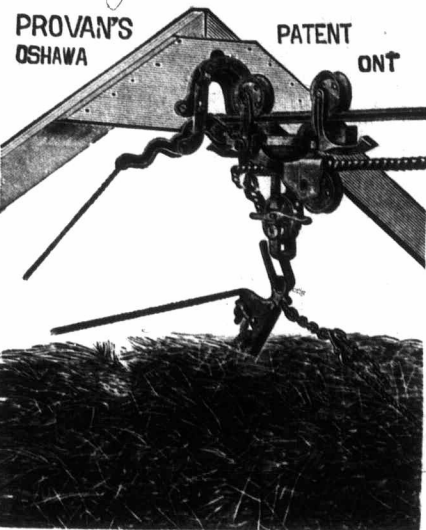
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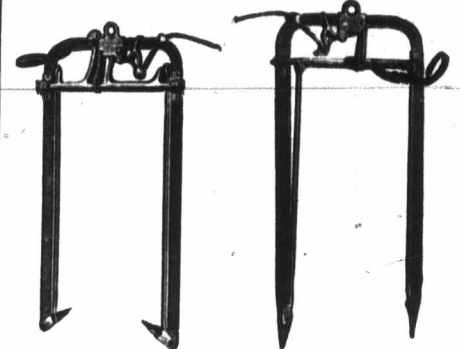
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