

Prof F T Shutt
in dec 15, 00

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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or lower, sometimes a mere trace
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VOL. XXXVII

LONDON, ONT., AND WINNIPEG, MAN., FEBRUARY 1, 1902

No. 543

EDITORIAL.

Injurious Copyright and Postal Regulations.

The disadvantages under which Canadian book publishers labor in respect to copyright and the anomalous condition of our postal regulations are subjects of real concern to farmers as members of a common community as well as from the fact that they are becoming the foremost of our reading classes. Under existing copyright arrangements between Britain and the United States, Canada is practically treated as though she were a part of the States. If Canada exercised the right to legislate in its own interests, it is safe to say that out of the 250,000 books imported under the heading of "fiction books and sheets" in 1900 into Canada from the States, 200,000 would have been published in Canada. As it stands, Canadian interests are sacrificed to the interests of British and American authors and publishers.

If the copyright conditions are bad, the postal conditions are worse. It now costs about 75 cents a year to deliver the "Farmer's Advocate" to subscribers in England; a dollar a year for the Weekly Globe or Mail-Empire, and 72 cents for the Canadian or Methodist Magazines. It costs nearly a dollar a year to carry British monthly magazines or weeklies to Canadian subscribers, and two and a half pence a week to bring Australian papers here. The Imperial rate of eight cents per pound on periodicals is exorbitant, unwise and unpatriotic, and the Canadian Government must charge this rate on Canadian periodicals going to Great Britain. Canada cannot reduce the rate without Imperial action. The United States Postal Department carries periodicals at the mere cost of service, about a cent per pound, believing that trade follows the press.

What are the consequences of this state of affairs, for which the British Postal Department is primarily responsible? A single mail train carries more sacks of United States papers into Canada than the total sacks of British papers for a whole week. Canada and the United States have what is called postal reciprocity, but for one Canadian newspaper carried free into the Republic probably 100 American periodicals, including a mass of baneful newspapers, are unloaded free into Canada. The nearly \$1.00 a year tax on British magazines has crowded them out of Canada and replaced them with cheap United States magazines or else with inferior American editions of the British periodicals, the British advertisements and other features being removed in New York and replaced with American. For some months we have been taking note of Canadian news and book counters, and find them loaded down with stacks of American magazines, instead of Canadian and real British magazines, as should be the case. We have some splendid magazine publications issued in Canada, which should be loyally supported as on their literary and artistic merits they richly deserve by the Canadian people, and be given a fair field—for special favors they do not need—at the hands of our authorities. Naturally, American periodicals are saturated with Americanism, if not offensively anti-British.

Surely the authorities in Canada and Britain must see what the ultimate consequences of such streams of influence are likely to be. As Dr. Withrow, the gifted Canadian historian and

editor, says: "Nothing, we judge, would do more to foster a community of sentiment and interest between Canada and the motherland, to diffuse information in each country about the other and to divert emigration from the British Isles to the Dominion instead of to the United States, than greater freedom for the interchange of printed literature between the two countries. The constant exchange of papers would keep up the home ties and would make each country vastly more familiar with the resources, commercial necessities and facilities for trade than any other agency of which we can conceive."

The Canadian publisher contributes heavily in taxes on the paper, the type and the machinery he uses, but while British periodicals are practically excluded, the American flood of nastiness is freely admitted. We do not believe that Canadians are becoming "Americanized" in national sentiment. All the tendencies are growing tremendously stronger in the other direction, but in manners, morals and trade the obnoxious influence is telling and is likely to grow worse.

The Montreal Witness contends at least for an Imperial postage on newspapers similar to that between Canada and the States, and the "Farmer's Advocate" believes that this would prove even more beneficial in the long run than the Imperial 2-cent letter postage. The Canadian Magazine, in summing up the needs of the whole question of copyright and postal regulations, makes the following condensed statement:

"THE FUTURE OF CANADIAN LITERATURE."

"Canadian writers and artists must have a home market. They will not have it until three reforms are accomplished:

"First.—The two million pounds of foreign (not British) periodicals annually admitted free into this market must be taxed as books, unprinted paper and advertising matter are now taxed.

"Second.—There must be a Canadian Copyright Act which will build up a strong publishing interest.

"Third.—The postage rates on newspapers and periodicals to other parts of the Empire must be reduced from eight cents a pound to one. This will bring in British periodicals and let out Canadian."

At a recent conference between the Hon. David Mills, Minister of Justice, and several publishers in Toronto, Mr. Mills intimated, speaking for himself, that provision might be made that in all cases where the British author had taken a copyright in the United States, and had also disposed to an American publisher the copyright of his works in Canada, a high duty should be imposed on all such works imported from the States. That would be practically saying, "If you want our market you have got to deal fairly with us." Where we thought we were being discriminated against or unjustly dealt with, we could compel the British author to deal with Canadians instead of Americans for the Canadian market. Some might object to that, but we have got to make sacrifices in the interests of each other with a view to maintaining our own political authority. Mr. Mills intimated that a measure looking towards relief was contemplated in the near future. It is said that coming events cast their shadow before. Is this the reason that within the past few weeks one of the largest New York publishing houses decided to put the control of their Canadian business exclusively into Canadian hands, and hereafter many of their works will be printed and bound in Toronto? Even under existing conditions, Canada absorbs

in proportion to population more books than the United States.

With regard to postal regulations as well as copyright, we apprehend that the views of the Minister of Justice must be shared by the Postmaster-General, Hon. Mr. Mulock, and other members of the Cabinet, and that such measures will be taken as will afford an effective redress for the grievances we have pointed out.

The Sir Wm. Macdonald Educational Gift.

By the kindness of Prof. Robertson we have before us full memoranda of Sir Wm. Macdonald's plan "proposed for the improvement of education at rural schools and for the establishment of courses of instruction and training in Domestic Economy at the Ontario Agricultural College."

In addition to provision for a Nature Study and Domestic Economy school at Guelph, as reported in our last number, the gift makes provision for two experiments or object lessons in each of the five Eastern Provinces of Canada, of the following character:

No. 1.—The consolidation of five, six or more rural schools into one central graded school, to be equipped with a school garden and a manual-training room.

No. 2.—The appointment of a travelling instructor to visit and spend one half-day per week in each of a group of eight or ten rural schools for a term of three years, to train the teachers and pupils of these schools in nature study and the making and proper using of school gardens.

No. 3 is supplementary to the two mentioned, and consists of the establishment of evening continuation classes, either at the central graded school or at one or two convenient schools in group No. 2, for advanced instruction in agriculture and horticulture, of the youths employed during the day on the farm.

It is thought that the practicability of the central graded school has been demonstrated by the facility with which milk and cream are collected. Since the milk or cream of a half dozen school sections can be collected daily to a central place, it is believed that the collection and distribution of children by a similar arrangement of routes may be provided for.

Of course, these single examples in each Province are to serve the purpose of object lessons or illustrations of what may be accomplished and how it can be done. Nature study and manual training cannot be generally introduced in a day; their introduction must come as a gradual evolution and improvement of the aims and methods which may be dominant for the time being. Concrete examples of the kind designed by Sir Wm. Macdonald and Prof. Robertson will set a standard, furnish effective answers to objections and thereby, doubtless, greatly hasten the desired end.

The memorandum cites three causes that have hindered the right kind of educational progress, viz., "want of money, the fact that the timetable is already too full, and the fact that teachers are not properly qualified to take up better methods." We shall presently add a fourth cause that is equally valid, but first a word as to those assigned.

The lack of money will not stand in the way when the people realize the need of improvement; indeed, in most schools but little increase of funds would be required. Then, with regard to the time-table the difficulty is more imaginary than

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11. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

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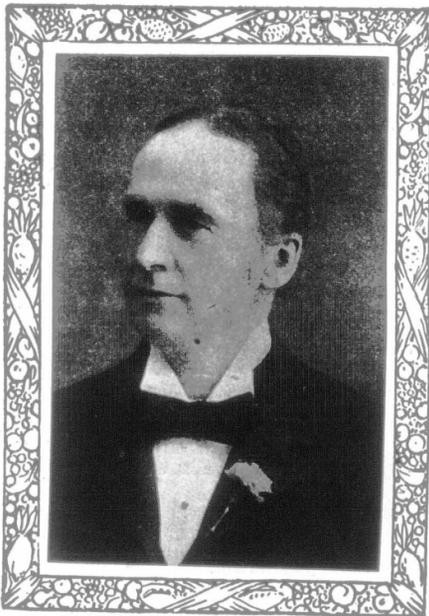
real. As we stated in last issue, nature studies can be, and should be, correlated with most of the other studies. For example, many of the experiments performed by the children will furnish practical problems in arithmetic—a problem solved to meet a need and for a definite purpose is worth a dozen aimless theoretical ones. There is no better material for descriptive composition than the reporting of the observations and investigations made by the child. As in arithmetic, so in drawing, the best lessons are those in which the pencil is used to express an idea which the child desires to record or convey. The pupil called upon to stand before the class and read his composition, it may be, upon the building of a particular robin's nest or the digging of a drain through his father's field, receives excellent training both in composition and reading.

The proper correlation of studies fully meets the second difficulty named above, but the third—that the teachers are not qualified—is a very real one. We believe that this difficulty will not be overcome generally until the academic training of intending teachers in the High Schools and the professional training in the Model and Normal Schools are better adapted to the ideal work of teachers in agricultural communities. In this essential particular the proposed school at Guelph, as per the plan outlined in the memorandum, is likely to count for little. In Ontario, from 750 to 1,000 teachers annually give place to as many beginners, the great majority of whom are in the rural schools. It is proposed to admit, at Guelph, classes of about thirty teachers for a two or three months' course, in all about 100 a year, or only about one-seventh of the recruitment. With their present academic attainments, in so short a time as three months they can acquire only a superficial acquaintance with the sciences that underlie agriculture, and further, as we pointed out in last issue, and cannot too strongly emphasize, there remains the more difficult but indispensable feature—the learning to use this nature study in the way best suited to the individual child. This point was emphasized by a prominent educator in the Boston Transcript the

other day, who showed that it is not an easy matter to make clear the wide difference between making nature-study minister to the child and subordinating, if not sacrificing, the child to nature-study,—between the development use of nature and the mere information use of it. That the teacher should be trained in the development use of nature studies is the essential thing.

A difficulty not mentioned in the memorandum, but nevertheless a real and serious one, is the fact that the people are not prepared for the ideal school. Were the necessary equipment and the competent teachers immediately available, we have many people who would not welcome them. Have we a reader who does not know of neighbors—are they in the majority?—who would say: "We send our children to school to learn reading, writing and arithmetic, and we don't want their time wasted over bugs and flowers and whittling?" Even many who see and deplore that the tendency of the country boy is cityward will be slow to admit that the introduction of what they will call newfangled notions and fads will arrest the lamented tendency. Up-to-date school inspectors, teachers and lecturers at Farmers' Institutes should use every opportunity to educate the people up to the best and highest aims and possibilities of education. Sir Wm. Macdonald's gift and the uses to which it is to be applied make the opportunity to introduce a discussion on the improvement of educational aims.

Schemes Nos. 1 and 2 outlined above propose



J. A. M. AIKINS, K. C., OF WINNIPEG.

Member of the Manitoba Agricultural College Commission.

to offer examples of model graded and ungraded schools for public inspection and instruction. We could wish that it had entered into the plan of our magnanimous benefactor to offer, instead of a merely academic nature-study school at Guelph, a model training-school which would be capable of turning out not only the travelling instructors referred to in scheme No. 2, but also regular teachers thoroughly competent to teach the traditional subjects as well as nature study and all by the best methods.

DOMESTIC ECONOMY.

Sir Wm. Macdonald's plan also proposes that the institution at the Agricultural College at Guelph shall provide residence for a hundred female students, not teachers alone, of domestic economy, with all the class-rooms, kitchen furniture and laboratories necessary for instruction in household science. The courses to be offered and provided for include dairying, poultry-keeping, beekeeping, fruit-growing, general gardening of flowers and vegetables, cooking and serving food, sewing, dressmaking, household decoration, and the proper care and hygiene of rooms, sinks, etc. The end in view is that our wives and daughters may know how to make and keep healthful, comfortable clean, and beautiful homes.

J. H. Livingston, Simcoe Co., Ont., writes: "The boys would rather do without their Christmas goose than the Christmas 'Farmer's Advocate.'"

Canadian Art.

It is a matter of very great satisfaction to the "Farmer's Advocate" to record the enthusiastic reception accorded especially to the reproductions of the paintings of Canadian painters given in our Christmas number. Soon after the paper was issued, an enquiry came from an American reader desirous of securing one of the original pictures. From several publishers requests have come for the privilege of reproducing the engravings, and one of the foremost magazine publishers of the Dominion has arranged for the use of over a score of them. Let us all do our share in keeping Canada and her gifted sons and daughters in the foreground of the popular esteem which they so well deserve. In this connection, the following note from Mr. Pettit, the well-known apiarist, will be of interest:

"I thank you for extra copy of Christmas number, which has been sent to a friend in Japan. The excellence of your paper, and especially of your Christmas numbers from year to year, is so firmly established that it seems superfluous for me to add a word of praise. But I am particularly pleased with the idea of making this an art number, and that of Canadian artists, and with the manner in which it has been carried out. In the matter of art and literature, our country is rapidly coming to the front. The farmer, from the very nature of his business, has not the best opportunity of keeping in touch with this progress except through such magazines as reach his home.

MORLEY PETTIT."

Elgin Co., Ont.

Mr. G. W. de Green, of Toronto, writes: "Long experience has taught us to expect something good in the shape of the Christmas number of the 'Farmer's Advocate,' but this year you have greatly surpassed all previous efforts. Recognizing the loyalty which all true Canadians feel towards the motherland, you very properly place on the frontispiece an excellent picture of His Majesty, as keen an enthusiast in stock-breeding as can be found anywhere, in connection with which the engravings of and article on the Royal herds at Windsor come very timely. The reproductions of the excellent paintings by Canadian artists show that we have here plenty of capable wielders of the brush whose tastes lead them to depict the beauties of rural scenery and live stock. Your engravings of animals and of breeders and others interested in agriculture are all very good."

Advantages of Graded Rural Schools.

BY WILLIAM IRWIN, I. P. S., PERTH CO., ONT.

The system of consolidating rural schools by forming one school district out of the whole or part of a township, and having one large school building centrally located, containing several rooms, to and from which the children in the district are conveyed in vans, has been in practice in parts of several States of the Union for twenty years, and it has been found to work with satisfaction. With us the introduction of the system, therefore, need not be by way of experiment. We can safely adopt a system that for twenty years has commended itself to the intelligence of the people where it has been practiced, and can graft it upon our own with whatever improvements and changes experience would suggest and different conditions demand.

The advantages claimed for this system are many. Improved school buildings, with better equipment, heating, lighting, ventilation and sanitary arrangements would be provided. It insures the employment and retention of better teachers, and thus secures more permanency in the teaching profession. The pupils can be better classified and placed where they can work to the best advantage. It results in better attendance of pupils, and affords the broader companionship and culture that comes from association with large numbers. The children escape the bad effects of inclement weather and bad roads, and are under the supervision of responsible persons when on the roads, and thus the morals of the children are guarded.

It provides in the higher grades a High School course, and thus parents are saved the expense of sending their children to a High School, while at the same time they have their children at home under their own control, and the boys and girls remain in touch with the home life.

After the system has been instituted, the expenses of management are no greater, as fewer teachers are necessary, only one building to look after, and not so many sets of equipment are needed. In the higher grades, special work, under competent teachers, can be taken up to meet the requirements of agricultural life, and thus create a greater interest in farm work among the boys. This will counteract, to some extent, the present tendency of boys to leave the farm and go into professions already overcrowded. It is a fact which we regret that a two or three years'

course at a High School in any of our towns gives a boy a distaste for farm life, and in many cases the parents are put to the expense of providing him with means to prepare for a profession for which he may not be specially adapted. In this way there is withdrawn from the farm the capital expended and the boy who might have become a prosperous and successful farmer.

There are many other advantages which will no doubt occur to the reader, but these are some of the salient ones. In my opinion, the merits of this system will commend themselves to the observant and thinking public, and I have no doubt that in the next twenty years we shall have many of these district schools established in our counties.

Graded vs. Ungraded Schools.

BY W. CARLYLE, INSPECTOR PUBL'IC SCHOOLS, OXFORD COUNTY.

A graded school is one in which the number of pupils in attendance is so large that the work of teaching them cannot be performed by one teacher, and is divided among a staff of two or more, as the requirements of the school necessitate. Every member of the staff takes charge of a grade, and teaches all the subjects taught the pupils in his grade. This is the custom in our public schools that are not taught by one teacher. Of course, another division of the work of instruction may be adopted, as in high schools, where the subjects taught (instead of the pupils) are divided among the teaching staff, every member of the staff teaching the subjects specially assigned to him, and teaching his subjects to all pupils in the school pursuing them, whatever form or grade they may belong to.

As to the respective merits of graded and ungraded public schools: 1. It may be stated the graded school is cheaper, considering the number of pupils educated. The principal must be a superior teacher, and paid a fair salary. But the assistants, shall we say, are cheaper teachers, grading downwards in scholarship, teaching ability and salary, most of them aspiring to become nothing more than assistants. A staff comprising a principal and nine assistants may teach as many pupils as would be found in ten strong rural schools, each under the management of one teacher. But the ten teachers of these ten ungraded schools would need the scholarship and teaching skill of the principal in the graded school, and nearly, if not quite, his salary, and thus, for instructing an equal number of pupils, cost their school patrons approximately the salaries of ten principals, instead of the salaries of one principal and the nine assistants on his staff.

2. On the other hand, the character of the instruction given in each class of these schools is important. The assistants in the graded school cannot reasonably be expected to teach with the efficiency of the principal. The deviation from him in this respect may be, and frequently is, extreme. But the pupils of the graded school are for six years out of seven of their school life undergoing training at the hands of the assistants, spending, if they ever reach it, one year in the principal's department. The same pupils, if taught in a strong rural school would, from start to finish, have been under the tuition of one, and perhaps the same, superior teacher, equal in all respects to the principal.

3. The amount of teaching received by the pupils in each: Many competent to judge believe in all graded schools of, say, more than six grades, the children get too much teaching, being under the manipulation of the teacher all day long; six hours of feeding, but none for digestion. In the ungraded, the teacher, having a large number of classes and a greater diversity of subjects to teach, takes under his personal manipulation and direction every class less frequently, is driven to economize time and energy in the bestowal of assistance, and to inculcate in his pupils the severe but wholesome lessons, of self-application and self-reliance. An experienced collegiate principal once pertinently remarked in this connection, "My entrants from the rural schools on entering the collegiate get right down to work and do it, while those from graded schools generally sit down with folded hands waiting to be told, shown, helped, pushed, many of them spending one or two years of their high-school life learning how to study, while some, owing to the years of spoon-feeding they have undergone in the graded school, are beyond help, and in time leave us, accomplishing no success."

The departmental entrance examination as an academic test has, ever since its introduction, brought into annual contest both classes of pupils. Do the results show that those from graded schools have the advantage? Wherein the test is mere memory work they have the advantage, if at all. But follow both classes of pupils as they work shoulder to shoulder through their high-school course of study. Who then gain the mastery? One more pertinent question may be suggested: To which class of pupils do the stronger men and women in future life belong?

Horses at the Winter Fair.

To the Editor "Farmer's Advocate":

Sir,—The late Winter Fair at Guelph has been pronounced by all a great success. It is agreed that the present building is not large enough, and I see the board are considering how best to improve and enlarge it to meet the growing demand for space. After being an exhibitor at the last two shows, I have not a word to say other than praise for the management. They have done the very best they could, and have been willing to hear from the different breeders' associations as to what they would suggest or require. There is another association—the horse breeders'—not yet represented at this great show, and I think this a good time for them to present their claim. Some may say that will mean additional expense. I admit it, but why should the horsemen not have

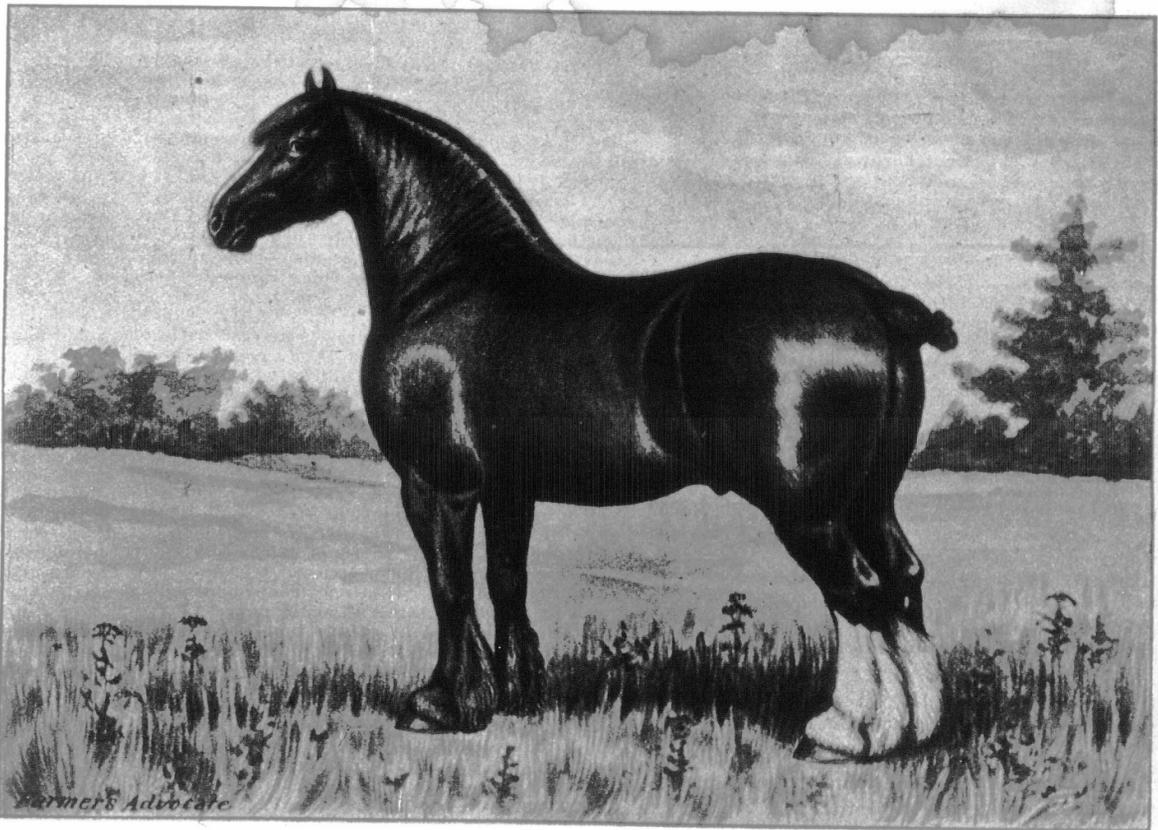
HORSES.

Standard of Excellence for Clydesdale or Shire Stallion.

HEAD.—Ear of medium size and pointed; Cranium nicely rounded; Forehead broad and flat; Eye full, prominent and mild; Nasal bones straight; Nostrils large, firm and flexible; Muzzle rather small; Mouth of medium depth; Lips compact; Muscles of Cheeks well developed and prominent; Jaw rather broad, with branches of lower jaw wide apart at the angles..... 4

NECK.—Of medium length, deep and full where it joins the body, being continuous with the withers without any line of demarcation; Crest well developed, well arched, broad and strong, but not so heavy as to turn to either side; the whole neck to be well and prominently muscled, surmounted by a good full mane of hair of good quality, and attached to the head in a graceful manner, not too thick and heavy at the throat; the general appearance of the head and neck to be strongly masculine..... 5

WITHERS AND BACK.—Withers in line with the posterior part of the upper border of the neck, tolerably high, rather broad and well muscled; Back straight and rather short; Loins broad, strong and well muscled..... 8



PRINCE STANLEY [2443].
Second-prize three-year-old Clydesdale stallion at the Winnipeg Industrial Exhibition, 1901. Sired by Grandeur [1729] 58202; dam Miss Stanley (2307) 5877.
THE PROPERTY OF A. & G. MUTCH, CRAIGIE MAINS, LUMSDEN, ASSINIBOIA.

a share of Government expenditure through the Winter Fair? We have cattle, sheep, swine, poultry, and I think it somewhat unfair that the horse breeders are left out. The educational side of the show is spoken of very highly, and I think the people could be taught, with equal benefit, what the horse export trade calls for. I would not suggest at present what classes should be represented, but think horses fit for export and dray purposes would add greatly to the interest now taken. It would give amateur breeders in rural districts a chance to place their horses before the public, and bring seller and buyer together at less expense. I would like to hear, through the "Advocate," from other horsemen what they think of the proposal.
Wellington Co., Ont. S. YOUNG.

Address Label Important.

We desire every subscriber to note carefully the date on the address label on the paper in order to see that due credit has been given for remittance. If same is not correct, write us at once, giving full particulars as to amount of remittance, date of sending, and whether sent by registered letter, money order, or an ordinary letter. We do not hold ourselves responsible for moneys sent in the latter way. The date on your label serves as your receipt, showing the date up to which your subscription is paid.

CROUP.—Rather long, well and prominently muscled, not too drooping; Dock coming out fairly well up, well clothed with straight and not too coarse hair, and well carried..... 4

CHEST.—Ribs long and well sprung, with well-marked angles; False Ribs long; deep through the Girth; Breast broad and well muscled..... 8

SHOULDER.—Moderately oblique from above downwards and forwards and heavily muscled, the muscles covering the Blade thoroughly developed and prominent..... 5

ELBOW.—Strong, muscular and fitting closely to chest..... 2

FORFARM.—Large, strong, well clothed with prominent muscles extending well down limb. 4

KNEE.—Straight, well developed and strong in all directions..... 5

KNEE TO FOOT.—Cannon Bone rather short, broad, strong and flat, with an absence of beefiness; Ligament and Tendons well developed and not too much tied in below the knee; Skin lying close to bone and tendon; the Posterior Border of the limb to be well feathered with a moderate quantity of straight, silky hair, especially in the region of the fetlocks (wavy, woolly or coarse hair very objectionable); Fetlock Joint large and strong; Pasterns rather short, strong and of moderate obliquity..... 10

FOOT.—Of medium size, rather round, with good, strong and moderately deep wall; Sole rather concave; Frog well developed and strong; Heels broad and strong and not too deep; there must be an absence of any appearance of hardening or thickening of the lateral cartilages; must not turn toes either inwards or outwards when standing; must stand straight, with feet firmly planted, not too wide apart nor yet very close together; Feet must be of equal size...	10
HAUNCH.—Strong and heavily muscled, thick through ham; Quarters broad and strong...	4
STIFLE.—Compact, strong and well muscled...	2
GASKIN.—Muscles strong, and prominent and extending well down the limb; Bone large and substantial; Hamstring prominent and strong...	4
HOCK.—Large, strong and well developed in all directions, an absence of coarseness and puffiness; Point well developed and posterior border straight; must stand with hocks fairly well together and straight...	5
HOCK TO FOOT.—Cannon Bone broad, flat, strong and rather short; Ligament and tendons well developed and strong; not pinched in below the hock; an absence of beefiness; Skin lying close to bone and tendon; Limb must be well feathered on the posterior border with a reasonable quantity of hair of good quality, the same as the fore limb; Fetlock joint large and strong; Pasterns rather short and moderately oblique...	10
FOOT.—Smaller, narrower and more concave in the sole than the fore foot; Wall strong and moderately deep; Frog well developed and strong; Heels broad, strong and not too deep; Feet must be of equal size...	10
COLOR.—Bay, chestnut, brown, black, gray, with reasonable modifications; reasonable white markings not objectionable...	3
SKIN.—Soft, mellow and loose, not like parchment...	4
TEMPERAMENT.—Energetic, docile, not nervous...	4
STYLE AND ACTION.—General appearance attractive; Movements firm, smart and elastic; must be a good walker, all joints moving freely; Knees and Pasterns and Hocks and Pasterns well flexed, showing the soles of feet plainly; must not roll or paddle with fore feet, but, lifting them smartly from the ground, fetch them forward in straight line and plant them firmly; must not go wide with hocks or hind feet, nor yet close enough with the feet to interfere; in the trot these movements to be carried out in a more marked degree...	10
WEIGHT.—Say 1,700 lbs. upwards...	6
HEIGHT.—Say 16 to 17 hands...	6
SYMMETRY.—All points well proportioned and general conformation massive and graceful...	10
Perfection.....	143

The desirable points in the mare or gelding of these breeds differ from those of the stallion only in the absence of the masculine appearance noticeable in the head, neck and general physiognomy. The head lacks this appearance, which is more easily recognized than described. The neck is not so massive in general, nor the crest so highly developed; the withers not so broad nor so heavily muscled. In temperament there is more docility. The weight is usually less, and the action not so heavy. "WHIP."

Note.—"Whip," in a private note, states his opinion that the best individuals of the two breeds, Clydesdale and Shire, are so nearly identical in character and purpose that one standard fairly applies to both. The standard given is claimed to be original and may be open to criticism, and horse breeders are invited to freely express their views on this subject, or any other horse topic, through the medium of our columns.—Ed. F. A.

Creseus at Home.

Creseus arrived home at Toledo, O., Jan. 8, and in answer to an inquiry as to whether or not the stallion king had trotted his last fast mile, Mr. Ketcham said: "I am not fully prepared to answer that. If I find that the horse is in good condition along about the middle of next August, I do not think it unlikely that he will be allowed to give a few exhibitions at different places. Until that time he will be kept busy at the farm." Mr. Ketcham said in addition to this, however, that Creseus would, under no consideration, take part in another race. His days of battling against other horses are over. He has met and defeated them all, and the only opponent that he will ever fight again will be the watch. It is evident that his owner has not yet given up hope of reaching the long-sought two-minute mark, and it is quite likely that he will be seen making the attempt next fall if his condition is satisfactory to Mr. Ketcham.

Judging Clydesdales.

To the Editor "Farmer's Advocate":

Sir,—Being always willing to do what I can to help along the horse interests of our country, I wrote an article on what judges have to contend with, which appeared in your Dec. 2nd issue. I see a reply in your Jan. 1st number by some unknown E. J. I have always been taught to believe that when anyone shoots at an opponent from a hiding place, he is either a coward or has no confidence in his own criticism, but I hope I am mistaken this time. By his positive "I say nay, sirs," his "you don't know," his theories of English and Scottish judging, and his dictation to export breeders of age and experience, we must suppose him to be an expert of no mean experience of some new school, and one who at least thinks he "knows it all." I will not waste much time or space on any theories unless I know the author to be an authority, but will just answer two or three of his misconstructions. In the first place, it seems he has never seen or heard of two different types of Clydesdales, possibly in the same ring: one of the true characteristics of the breed, the other, although of the same breed, yet of entirely different type. Where has he come from? Surely he is no native of our country, or has not used his eyes! I suggested, in order to encourage more size in the model Clyde, as he is now recognized the world over, to give special prizes to the large type that might be useful to cross with certain mares for a certain purpose. E. J. is seemingly up in Thoroughbreds also. A Thoroughbred is a Thoroughbred the world over, having a fixed type as such, and they are judged as such, but an association may and sometimes has, and sometimes has not, adopted the plan of selecting an animal of specially large size for some special purpose, but he is a Thoroughbred all the same. That is my suggestion with regard to the Clydes. Now, Mr. E. J., whoever you are, I want you to understand, as you say fairs are supposed to be educators for the people, that when people go to fairs they expect to see a finished article, and remember also when a judge is sent before the people to judge Clydesdales he is expected to judge them as such, and not as Shires or any other breed type, and they expect him to select the finished article characteristic of that breed. If I understand E. J. rightly, he is not only trying to throw dirty water at the judge, but also at the parties who own superior stuff. It may be himself or some of his friends who feel disappointed because they could not compete against their superiors. Any schoolboy ought to know that an animal of fair average size of the breed, of first-class quality, can win over a brute with perhaps a little more weight but with legs that would take a long blade to cut through what they call skin, and hardly know when they reach the bone, because it is not much harder than the hide. If fair boards cannot select judges to suit this E. J., he might suggest something that would suit him, say that they send in their weighmaster and scales to do their work quickly—highest weight, highest honors. Let E. J., before beginning to educate and dictate to England and Scotland how to judge horses, get his little A B C book on horse lore and read up. Remember, I like a good-sized horse as well as anyone, but I am Scotch in my views,—quality first, with as much size as is necessary to constitute a first-class horse for draft. Perhaps E. J. had better go over and give Mr. Holloway also a lesson before he goes to Britain. Has his kind, that have beaten everything on both continents, bulk and not quality? Prince of Carruchan, known as the unbeaten Prince of Carruchan, has he bulk and not quality? I might name scores of world-beaters of that stamp, but when you go over you may see them yourself. You say our importers cannot get your kind. No, not easily. That kind that has nothing but bulk to commend them are played out long ago. Our importers have better sense than to bring them, if they could find them. I repeat, the last of your kind was selling about thirty years ago, when I saw them first, for less than geldings. You say they are importing Shires. Success to them, although I never owned but one Shire since I began importing, thirty years ago. I am going to disappoint you badly, for I am just going to get all the quality I want, with a touch of the best of your bulk. When I produce a few Princes, Darleys, Princes of Avondales and others of that kind, I will send you a sample. Happy New Year to you, E. J., hoping when the weather gets warm you may be able to crawl out from under the barn and show yourself in daylight, so that we, who are always open for education, can learn from your experience on horse matters.

Huron Co., Ont.

ALEX. INNES.

Surprised and Delighted.

Allow me to express myself as delighted and surprised with the Christmas number of your magazine. I had no idea it was gotten up so nicely, and I consider it second to none of its class in Canada. The illustrations are excellent.

York Co., N. B.

H. F. ALBRIGHT.

STOCK.

Early or Late Calves: Which More Profitable?

The general opinion prevailing among breeders of cattle of both beef and dairy breeds appears to be that it is more profitable to have the bulk of the calves come from September to December. There is little doubt that with dairy cows this is preferable, as in winter butter brings the highest price and good cows pay well for the extra feed required to keep them in condition, while the calves can be conveniently and well grown during the winter and go out to grass in the spring, finding for themselves. The breeders of pure-bred beef cattle who make a practice of showing calves at the fall fairs aim to have them come early in the fall in order to have them large and well-developed to show as under a year old, and there are generally a good many breeders ready to buy good young bulls at that age in order to have them ready for service about the end of the year or when they are about 14 or 15 months old. The impression also prevails that breeders plan to have their best cows produce their calves in the fall, in order that their calves may be shown to advantage at the fairs, and that as a rule the best of the young bulls in the country are brought out to the fairs. A little reflection, however, may upset this theory, since it is known that not all the best breeders or best herds are represented at the fairs, many having made their reputation in that way years ago and having retired from the show-ring, and many others being first-class breeders and extensive importers who have never made a practice of showing their cattle at the fairs. Moreover, the best cows frequently do not stand to the early service, and for this or other reasons produce a calf in the spring. And there are advantages in having a part of the cows calve at that season. The heifers that were born in the fall months will be about the right age to produce their first calves in the spring when 2½ years old. If bred to calve in the fall at 2 years old, they are too young, and if to come in in the following autumn, will be three years or over, which in these days of demand for early maturity may be considered older than is necessary. These heifers, and the same may be said of cows, can be wintered well on cheaper food when not milking. A prominent breeder of pure-bred beef cattle some time ago remarked that he bred February, March and April calves most profitable, and on being asked for an explanation of the reasons why, replied in substance as follows: "Cows winter cheaply and well when carrying calves. Calves go to grass with dams in May. They come in in October, healthy, vigorous, and with well-developed stomachs and muscles. They thrive immensely on good feed up to, say, January or February. Buyers come wanting bulls 'not less than 12 to 20 months,' but I sell these younger calves to them. They usually have heavy, glossy coats of hair, and they look big. I have invariably made my best prices on late calves. I seldom have a late calf remain over with me. I frequently sell July calves among the early sales. I price the older calves to bring customers, when I know that it is the younger ones they will buy when they see them. Not one bull out of three looks well when 14 or 15 months old, and I count it ruinous to have to feed after they are 14 months old. If buyers won't give my prices when the bulls are young, I just take theirs. I count that bulls do not make any money, on an average, if kept till two years old. Some are not salable and some barely pay expenses. Others make big prices, but only a few. I like to let some one who needs them pay for the feed and take risks." There is much sound sense as well as shrewdness in this presentation of the matter, and while all may not be so situated that they can successfully raise the calves by pasturing them with their dams, owing to shortness of grass land, it cannot be disputed that the free exercise secured in this way makes the best possible foundation for a strong and vigorous constitution in the youngsters, and the practice is economical both in regards to labor and feed. The comfortable conclusion may then be arrived at that if it is not more profitable, it is at least no serious misfortune to have a percentage of late calves.

What It Means.

I have taken the "Advocate" for the third of a century. I do not know that I can interpret the meaning of the cover of your Christmas number any better than this: That the picture of King Edward VII. means that the "Advocate" is a royal paper; the maple leaf, that it is loyal to the King and Canada; the stars mean that the "Advocate" has been illuminating the world for 35 years and will continue to do so for all time.

York Co., Ont.

Yours truly,

WM. LINTON.

Dual Purpose Cows.

Considerable discussion has taken place in late years on the question of the possibility of breeding a class of cattle that will make first-class beef animals if fed for that purpose, and the females of which will make profitable dairy cows when used in that capacity. While it is scarcely reasonable to contend that cows of this class as a rule can be developed into the highest type of dairy producers or can be made to average as high in that regard as those of special dairy breeds whose breeding and training has been entirely in that direction, yet observation, experience and the records of milking and buttermaking tests have given ample evidence of the possibility of combining the two qualities, beef making and milk production, in a high degree in a cow that for the average farmer is perhaps more profitable than any other. The general farmer, who is not so situated or disposed as to make dairying a specialty, wants a class of cows that will give profitable returns at the pail and whose calves, raised on skim milk and fairly well cared for, will grow into beef animals that can be fed off at two and a half years old, weighing from 1,200 pounds to 1,400 pounds and showing smoothness of form and thickness of flesh fitting them for the export trade or the best markets available. And we are fully persuaded that by reasonably good management this result may be profitably and satisfactorily accomplished. There is ample room for the exercise of good judgment and good management in the feeding of calves during the first few months of their lives so as to raise them cheaply, or at least economically, and yet to give them such a good start in life as will, with fair after-treatment, ensure a profitable animal. There is often much loss in overfeeding with milk or feeding it cold to calves, causing indigestion and scours and thus weakening the constitution at the start. It is surprising on how small a quantity of milk a calf can be well raised if it is fed often, three times a day for the first month; new milk the first two weeks; and the milk always sweet and warm. Before the calf is a month old, as a rule, it can be taught to eat a little good hay and whole oats or chopped oats and bran by putting some into the mouth occasionally, and when it has once learned to eat there is little danger of a setback if its quarters are kept clean and well bedded.

It is true that as a rule the beef breeds are bred and managed with the sole object of developing their beefing qualities, without any regard to their milking propensities, the calves being kept as fat as the whole milk of their dams, supplemented by fattening meal rations, will make them, and kept closely confined the first year, a course of treatment that would quickly lower the milking tendency in even the special dairy breeds. Heifers so pampered in their first year are entirely unfitted to find for themselves when turned to pasture, being weak in bone and muscle, and cannot make as useful mothers as if they had been kept in only good thrifty growing condition and had been allowed ample exercise when young. While this hothouse treatment may be necessary in order to produce prizewinners, it is certainly a mistake to treat heifers that are not intended for show purposes in this unnatural way. And even the show animals would be vastly better in every way if given a reasonable amount of exercise. As a rule, the best milking cows in a herd of pure-breds of the beef breeds are the best breeders. The milking propensity has a tendency to produce and maintain the feminine or cowy appearance we all admire, and a deep-milking cow gives her calf the best start in life, a start that may, with good management, be kept going on without check, producing the most desirable type of animal at maturity. To our mind, it would be well if most of the heifer calves in pure-bred herds were raised by hand, and if this were done in the case of those from good milking dams, the cows might give a good account of themselves in the dairy. However this idea may strike the breeders of pure-breds, there can be no question that the general farmer who prefers grades of the beef breeds can improve their milking qualities and make them profitable in the way we have indicated.

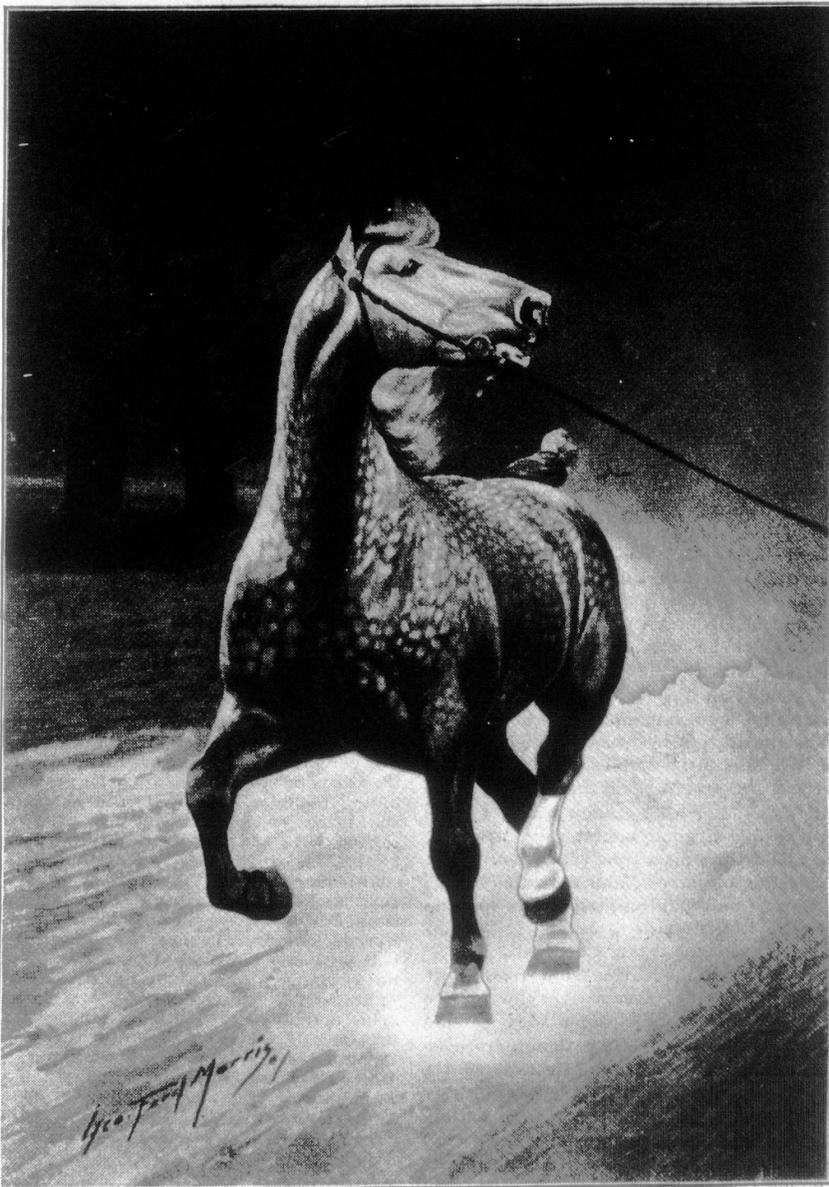
In this connection we commend to the attention of breeders the sentiments embodied in the following extract from an article recently published in the Live Stock Report of Chicago, a paper devoted principally to the handling of beef cattle:

"The characteristics of a modern beef animal of superior excellence can better be obtained in conjunction with milk than without it. The fact is now recognized and accepted by some of the foremost breeders of Great Britain. The proprietor of one of the herds of Scotch Shorthorns that is at the present time in greatest favor in America, and one that has been most largely drawn on to maintain the excellence of our herds, pursues precisely this policy. This is not an isolated case. The cultivation of good milking qualities in the British beef herds is the rule and not the exception. If it were the rule here there

might be less occasion to import so frequently and so extensively.

"Suppressing milk secretion tends to weaken fecundity and thereby to shorten the reproductive period of the breeding animal. The best milkers are almost invariably the best breeders in the herd. The shy breeders are rarely if ever found among the heavy milkers. Cows that do not milk well seldom breed regularly until an advanced age is reached, and what calves they raise will be stunted unless provided with a nurse cow.

"The most important reason for combining milking quality with beef, however, is rarely considered at all. It is a prime factor in maintaining smoothness and quality. To suppress milk is to curtail fecundity or breeding quality, and to curtail or check breeding quality tends to unsex the animal, and as a direct result the females become coarse and masculine. They not only tend to become coarse and masculine in appearance, but coarse in substance and texture. The scant milker becomes a shy breeder and grows gaudy and uneven in her flesh. It is a rare exception to find a Shorthorn that will carry its flesh smoothly and evenly to maturity unless descended from good milking ancestry. The beef cow that gives a good flow of milk may be repeatedly fitted in high condition and reduced, and remain smooth, but not so with the dry cow. In the early days of the breed, when it was the rule to grow large, gaudy bullocks for the block, coarse, patchy carcasses were tolerated, but they are no longer wanted. The killer and the consumer severely discriminate against them. The compact, tidy bullock now demanded must be thick-fleshed, smooth and even and of superior quality throughout. A good flow of milk in the dam is conducive to this standard in the butcher's bullock and in the breeding bull; and the absence of it is detrimental."



Engraving Copyrighted.

THE PERCHERON STALLION CHAMBELLAN 27849 (46787).

Winner of first prize for stallion four years old and over at International Live-Stock Exposition, Chicago, December, 1901. Winner of first prize at the Show of the Societe Hippique Percheronne, Nogent, 1901. Winner of first prize at the Government Show, Vendome, 1901. Imported by Dunham, Fletcher & Coleman, Oaklawn Farm, Wayne, Du Page County, Illinois.

The Farmer King.

Under the heading, "The King at the Cattle Show," the London (Eng.) Spectator of December 14th gave a graphic account of the visit of His Majesty to the recent exhibition of the Smithfield Club. It was remarked that: "The hereditary patron, adviser, chief competitor, and most famous stock-breeder of this closely-united and self-respecting body is the King himself. His Majesty has not only inherited the famous herds and flocks of Queen Victoria, but has for years been among the first of all breeders of certain kinds of stock. He has taken seriously to the business for very many years at Sandringham, and on a scale which very few private persons can emulate. He now has establishments, any one of which would be considered of the first quality, in Scotland at Abergeldie, in Norfolk, and at Windsor. At this show the combination was irresistible. His Majesty exhibited more animals and won more prizes than anyone else. Even if he had not, his support and encouragement of those who are doing their duty by the land and its people would have been just as hearty." In conclusion, our contemporary remarks: "Some of our readers may be a little surprised at the importance attached to the Smithfield Show, but, in truth, the pride and satisfaction felt in the show are perfectly genuine, for, in spite of our inability to make farming pay, every Englishman has a touch of the farmer somewhere in his composition. It is thus most natural that the King's very real interest in the show should add to his popularity. When he goes to the show he is visibly and directly sharing the chief enthusiasm of a very large portion of the nation."

Fads in Breeding.

In an address before the short-course judging class at the Ontario Agricultural College, last month, Mr. J. C. Snell, of the "Farmer's Advocate," London, in speaking on the breeding and management of beef breeds of cattle, cautioned the class against being carried away by fads and fancies in breeding any class of stock, while neglecting qualities that are substantial and essential to the production and perpetuation of high-class performance in the particular line for which the animals are designed, and related the following incidents in his own experience: "It was back in the seventies, when the Bates boom in Shorthorns was on and many young breeders, and not a few older ones, were carried away with the idea that nothing but a Bates bull, and a red one, was worth breeding to. I went to Kentucky, a State then noted for fine Shorthorns, and bought the first-prize bull calf at the State Fair at Lexington, paying \$750 for him. He was all red, was trained all summer by the black herdsman to hold his head high and stretch his neck with a graceful curve like a blood horse; he was the son of a pure Duke bull and deeply bred in Bates blood, but he stood high on his legs, was short in his ribs and had short, wiry hair and a hard-handling hide, but he was Bates, and red and stylish, and so filled the bill for the faddists. I could have bought at the same time for \$400 a yearling bull that had won no prize, but which my better judgment told me was far and away a better one. He was low-set, blocky, thick-fleshed, and with the right sort of skin and hair, but he was not all Bates, nor all red, and was not stylish, though he had a good honest face, a short, thick neck, and strong masculine character. I left him with a feeling of sorrow, and took the stylish calf. Well, my bull paid me all right for the time being. He won first prize at the Provincial Exhibition as a yearling by a close call, but I never did it again; his calves sold readily at good prices while young, because they were like himself, red and stylish, and people were looking for that sort, but not one of his daughters even developed into a third-class cow. He lowered the character of the herd, and I was never entirely happy till I saw the tail of the last of his progeny go through the gate to the road. I watched with interest the career of the bull I left behind me, and found that he was purchased and used with signal success in his herd by that wise and consistent Kentucky breeder, William Warfield, who never allowed himself to follow the faddists, and who has outlived and outlasted all his contemporaries. He was shown with great success, and sired heifers that were first-prize and sweepstakes winners at many State Fairs when they had grown into grand cows. I am satisfied now that this bull, Muscaton, would have been lots cheaper at \$1,000 than my Duke at \$400.

"On a second trip to Kentucky, some three years later, when I had learned a little from experience, on looking through Uncle Abe Renick's famous herd of Roses of Sharon, which were then in high favor and on which he was using a pure Bates Duke bull, and selling calves at anywhere from \$500 to \$1,000 each, I espied a thin red and white bull calf that had a good open countenance, was deep-bodied, level, and covered with a good coat of hair, and on enquiring why he was thin, the old gentleman told me that the calf was not sired by his Duke bull, though by a right good one, and they wanted to show his dam, so they weaned him young and fed him from the pail. Said he: 'I can't sell that calf for one quarter what he would bring if he had been got by the Duke bull. What will you give me for him?' I said, with no thought of getting him, 'I'll give you \$100 for him.' When saying good-bye, the old man sided up to me and said, in a low tone, 'I believe I'll let you have that calf.' I named him Loudon Duke, and by good care and attention brought him out a first-prize winner at the Provincial Fair as a yearling, and later a championship winner, and he stood at the head of the herd winning the Prince of Wales prize, while his sons and daughters grew into prizewinners, beating in more than one instance imported animals that had been winners at the Royal Show of England.

"Now, I would not have you go away with the idea that red is not a good Shorthorn color, for some of the best of the breed have been and are of that color, but see that the hair and handling is of that quality that denotes a good feeder and the flesh thickly laid on back and ribs. The harm in the craze for red bulls was that it led breeders to use a hard-haired, thin-fleshed, leggy red, and reject a roan or a white that had these good qualities. It was not because the

cattle were Bates-bred that they were objectionable, for some of the best that have lived were of that line of breeding, and the blood was freely used in the evolution of the most popular cattle of the present day, but the trouble was that so many breeders would have Bates bulls because they were popular, and would use a mean bull of that breeding rather than a good one of some other that was just as purely bred. And style is by no means to be despised in a bull of any breed, for, other things being satisfactory, the bull that holds his head well up and has a strong crest and the look and walk of a gentleman is most likely to prove an impressive and a prepotent sire. The mistake is in attaching more importance to fancy points than to the weightier matters of constitution, feeding qualities and usefulness. Great damage has been done to many breeds of stock by reversing this order.

"There was a time when swine breeders had a delusion for 'dished faces' and heavy jowls, and the first question asked as a description of a hog was, 'Has he a short nose and a dished face?' And if a Berkshire, 'Is he well marked?' instead of 'Has he a good back and hams and legs?' He might be defective in all these substantial points, but if his head was short and he had the proper amount of white on his feet, face and tail, though he were cat-hammed and had not a decent leg to stand on, he was preferred for a breeder. In 1871, I crossed the ocean with a Canadian who was bound to have a sow with the best head in Britain. He paid \$200 for one that suited him; her face was so short and her nose turned up at so sharp an angle that her eyes could scarcely be seen, while her jowls dragged on the ground. He learned after he had paid for her that owing to the bulk of her cheeks she could not eat her food out of any style of trough, and that it had to be rolled into balls in the hand and dropped into her mouth, which she lazily opened when her nose was gently tapped with the finger. A pillow of chaff had to be placed under her head to keep her from smothering, but in the car on the way up to Liverpool in the night, the owner, on waking from a temporary sleep, found the pillow had worked out from under the head of his butterball sow and she had slept the sleep that knows no waking. We had some of these dish-faced hogs in the cattle car coming up from Quebec on that trip, and at Belleville an Irish section-man, seeing one of them looking out through the bars, innocently asked, 'How did that pig get hurted?' He had doubtless in his younger days been at Donnybrook fair and had seen broken noses galore, the work of the blackthorn shillalah.

"It is not many years since ninety-nine out of a hundred farmers would not be persuaded that a Jersey was pure bred that was not solid fawn in color and had not a black tongue and switch. You might 'tell that to the marines,' but they knew better, and lots of men, sane on most other points, wouldn't buy a Jersey cow with a white switch or a spot the size of a dollar, even if she were good for twenty pounds of butter in a week; but you could easily have palmed off on them half-breed that was perfectly marked or a solid-colored cow that wouldn't half pay for her board. Indeed, it was not till after the World's Fair in 1893, when Ida Marigold, whose color was nearly one third white, won the championship by inspection, as well as in the milking test, that this delusion was dispelled from the minds of most people, but there are yet thousands of farmers who know their business so well that they have no use for an agricultural paper and who are cocksure that no Jersey can be pure-bred that is not solid-colored.

"The Clydesdale breeders a few years ago got a fad in their heads for fine bone, and paid so little attention to the size that is needed in a draft horse that they brought out a class of pony Clydes, nervous and mettlesome and without a place to put their dinner, and the result was that in a few years, when heavy drafters were required for the export trade, they could not be found in Canada. The prejudice against gray horses has been persistent and long-lived, but how many farmers can say that the best horse they ever owned was not a gray one? Were not many of the best of the early Clydes grays, and was not that prince of harness horses, Old Messenger, whose progeny revolutionized the harness-horse stock of America, a gray? And when you hear or read of a horse living to an unusually advanced age, is he not almost invariably a gray? Verily, our prejudices die slowly, and though they are generally as unfounded as the baseless fabric of vision, yet they often leave a wreck behind."

Pleased.

I have been very much pleased with your paper for the past year. I received my Christmas number all right, and was highly pleased with the way in which it has been gotten up.

Yours sincerely,

S. A. OSBORNE.

Waterville, King's Co., N. S.

Our Scottish Letter.

SOME NOTABLE AYRSHIRES OF THE LAST CENTURY.

In a former communication (in issue of Dec. 2nd, 1901) I gave some information about old-time Ayrshire bulls and noted cows, but, unfortunately, the copy of the "Farmer's Advocate" which contained the article has been carried off by someone who relished its contents, and I am not sure where I left off. This is the slack season in public affairs, and before the busy time of horse shows and bull sales begins I would like to give the Ayrshire breeders a few more particulars of the men of renown and the cattle famed in the third quarter of last century.

The leading man in the Ayrshire world from the year 1850 onwards was the late Mr. Parker, Broomlands, Irvine, one who was a bit of a character and essentially one of the olden time. He always wore a tall hat (stovepipe) and fed his young Ayrshires wearing that headgear. Formerly, all dealers in Scotland were similarly equipped. The last to abandon the tall hat was the late Mr. Hugh Crawford, who died with startling suddenness in the middle of the great All-Hallow Fair in Edinburgh in November, 1892. Mr. Parker's greatest bull was Major, described by one of the best of the old judges who survive as the biggest and best bull of the Ayrshire breed he ever saw. Major was first at Ayr in 1854, and was of Mr. Parker's own breeding. He was in color brindled, with long, fine horns, and perhaps rather deficient in masculine character. His dam was also brindled, and the frequency of this color amongst the Ayrshires of half a century ago points distinctly to a West Highland influence in their breeding. Major was also first in 1853 at Glasgow, East Kilbride, and Ayr, as a two-year-old, but when he went to Glasgow in the following year he was only placed third, the first being a celebrated show bull belonging to Mr. Robert McKean, Lumloch, and the second belonging to a Mr. Cameron. At this show Major was bought by Sir Michael R. Shaw Stewart, Bart., but becoming ill-natured he was not long afterwards destroyed. Major was one of the greatest sires the Ayrshire breed ever boasted, and his two sons, Cardigan and Clarendon, were the phenomenal bulls of their time. Cardigan was probably sire of the class now known as yeld stock; that is, they were large-framed, roomy cows; but not distinguished by anything very fancy in the formation of their udders and teats. Cardigan was wanted for show purposes at the first Paris Exhibition, but an offer of £100 did not tempt his owner, Mr. Ivie Campbell, to sell him. He had a full brother named Sir Colin, which, as a stirk and a three-year-old, was first at East Kilbride, a notable old-time show, held in the month of June and extensively patronized even yet; in fact, Canadian buyers of Ayrshires should know that a prize won at East Kilbride means about as much as any prize can possibly mean in the Ayrshire world.

The produce of Major in the fifties were the leading animals at the West Country shows, but next to Cardigan his most notable son was Clarendon. He was second at Ayr in 1859, but first at Glasgow and Ayr in 1860. The dams of Clarendon and Cardigan were both brindled cows, but there was no comparison between them, the dam of Clarendon being a very fine cow and steady breeder of good calves, while the dam of Cardigan was not at all in favor with lovers of milk stock. The bull which beat Clarendon in 1859 went to Mr. Drew, Carmyle, and was got by a son of Major out of the dam of Cardigan. Clarendon was a most successful sire of milk stock, and his influence can still be traced, notably in the Muir stock of Mr. James Murray, a descendant of his having been first and champion at Cumnock more than once. His female produce made grand, big, substantial cows, with right good vessels and teats. In 1862, Mr. Murray, Carston (who still survives, in his 99th year, and has been an interested assistant in compiling these notes), was first, second and third with queys by Clarendon, and his produce held their own against most for many a day. He himself died in one of the earlier visitations of pleuro-pneumonia. A full sister of his, a brindled quey owned and bred by Mr. Parker, was first at Ayr in 1857. She was afterwards first at Glasgow and Ayr on more than one occasion. She was one of the best cows ever known in the annals of the breed. The Duke of Atholl's prizewinning bull at Battersea International Show in 1862 was by Sir Colin, already named, and another great bull of the period, owned by Mr. T. Brown, Holm, was by Cardigan. In 1864, Mr. I. Hyslop, High Cairn, showed Young Clarendon at the Highland. He was bred at Dalgig, and was got by Clarendon out of Skelpie by Clarendon. He was a red bull, and one of several which during the years 1859-66 bore the reputation of the Broomlands Major in a full flood of success. The whole of these cattle were



SHROPSHIRE YEARLING WETHER.

First in his class and one of the pair winning the silver cup for best pair of wethers, any age or breed, at International Live Stock Show, Chicago, 1901. PROPERTY OF RICHARD GIBSON, DELAWARE, ONT. (SEE GOSSIP, PAGE 103.)

distinguished by their great substance and long, branching horns, and these things indicate that the modern type is in no sense the original mould of the Ayrshire.

Coming down to a somewhat later date, Ayrshire fanciers will be interested to hear something about the celebrated bull, Burnhouses (8). His breeder was the famous Lawrence Drew, the younger, who made his name worldwide during his occupancy of the home farm of Merryton. He was calved in 1865, and was of a distinctly-marked brown and white color. He is described on all hands as a bull of great robustness of constitution, wide and roomy in his shapes, and, although not a noted show bull, full of style and breed character. He was too masculine in shapes to be popular with the fanciers of old stock, but his owner, the late James Howie, Burnhouses, Kilmarnock, who had great difficulty in getting Mr. Drew to sell him, always regarded Burnhouses as the best sire of the right type of dairy cows he had known. His female progeny were full of style, with grand frames and rightly-hung vessels, while their teats were rightly planted and of the proper dairy size. The ruinous small-teated craze had set in when the produce of Burnhouses made their appearance and held their own against them. It would have been well had it never obtained an entrance. Amongst the sons of Burnhouses which left an indelible impression on the breed were Auchendennan (1), Burnhouses of Drumlanrig (7), Fleming of Drumlanrig (28), The General (31), Righead of Drumlanrig (51), and Burnhouses II. (106). When the first volume of the herdbook was issued, the first crop of queys after Burnhouses were eleven years old; consequently, very few of them were registered, and a good deal of data necessary to show his influence on the breed has been lost. The first great success achieved by his produce took place at Ayr in 1870, when what were called the "five white queys" from Burnhouses won the group prize, having previously in single file given a good account of themselves in the ordinary class. In the following year, Mr. Howie brought out five brown queys, three of which took first, third and fifth in the Ayr Derby, and another, named White-legged Beauty, on the same day was first aged cow in milk, and champion female. Many other prizewinners were got by this famous sire, notably Lady Mary of Burnhouses (441), champion at Kilmarnock in 1873; Blossom 48, Ayr Derby winner in 1875, and first as cow in milk at Glasgow in 1876; Fanny II. 182, second three-year-old at Kilmarnock in 1871, and first cow in calf in 1872; Fanny of Drumlanrig, second four-year-old in milk at Ayr in 1873; Dew-drop of Drumlanrig, first four-year-old in milk at the Highland in 1874, and winner of the gold medal in 1875 and 1876; Julia 218, second three-year-old in calf at the Highland in 1877; Lizzie, first four-year-old cow in milk same day, and Frost, cup winner at Stirling and Dumbarton in 1876, first three-year-old in calf at the Highland same year, and gold-medal winner at the great Edinburgh Show in 1877. Frost was owned by Mr. John M. Martin, then farming at Auchendennan, on the banks of Loch Lomond, and the old bull himself died in the possession of the same gentleman. He had a stiff job getting Mr. Howie to sell him, although he was then a very old bull. His purchase was, however, a good investment.

The praise of Burnhouses is on the lips of all Ayrshire fanciers to this day, but scarcely less popular is the bull known as "the Company bull," but registered as White Prince (63). He was bred by Mr. Howie at Burnhouses in 1871,

and acquired distinction as a sire at Burnhouses, but passed after a little into the herd of the Duke of Buccleuch at Drumlanrig, then rising into prominence under the skillful management of Mr. James Cranston. White Prince lacked the masculine character of Burnhouses, but was a bull very much after the same type in other respects. His female progeny were adversely criticised as being rather strong in the bone. His sire was an unregistered bull called the Dykenen bull, and his dam was a daughter of Burnhouses (8). Some of his female progeny made phenomenal records in the show-ring, and if less numerous than those of his grand-sire, their influence on the breed was probably quite as enduring.

I close these jottings with a few notes regarding the most renowned of all the sons of Burnhouses (8). This was Auchendennan (1), bred by Mr. John M. Martin, and got by the old bull out of his own daughter. He was in color light brown and flecked, and in build and conformation he belied all theories of inbred animals being dwarfish and lacking in stamina and substance. His female progeny were well-framed big

cows, with what were called rather "soft" vessels and teats of fair length and thickness. The tribe, however, were not noted for their milking qualities, but they made a decided impression for good on the breed, being big, grandly-framed animals, with wide chests. Auchendennan was a singularly impressive sire, and a standing proof of the value of inbreeding if such an animal is to be produced.

These notes may be again resumed during a slack season. What I want to demonstrate so far is that the early Ayrshires—that is, those before 1850, and the more recent Ayrshires of the period of the Parker and Howie domination—were great, roomy, healthy cattle with wide chests and good sound vessels and teats of the commercial type. The "shelly" Ayrshire is a comparatively late development in the breed—and had to be developed—the originals were not of that stamp. Hence the vast number of herds of great, roomy, wide Ayrshires to be found in Scotland quite apart from the show-yard fancy.

"SCOTLAND YET."

Saving the Little Pigs.

Allow me to give your farmer readers a pointer on raising litters of pigs. It has been my endeavor for years to plan some way to prevent brood sows lying on their young ones at farrowing time, and killing sometimes half of them. I have tried stinting them with bedding, long straw sometimes, and short cut straw at other times. I have nailed scantlings, also, around the pen, about one foot from the floor and from the wall, that the young ones might take shelter under them, but those plans have failed. I have now tried another, which I believe will work all right. I had a young sow coming in. I went to work and made a platform or table about eight feet square, similar to those we have for young feeding pigs to lie on, with only this difference: I made it low on sides, so that if the little fellows got off they would be able to get on again. I put this table in the center of the pen, away from the walls, and gave the sow some cut straw on it for bedding. She made her bed on it, and it kept perfectly dry. Had it been on the level of the pen the straw would have been wet, cold and uncomfortable, but being dry, she was contented and lost none of her young ones. I believe this dryness of bed is the whole secret, together with being also away from wall.

T. PORTER, York Co., Ont.

Black Lambs.

I can fully endorse your reply to "Sheep Breeder," re black lambs, as I occasionally have seen such produced by well-bred registered parents of different breeds. While having bred Shropshires for twenty years, it has been my good fortune not to have a single black, yet I have imported a couple of rams which sired "niggers." On writing the breeder for explanation, I was informed that the descendants of a noted show-yard ram named "Bristol Reserve" were somewhat faulty in producing the undesirable color. One of the rams used in a friend's flock sired a very small percentage yearly of blacks, but when afterwards used in another flock, none were reported from it. Your correspondent, with his thirty-three per cent. of "misfits" in 42, cannot fairly attribute his misfortune to the ram, as such an extraordinary freak of nature is most difficult to trace to its source. If the ram at birth was a very dark-fleeced lamb, and now shows dark fiber in his coat next the skin, and if the ewes had a similar defect, or were sired by a ram alike faulty, the combination, and the concentration of bad blood, would probably give the undesirable result reported by "Sheep Breeder." JOHN CAMPBELL.

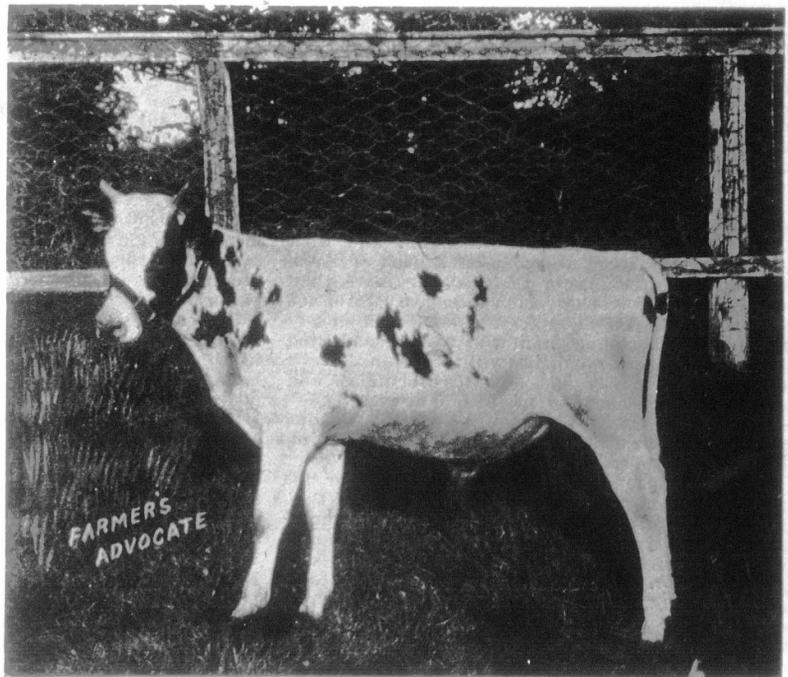
FARM.

What the Country Wants.

One thing that Canada wants to-day is that more of her sons of ability turn their attention to farming and cease to strive and to struggle upon the pittance offered in city offices. All such young men may have free scope and exercise on the farm for every grace and refinement they may possess, and they need be no less courteous gentlemen than in the proudest city home.—"Farmer's Advocate."

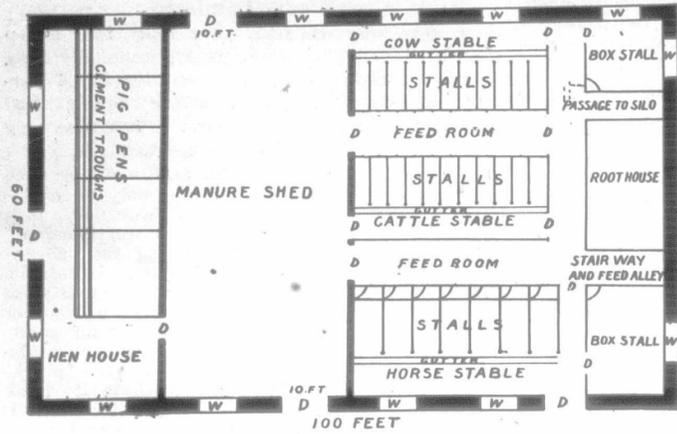
"Our contemporary has given some good advice that the farmers' sons not only of Canada but of this country can ponder over. More young men are coming to the city every year to begin at the foot of the ladder than there are opportunities to improve upon the conditions that they are leaving behind them. Perhaps too many bright and gleaming pictures have been published of the youth starting cityward with a sixpence in his pocket and in old age retiring as one of the notables of the land. In juxtaposition with this should be printed also the thousands that merely eke out an existence, when they might have been happy and prosperous in the rural community. It will be well for the young man who is city infatuated to look well at what he is leaving and study impartially what is before him previous to any great change. The most that we can say is to look at matters as they are—not through the eyes of the fanciful picture painter."—The Drover's Journal.

There is no telling what influence the proposed Domestic Science annex will have upon the rush of young men desirous of pursuing their agricultural studies at Guelph.



UTOPIA 13726.

Ayrshire bull calf, son of Matchless 7560 and Imp. Nellie of Barcheskie. PROPERTY OF J. N. GREENSHIELDS, ISALEIGH GRANGE, DANVILLE, QUE. (SEE GOSSIP, PAGE 106.)



BASEMENT PLAN OF R. CHONSBERY'S BARN, YORK CO., ONT.

Barn Plans.

In response to many urgent enquiries and requests for barn plans, recently received, we give in this issue a number of engravings showing plans of basement stables containing useful features which may be adopted as a whole or in part by farmers arranging to build new barns or remodel old ones. It is impossible to design a plan that will suit all or any considerable number of farmers, as the circumstances vary widely, some requiring a larger and some a smaller building, some being engaged in the keeping of one class of stock and some another, so that the best that can be done is to present plans that are in use and that have been devised for different purposes, with the hope that the main features of some of them may be helpful to our readers in making a plan to suit their own purposes. Several of the plans given are probably on a larger scale than the average farmer requires, but the same principle may in most cases be adopted by reducing the dimensions, and in the case of some which are arranged for cattle only, the stabling at one end of building could readily be partitioned off and used for horses or other stock. The plan of Mr. McMillan's basement shows an arrangement whereby cattle are fattened loose in large box stalls instead of the general custom of tying them in stalls. The system is economical in construction, and a number of our advanced feeders who have thoroughly tested it are more than pleased with the results, both in the health and gains made by the cattle.

Starting Farming.

The following enquiry is to hand: "A young man twenty-five years old, raised on a farm, with a good common-school education, who has received a bequest of \$2,500, together with \$500 which he has earned by working out, desires to start farming in a locality adapted to dairying or beef-cattle raising and general mixed farming, his idea being that this would be preferable to settling in a new country. Would you advise him to rent or buy, and about what size of a place and what equipments in the way of stock, implements, etc., will he require? Any other helpful suggestions given will be appreciated."

The first question which comes up before this young man who thinks of starting farming for himself, and has a capital of \$3,000, is whether to buy or rent. He would be able to rent a very much larger farm than it would be prudent for him to buy, and it might be that he would prefer to run business on a large scale to working on a small place. But in this country renters, as a rule, do not seem to prosper. This may change in time, but as yet the renting of farms seems to be profitable to neither owner nor tenant. There is a great satisfaction in ownership, and with most men the effort to clear off a debt or make improvements results in their having more than would be likely without such incentive. It is not wise for some people to go into debt even to buy land, but this young man who at 25 has saved \$500 of his own earnings will, we think, know the value of money and how to economize, and might with prudence borrow \$1,000 or even \$1,500 in buying a farm. He should be able without going deeper in debt to get a good place of 50 or 60 acres, with stock and implements.

Beware of buying a farm naturally poor or one that has been run out. Far better get one that is in rough shape, or even dirty, but is in good heart. It is possible to restore the fertility of a worn-out farm, but it is a heart-breaking job and gives poor present returns. Few people have any idea of the difference in actual value between even an ordinary farm and a rich one. It used to be said of a certain 50-acre farm that there was as much raised on it as on most places of 100 acres. Even with less difference in fertility, it might be as valuable. To illustrate: It takes, say, 25 bushels of oats per acre to pay expenses. On one farm the crop averages 40 bushels per acre; that

would mean a profit per acre of 15 bushels. The yield on another farm averages 55 bushels; surplus over cost, 30 bushels—exactly double. These figures are not extreme, as we all know, yet most of us would be much astonished if told that one place was worth almost double the other.

As a general thing buildings on a place can be bought cheaper than they can be put up. A young man beginning business should be content with buildings that are serviceable, even if not so fine as he would like. It will be wiser to leave fancy improvements until he can pay for them.

As to implements, some, such as a plow, harrows, cultivator, wagon, etc., are necessary; others, such as a binder, possibly, a mower, and seed-drill, it may be more profitable for a time to hire, looking out meanwhile for possible bargains in these at sales.

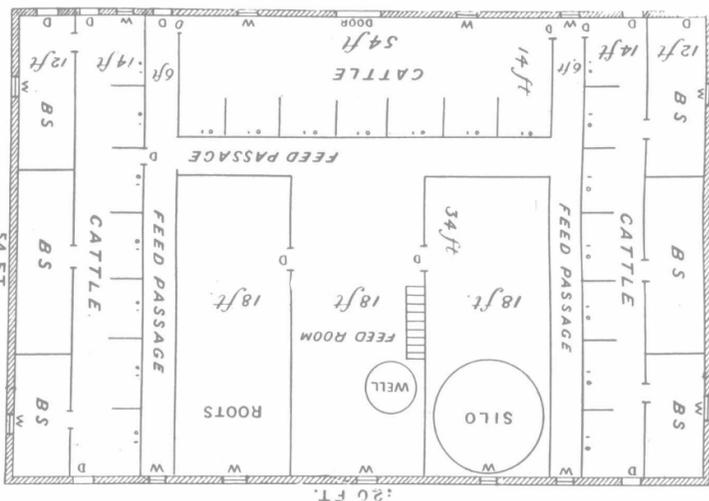
Many who have large farms have a large area in pasture and keep dairy cows or, what is more common, fatten steers on the grass. By this method they are saved the trouble and expense of much hired help, but such a course is inadvisable on a small farm. To make the most out of such a place it is best to have most of the land in crop. One acre in crop will give as much food for stock as three acres in pasture. A partial soiling system may be adopted with advantage. Prominent dairymen recommend this very strongly. Have a succession of green crops for feeding during the summer months. By this means a

song, "Ilka lassie has her laddie," is true in his case and our advice is for him quite thrown away, because his plans in that line are already perfected, but it is good advice all the same. A single man can get along hiring out or working in town, but on a farm by himself—no. We have known it tried by men not easily defeated, but they eventually sold out and quit the business. The old saying, "It is not good for man to be alone," may be ignored in some conditions of modern civilization, but get back to nature, go to the farm, and it holds good.

An Old Barn Made New.

The accompanying engravings illustrate how an old barn (74x30 ft.), with sills resting on the ground, was transformed into a modern structure by having ten feet added to one side and being raised upon cement concrete walls and the basement stabled floor throughout with the same excellent material. It now contains storage room above for the crops (excepting, possibly, corn, which will probably ere long be stored in a silo) grown on the 70-acre farm of Mr. Jacob W. Manning, Middlesex Co., and in the stable space for twenty cattle and six horses, besides box-stall space (13x16 ft.) and room for carriages and roots. The two plans show clearly the arrangement above and below. The wide double approach on north side gives entrance to both barn floors, and below it wagons or other rigs or implements can be stored. Next the barn the ends of the bridge stringers are supported on a 4x4 inch oak sill, carried clear of the barn sill by strong iron hangers. The hay bay (28x30 ft.) is filled by horse fork from barn floor, and the east barn floor is filled with grain, also west bay and loft on poles over west barn floor. The space 10x42, south side, is left empty for straw at

threshing time. Below eaves north side of hay bay is a door (4x6 ft.), opened for light or ventilation in harvest or threshing time, and on south side (opposite) a similar door (3½x3½ ft.). South of the east barn floor is another similar door, above the floor, and at south of west barn floor still another (8x8 ft.), the bottom of which is three feet above floor, so that there is no danger of horses or men stepping out, there being no approach on south side. Above the latter door is a gothic or dormer window in roof, six feet high and four feet wide, to be opened at threshing time. Mr. Manning considers that it was worth \$10 at the first threshing in relief



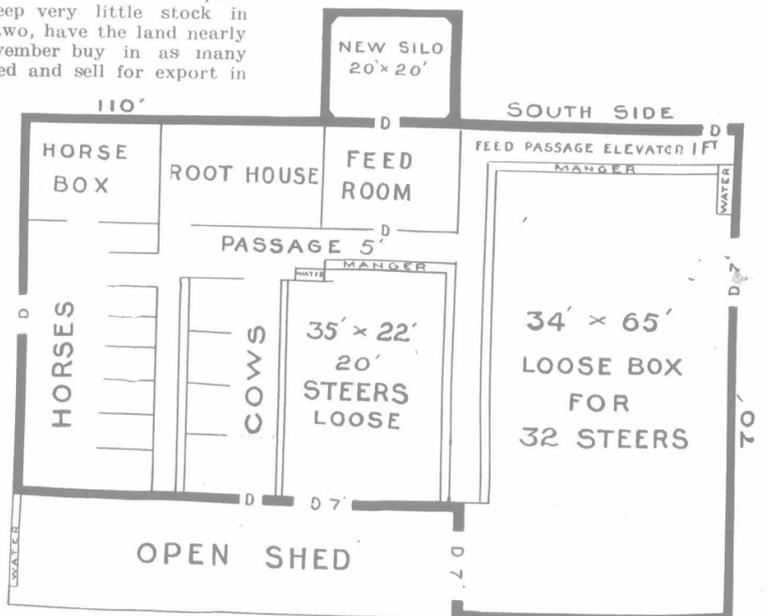
BASEMENT PLAN OF BARN BUILT BY J. C. SNELL, PEEL CO., ONT.

larger stock can be kept and the farm be none the worse, but rather better.

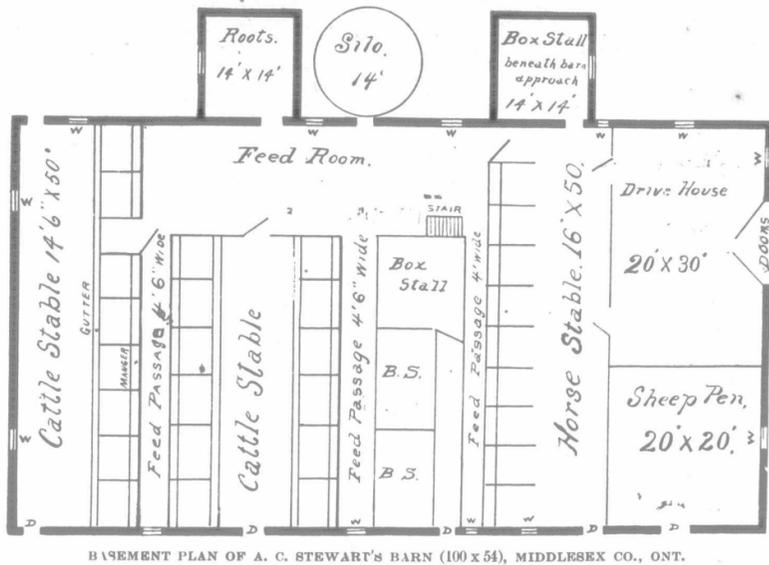
We would suggest two quite different ways of stocking a small farm. The first, to keep as many dairy cows as possible, send all the milk in summer to a cheese factory; if possible, to a butter factory in winter; raise very few calves, but have a full supply of hogs. We know of young farmers who have done very well in this way. The second (and this is Mr. Simpson Rennie's plan) is to keep very little stock in summer, only a cow or two, have the land nearly all in crop, and in November buy in as many feeders as can be fattened and sell for export in the spring. Needless to say, if there is judgment in buying and skill in feeding, this also is profitable. Have a good percentage of the farm each year in hoe crops—roots and corn. No other farm crops give nearly as much return per acre.

We are tempted to give another "helpful suggestion," which we hope will be appreciated, though it may be considered somewhat out of the province of an agricultural paper. Having given this young man so much good advice, we begin to feel quite friendly to him, and now we affectionately warn him against trying to "batch it" on a farm. Very likely the old

from dust and discomfort. The granary, with 8-ft. ceiling, has capacity for 2,000 bushels of grain. From the east bins, oat and chop chutes, respectively, for horses and cattle, are run into basement passage (boxes marked "O" and "C" on plans). The main barn posts are 16 feet, and the roof has about square pitch. The hay chute (4x5 ft.) extends from floor to rafters. Galvanized-iron eavestrough carry off the roof water.



BASEMENT PLAN OF ROBERT McMILLAN'S BARN, HURON CO., ONT.



BASEMENT PLAN OF A. C. STEWART'S BARN (100 x 54), MIDDLESEX CO., ONT.

The basement ceiling is nine feet high and floor is a trifle higher than ground outside, the stables being well lighted by 12 windows (made like house windows), each 2 ft. wide by 3 ft. 6 in. high, containing four lights 10x18 in. The window and door frames are sized. The east end stable doors open in and the west doors open out. The cattle stalls are four inches longer at east than west end. The manure gutter behind cattle is 16 in. wide, with a 6-in. drop at animals' heels and 4-in. drop next rear passage. Instead of a square edge at rear, Mr. Manning, however, strongly recommends a sloping one as being much easier to clean out. The cattle mangers have an 8-in. drop from feed-alley floor, are 20 ins. wide at top and 18 ins. at bottom, and next cattle is sloping plank, 1 1/2 x 14 ins. Two boards on alley side of posts keep cattle from reaching into alley, and fodder is fed under the lower one through a 15-in. space. Cattle are watered in yard at present. Between horses and cattle the partition is close boarded to the ceiling, but both are fed from same feed alley. The hay chute is not open at south side. Horse mangers are 2 ft. wide at top and 18 ins. at bottom. The bottom is slatted and is six inches above stall floor, so that dirt and dust shake through and can be raked out easily into stall every few days. The horse-stall floors are two-inch plank on cement. The south wall of stable has a foundation of cement concrete to 18 inches above ground, above that it being double boarded, with tar paper between. The foundations go two feet in the ground. Ninety barrels Queenston and 12 barrels Portland cement were used. Dressed lumber was used for siding, and the barn was decidedly improved in appearance and durability by two good coats of paint. In cleaning out stables, the horse manure is loaded in bottom of sleigh, near south-side door of stable, and then the team take the sleigh through passage in rear of cattle, when the load is taken to field or pile, as circumstances require. The east side of box-stall space is formed by a gate which, on being swung back to wall, a team can pass through, as on north side of stable. One door of each set in basement is cut in halves so that upper part can be left open on warm days. Fresh air is brought in through a 4-in. tile under feed alley, with 3-in. laterals opening into each cattle manger.

Charges for Cutting Corn.

To the Editor "Farmer's Advocate":
 Your issue of Jan. 15th last contains a query made by N. R. G., of York Co., Ont., in reference to cutting corn for ensilage. My neighbor and myself have a corn-harvester, and have done considerable cutting the past season. In regard to charges made for the work, I might say that each farmer finds his own twine, and horses for half time, and we charge \$1.00 per acre where the rows are sown three feet apart, and all or nearly all plant it at this distance. We calculate twenty-two rows, three feet apart, forty rods long, an acre. We seldom find a man who plants it any closer than this distance, but where we do we charge accordingly. We consider this the fairest and best, and it is the general way in this section. We have never heard of corn being cut by the hour, and I consider it would be very unsatisfactory.
 J. J. W.
 Halton Co., Ont.

I still must have the "Advocate," and herewith enclose you \$1 for subscription for another year. The "Advocate" comes to me so bright and full of good things that I could not think of being without it. It is one of the very best that comes to my desk.
 Very cordially yours,
 JOHN C. MILLS.
 Preston, Minnesota.

Ayrshires in Pan-American Model Dairy.

I have read with interest the articles in the "Advocate" setting forth the achievements of the different breeds of cattle at the Pan-American Exposition, and I have been disappointed to find that no abler pen than mine has recorded the success of the Ayrshires at Buffalo. Although the Ayrshires have carried off no great laurels, yet they have proved themselves to be the best all-round breed of cattle for the Canadian farmer who wants a cow whose milk in the summer time will bring him most profit for the manufacture of cheese, and in the winter the milk of which is equally valuable for the manufacture of butter. Now, in the result of the test published in the "Advocate" it is seen that the Ayrshires were high up in the production of both butter-fat and solids. The Guerneys were first, it is true, in the production of butter, but in the whole six months the record shows that the difference between them and the Ayrshires was the nominal sum of \$7.41. And if the price as feeding value of the skim milk had been taken into consideration, as it certainly ought, the Ayrshires would have headed the list with a good margin.

to suppose that a Shorthorn will continue to increase such weight to the same extent as it did during the first six months of the test.
 STEWARD CLELLAND.
 Richmond Co., Que.

The Formal Opening of the O. A. C. Dairy School.

On January 13th the lecture room of the dairy building was filled to overflowing with students and visitors, gathered to hear addresses from some of the most prominent dairymen in the Dominion.

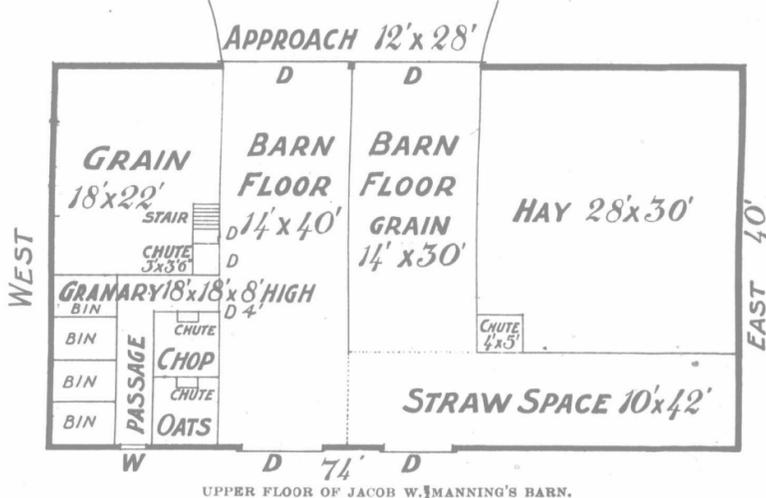
Prof. Robertson, Dr. Van Slyke (of Geneva, N. Y.), and Mr. R. M. Ballantyne were expected, but were unable to be present. However, a most profitable and lively afternoon was spent. Could it be otherwise, with Mr. Dan Derbyshire (a whole host in himself) in the chair; addresses from Mr. Woodward, official referee of the Butter and Cheese Association, of Montreal; Dr. Mills and Prof. Dean, and the following musical programme, contributed by the dairy students: Piano solo, Miss Jennie Glendinning, Manilla, Ont.; violin solo, Mr. Marshall, Niagara Falls, Ont.; piano solo, Miss Jessie Evans, Guelph, Ont.; chorus, lady dairy students; piano solo, Mr. Will Macdonald, Truro, Nova Scotia.

Mr. Derbyshire spoke of the magnificent opportunities the boys and girls of to-day have, and continuing, said: "It is the boys and girls like those before me, who take advantage of the privileges offered, who come to the front ranks every time. This is an age of specializing, and to be an expert dairyman, a wide and thorough knowledge of all that pertains to that work is necessary."

Dr. Mills' address was particularly to the students. He told them to read, to think, to observe, to have a high aim, and to be content with only their best effort. He emphasized the importance of cleanliness in all dairy work, and said the maker should be so educated as to be a bureau of information to the patrons.

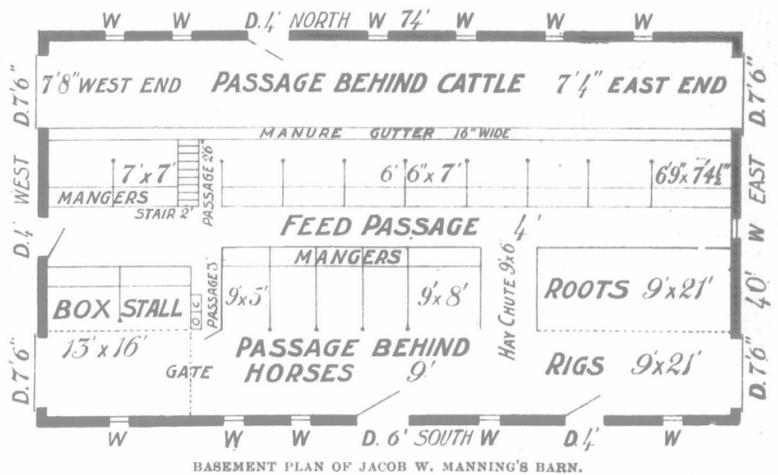
Mr. Woodward spoke largely from the standpoint of a buyer, and impressed upon his hearers the necessity of keeping up a good standard for export cheese. Much of last year's cheese was off flavor, and this was mainly due to the excessive heat and improper curing rooms. Open cheese, and mealy, sour cheese resulted largely from lack of judgment on the part of the maker. Many were using too much starter and getting the milk overripe. Cheese should be made of a uniform size. All of inferior quality should be so marked, thus avoiding a possible cut on the entire shipment. During last season several such cuts were made owing to a few bad cheese in shipments. Cheesemaking has reached its limit. The field for buttermaking is large and promising.

Prof. Dean in his brief remarks dwelt on the power of influence each student exerted, and strongly endorsed all previous speakers had said. The attendance at the school is excellent. This department of the O. A. C. grows in usefulness each year. A course of lectures in cooking is a popular addition to the curriculum this term, and over one hundred ladies are taking advantage of its training.



UPPER FLOOR OF JACOB W. MANNING'S BARN.

Again, it is seen that in the production of solids the Ayrshires came second. A great recommendation for the Ayrshire herd is its uniformity of production. A better example of this could not be found than the small difference in net profit shown between the best and poorest cow in the five Ayrshires composing the herd at Buffalo; the actual difference being \$7.37 for six months, whereas in every other herd a difference of double and in some cases even treble this sum is shown. Now, if such a material difference is shown in such a small herd, it is easy for farmers and dairymen to conceive the great difference there would be in a large herd. One feature of the test of which I did not approve was the allowance of three cents per pound for increase in live weight, which I consider of no value to a dairy cow. For instance, the Shorthorns showed an increase in weight of 802 pounds, which at three cents per pound credited them with \$24.06. Now, I fail to see how the breeder or owner of Shorthorns is going to realize the \$24.06 allowed to him for this increase in live weight during the test. I mention this because it was solely due to this superfluous increase in live weight that the Shorthorn was able to compare as favorably as it did with the strictly dairy breeds. And whilst a dairy cow will continue to give a profitable return each six months, it is absurd



BASEMENT PLAN OF JACOB W. MANNING'S BARN.

The Merits and Demerits of Agricultural College Courses.

In order to give further information to our readers on the question of agricultural education, we submit an analysis of the agricultural courses given by the colleges which have been successful in attracting students. Many farmers, on being told that chemistry is one of the subjects taught at an agricultural college, agree as to the wisdom of such instruction, and say that they would like to be able to analyze their stock feeds, soils, etc.; a mistaken idea, and one that is not practical. The average graduate of a four-year course in agriculture is unable to properly conduct a chemical analysis of feeds or soils, even if he could afford the elaborate chemical outfit necessary.

WORK FOR THE SPECIALIST.

Soil analysis and analysis of feeds is the work of a specialist, the agricultural chemist, and any attempt to load a farmer's son up with chemical formulas at an agricultural college, or to turn him loose in a laboratory full of glassware, test tubes, retorts, filter paper, reagents, etc., is only waste of valuable time, time which should be given to discussion of principles and results of field and feeding experiments. Similarly with botany, a subject, as taught at many agricultural colleges, little applied and narrow in scope. Here again the student is made weary with endeavoring to memorize the Latin names with which it has been deemed necessary by the scientists to load their subject. Geology, as with the two preceding subjects, is a deep study, but of nonpractical benefit to the farm student, because he would have to delve too deeply and spend too much time to get information of questionable value to an up-to-date agriculturist. It is, of course, highly interesting to know that back of the ages the horse was a four-toed animal and that certain species of reptiles are now extinct, and that certain strata were formed during the Ice Age, yet such information given to the farmer will not aid him in feeding his horse better, husband his farm's fertility more carefully, aid him to put first-class products on the market, or help him to enjoy life better, so that we insist on a thorough appreciation of the practical in the shaping of an agricultural course. It is not possible for a university to give a course of any practical value to a farmer, in which opinion we are borne out by experienced teachers and educated farmers.

THE LONG COURSE MAKES TEACHERS.

In the Scottish Farmer is described the work required for the B. Sc. degree in agriculture at

the University of Edinburgh. As that paper pertinently puts it, "B. Sc.'s in Edinburgh seem to need to know as much as all their teachers put together." It would doubtless suit those people who are wedded to higher education, but such a course is impracticable for work-a-day farmers in Canada. As one of the agricultural colleges puts it in their catalogue, "The advanced instruction (the four-year course) is designed to fit men for teachers and experimenters (in agricultural colleges and experiment stations); the special, or short course (of one or two years), is intended for young persons preparing themselves to become farmers, and who wish to avail themselves of technical and practical instruction in modern scientific agriculture."

It has been found that the long-course students in agriculture, especially in those institutions which have a university connection do not go back to the farm; in fact, these students look for a professorship at some college, in an experiment station, or a position not necessarily connected with agriculture. This statement is admitted by the colleges to be true, and was so found by the Manitoba Agricultural College Commission when lately visiting the different colleges.

The course outlined in the "Farmer's Advocate" we believe would be popular and practical, as a somewhat similar course in an American college (Wisconsin) has resulted in the greatest increase in number of students in the same time of any agricultural college on the continent. The subjoined schedule will aid the reader materially, and by its use he will be enabled to see where some colleges lack in the giving of practical and technical instruction.

As will be readily seen, the length of the time

spent at the colleges varies. For our purpose the length, of course, matters little, provided the course is not too condensed, and that the subjects of greatest importance are given a sufficient amount of time in the curriculum. It must not be forgotten that an agricultural college is a professional school for the farmer as the medical school is for the doctor, etc., and therefore professional studies should occupy the student's time while there. Such being the case, it will at once be seen on scanning the subjoined schedule that some of the colleges devote too great a proportion of their time to non-professional subjects, such as literature, etc. In the case of Guelph, nearly as much time is given to subjects to be got at the common and high schools as is given to live stock, etc. In the North Dakota College term, it will be noticed that the hours for academic studies outnumber those given to agriculture, the Minnesota school being open to the same charge.

The difference between the total hours of study, compared with the length of college term (for instance, Iowa's two year terms of eight months each, with 1,296 hours, and Wisconsin's two year terms of four months each, with 1,095 hours), is accounted for by a more condensed time-table and less time given to manual labor, military drill, etc.

THE SHORT COURSE HELPS THE FARMER.

Comparisons might be continued, but we prefer to let our readers study the schedule for themselves. Suffice it to say, that we are of the opinion that animal husbandry and field agriculture should be predominant in the course, plant life and horticulture, shop work and farm dairying coming next in importance. Valuable time should not be given to elementary inorganic chemistry with its formulas, atomic weights and combinations, nor in botany, to the memorizing of a lot of natural orders and their peculiarities; in fact, we know from practical experience that students without a particle of the instruction condemned above were able to appreciate and grasp fundamental principles and practices of agricultural chemistry and plant life delivered to them unburdened with the fripperies of scientific formulas or nomenclature. The "Advocate" therefore insists that the non-essentials be relegated to those institutions devoted to delving in the musty lore of the Greeks and Hebrews, and that the agricultural course should contain only those essentials which are inseparable from progressive agriculture.

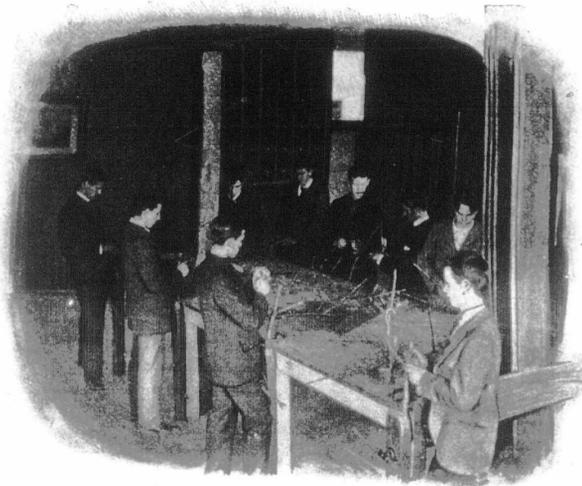
This season has witnessed, as recorded in the last issue of the "Farmer's Advocate," the successful inauguration of a series of short courses at the O. A. C. in stock and grain judging, poultry-keeping, farm dairying and domestic science which bid fair to be most popular and a move in the right direction.

Vetches for Pasture.

I have a hundred-acre lot on lake shore, six miles from home. It is very rough, broken land, a good deal of it very high and dry. I never intend to farm it, any more than to make a pasture of it for young cattle. I chop and burn a portion of it every year. How would it do to seed it with tares or vetches? I am told they make a good crop of forage where nothing else will grow. Is that so? If so, at what time of year would you sow the seed? Would there be any danger of the cattle carrying the seed home, suppose they were brought home about the first of November? Of what value is it as a forage plant? I see the seed advertised in catalogues at \$2 per bushel.

Lanark County, Ont.

Ans.—Vetches are an annual and a leguminous crop, something of the nature of peas, and are sown from year to year. They are more commonly used as a soiling crop—that is, for cutting green and carrying to the stable or feeding in racks in summer—but may serve a good purpose as a forage or pasture crop, especially for sheep and pigs, and probably would answer as well as any other crop for the purpose required by our correspondent, even for cattle. The seed should be sown as early in the spring as the land is dry enough to work right, at the rate of one and a half bushels to the acre, and well covered with the harrow, and should be pastured when from six to eight inches high, as they will grow up again after being eaten down, but if allowed to grow long on rich land will lie flat on the ground and the vines will rot. It is the common practice to sow some oats with them to hold them up, and it might be well in this case to seed with one bushel each of vetches and oats. Grass seed, as timothy and clover or blue grass, might be sown at the same time, and would probably prove a fair catch if sown in early spring. If this is not practicable, the grass seed could be sown in the fall and might make a fair crop the following summer. There would, of course, be no danger of the seed being carried by cattle if kept eaten down and not allowed to ripen. If they ate the ripened seed there might, but the tame vetch is not troublesome, while the wild vetch is.



STUDENTS GRAFTING AT ONTARIO AGRICULTURAL COLLEGE.

ANALYSIS OF COLLEGE SCHEDULES, SHOWING APPROXIMATELY HOW THE TIME IS ALLOTTED AT SOME OF THE LEADING AGRICULTURAL COLLEGES.

Name of College and Length of Course.	LIVE STOCK Including Feeding, Breeding, Judging, Management and Veterinary Science (VS).	AGRICULTURE Field Crops, Soil Cultivation, Physics of Agriculture and the Principles Involved, Farm Drainage, etc.	PLANT LIFE AND HORTICULTURE.	SHOP WORK—Carpentry, Blacksmithing, Engine Practice.	FARM DAIRYING.	AGRICULTURAL CHEMISTRY. Literature, Arithmetic, Composition, Geography, History, Etymology, Stenography, Languages, etc.	BACTERIOLOGY.	PARLIAMENTARY PRACTICE.	FARM BOOKKEEPING.	ECONOMICS.	GEOLOGY.	POULTRY AND BEES.	BIOLOGY. BOTANY (B), ENTOMOLOGY (E), ZOOLOGY (Z).	TOTAL HOURS.
WISCONSIN— 2 years of * 4 months each.	330 60 (VS) 390	203	161	15 2	70	28		21	35	21	14			1095
GUELPH— 2 years of 6 months each.	156 91 (VS) 247	134	111	39	52	182	237	26		26	26	156	B 52 E 26 Z 65	1353
N. DAKOTA— 2 years of 8 months each.	300 240 (VS) 540	60	180	300	120		710		30	60	60			2060
MINNESOTA— 3 years of 6 months each.	149 205 (VS) 354	231	286	195	231	195	221		65	52		E	65	1898
NEBRASKA— 3 years of 6 months each.	312 192 (VS) 504	192	141	120	96	120	261			48			B 96 Z 48	1632
IOWA— 4 years of 8 months each.	272 224 (VS) 496	210	256	32	112	176	684	32		48	48		B 160 E 32 Z 144	2460
IOWA— 2 years of 8 months each.	176	272	192	64	160	128	176		32		32		B 32 E 32	1296

N. B.—* The course upon which the "Advocate" plan is modelled; it will be at once noticed that this course is well balanced, essentials receiving the proper consideration, the course being a professional, not a general one.
† A considerable part of this time is devoted to inorganic chemistry.

DAIRY.

Western Ontario Dairymen's Convention.

(Specially reported.)

The thirty-fifth annual convention of the Western Ontario Dairymen's Association was held in the Opera House, Woodstock, Ontario, on Tuesday, Wednesday and Thursday, January 14th, 15th and 16th, 1902.

At eleven o'clock on Tuesday morning, the President, Mr. R. M. Ballantyne, of Montreal, read his address of welcome to an audience of about seventy-five people, in the course of which he touched upon the development of our export trade, as follows:

The year 1901 shows a falling off in cheese exports, but an increase in butter exports. The total exports of cheese, May to November, 1901, were 21,000,000 boxes, with the estimated balance at home of 550,000, makes a total of 21,550,000 boxes, against a total for 1900 of 28,000,000 boxes. This, however, was offset by a material increase in the butter exports, which were 410,893 boxes, against 256,563 boxes for 1900, an increase of 154,330 boxes, equivalent to about 350,000 boxes of cheese.

Mr. Ballantyne says that the cheese made in Western Ontario are the equal and really superior to the cheese in any other section of North America, and his position enables him to judge. They are stylish in appearance, uniform in quality, well-finished ends, and boxed better than any other, the chief defect being bad flavor. In this connection he said that makers should not wait for favorable markets, but sell. Our dry and hot curing rooms are unfit for holding cheese. We must have cooler temperatures. The increase in weight would pay the increased cost necessary. The President commented favorably on the good work done by Hon. Mr. Fisher, Dominion Minister of Agriculture, for the dairying interests, particularly the getting of cooled compartments on the steamships for carrying cheese, and intimated that the Minister was ready to do more when trade really deserved and required it. Comment was made that while our cheese in Western Ontario were better made than others, they suffered a great deal in getting to the port of Montreal in hot weather. He also recommended central cold-storage plants, and closed by a reference to the high standing of our cheese at the Pan-American, the credit of the same being due to the Western Dairymen's Association.

The Directors' Report was read by the President. In it a loyal reference was made to the death of the late Queen, occurring as it did soon after the closing of the last convention of the Association. Recommendation was made that the membership fee be \$1. Better transportation facilities were looked upon as very necessary. Factories were urged to engage services of instructors and to forge ahead. Grateful reference was made to the fact that the railways had agreed to allow all delegates to return free without restriction as to numbers present. The report was received and adopted.

Mr. Geo. Hatley presented the Secretary-Treasurer's report, which, on motion, was adopted. Receipts, \$6,169.82; payments, \$5,198.54. Balance on hand, \$971.28.

Inspectors' Reports.—The reports of Inspectors Jas. Morrison, Jas. Bristow and Arch. Smith were then presented, the chief points of value in which may be summarized as follows: The principal defects of the making rooms were poor buildings and bad flavors, which allowed the whey and wash water to leak through, causing bad odors. The temperature in the curing rooms was controlled chiefly by ice-boxes, and at some factories visited, by sub-earth ducts, the latter being preferable, as there is a better circulation of air, and the cheese are not so liable to mould.

The patrons are becoming more convinced of the reliability of the Babcock tester to determine the per cent. of fat in the milk. The whey-tanks are elevated in most factories, it being found much easier to keep them clean. The Barnard mill is recommended, where a power curd mill is used, as doing first-class work when in proper shape.

WASHING CURDS.

More of the makers have practiced washing curds this last season than formerly. Unless with a very fast working or sour curd, washing at dipping is not advised. With an ordinary working curd, it is apt to check the acid too much, causing the curd to be too long in maturing. To wash after milling, with 6 to 8 pails of pure water at a temperature of 94 to 100 degrees, according to the season or to the temperature of the room, will give good results in expelling white whey and flavors and also gives the curd a silkier feel. As washing of curds tends to weaken the body of the cheese, care must be taken not to salt too early, as this has been the means of a great many open cheese.

The curd test is one of the cheesemaker's best friends and should be in use in every factory. They can be purchased for about \$5, and the use of pint sealers is advocated instead of bottles with wooden corks, as it is the most effective

means of detecting bad-flavored milk. It was used this year at many factories visited, and the Babcock test very seldom used.

One of the chief defects in the butter is excessive moisture, and poor keeping quality, which is largely due to the care the cream receives at the farmer's home, the high churning temperature and lack of skill on the part of the maker. This would not have the same force in connection with the separator creamery.

DEFECTS IN CHEESEMAKING.

Mr. G. G. Publow, Instructor at Kingston Dairy School, then gave his address on "Defects in Cheesemaking," commencing by emphasizing the necessity of makers getting a knowledge of the "why," rather than the "how" simply, and indicating that if this were better understood, greater uniformity would prevail in the cheese of a factory and of a district. The causes of long-keeping cheese were given as follows, viz.: Sweet milk, less rennet, higher cooking, more salt, lower curing temperature. Cut curd uniformly to get uniformity of results afterwards, and the faster it works the smaller it should be cut. Cook in accord with the development of the ferment—fast or slow.

Makers should be educated to the "touch" in curd-cooking, and should mix plenty of brain with the work. Milling is chiefly for the purpose of getting the salt more evenly distributed through the curd. Salt to give flavor and texture; it also retards rennet action, but lengthens keeping quality.

DISCUSSION.

Q. Does the richness of the milk affect the cooking? A. Yes; the richer the milk the higher and longer the cooking should be, and the more salt should be added—this is to ensure uniformity.

Q. T. B. Millar—What is the cause of hard, dry cheese? A. Too much stirring and not properly cooking before acid is developed, or over-cooking, resulting in a lack of moisture.

Q. Mr. A. T. Bell, Tavistock—Would you cook lower in spring? A. Yes, because less fat in the milk; cook just enough to get the curd firm—"lively" to the feel. We use in the East a temperature of 92 to 96 degrees F., and draw the whey at 1-16 inch on the hot iron. Mr. Bell said that 98 suited them better.

Q. Might more rennet be used instead of lowering temperature? A. It might be with inexperienced makers.

Q. Has rennet an effect on curing cheese? A. Yes, much.

Q. What is the cause of leathery cheese? A. Not enough acidity for the amount of moisture taken out.

Q. Has curing room anything to do with it? A. No, not likely.

Q. How much salt do you use, Mr. Publow? A. Up to about May 10th, 2 lbs.; June, 2½ lbs.; August and September, 3 lbs.; using judgment as to amount of moisture.

The President here observed that the main objection to the fall cheese is softness or pastiness, and Mr. T. B. Millar indicated that the cause of this is curd not being properly cooked and not given enough acidity.

Q. Is cheese usually harmed by too much acidity after dipping? A. Not usually, if not too much moisture. About .2 per cent. acidity when adding rennet is correct, and one per cent. at time of salting.

Prof. Dean intimated that the knowledge of the alkali test was a very important part of the present-day cheesemaker's education, and, if properly used, a source of great power; indeed, he did not consider a cheesemaker up-to-date who did not thoroughly understand it.

Prof. Dean then addressed the meeting on the subject, "Cold Storage for Hot-Weather Cheese." The Professor expressed himself to the effect that the growing work and growing needs of the Canadian dairy interests require the assistance of a half dozen special chemists and as many bacteriologists. The burden of the Professor's address may be couched in the sentence, "Canadian cheese are being cured at too high a temperature." The lower the temperature at which we can get right and proper curing, the better.

In an experiment carried on in 1898, cheese cured at a temperature of 60, 65 and 70 degrees F. lost 3.4, 3.8 and 4.2 per cent of their weight, respectively; 30-lb. cheese were used.

The cheese cured at 60 degrees F. were worth 1 to 1½c. more per pound and lost one per cent. less in weight than those cured at 70 degrees F.

The 1900 results confirmed those of 1898. During 1901, going one step further, we desired to study: (1) Would cheese cure properly at 40 degrees F.? (2) Would it be better to cure a while in the usual curing room and then in cold-storage? The experiment was carried on from April to November, two to four times each month, and covered work as follows: cheese cured direct from the hoop at 40 degrees F.—

- 2-1 week in the curing room and then cold storage.
- 3-2 weeks " " " "
- 4-3 weeks " " " "
- 5-4 weeks " " " "
- 6-5 weeks in the curing room and no cold storage.

The loss in weight at one month old was as follows, viz.:

- 1-2.1% of total weight.
- 2-2.8% " " "
- 3-3.2% " " "
- 4-3.6% " " "
- 5-4.4% " " "

Cheese put directly into cold storage required three to four months to cure to the condition of four to six weeks curing in a good ordinary curing room.

Three experts were called to the Dairy Department of the O. A. C. to judge these cheese, the average score being as follows:

- 1-91½ out of a possible 100.
- 2-90.8.
- 3-92.1.
- 4-90.5.
- 5-Off flavor.

On Nov. 11th, 1901, these cheese were sent to Montreal and judged by Montreal experts, the average score being as follows:

- 1-... out of a possible 100.
- 2-89.8.
- 3-81.8.
- 4-80.0.
- 5-Off flavor.

The cheese were made July 6th, 1901. If similar results continue to show from like experiments, we shall have to change our methods. We can say that when July and August cheese are put into cold storage soon after they are made there is less bad-flavored stuff. Holding cheese in ordinary rooms is suicidal, especially if we are to hold our own in British markets. Large factories should have their own cold storage, but for a number of small factories a central cold-storage plant is undoubtedly a step forward in improvement.

Prof. Harrison, Bacteriologist at the Ontario Agricultural College, spoke at some length on

"BITTER MILK AND CHEESE."

The basis of the address was the isolation and identification of the "yeast" that causes bitterness in milk and cheese, the basis of working being the difficulties which arose in a factory in the vicinity of Woodstock. Mr. Harrison explained the system followed in securing samples and data re the isolation of this "yeast" in question and the inoculation of the same into sterilized mediums for propagation. When it is remembered that in this investigation samples of milk were taken from each of 82 patrons, that the can-washings were also examined, that the mixed milk supplied the creamery and the first milk from a number of the cows were given careful examination, the amount of work may be imagined. The original source of infection was found on the leaves of maple trees in the vicinity of milk-stands. The can-washings showed infection by the bitter organism to a very large extent, showing the need of very careful washing of the cans.

Prof. Harrison, during the course of his investigations re bitter-milk organisms, also found a red-color-producing mould in the factory, which he located at thirty different stables of the patrons. He also found great numbers of gas-producing organisms in the air of the stables. These facts point strongly to the grave necessity of careful handling of milk and milk cans. Ordinary washing of cans is quite inefficient. Thorough washing and thorough scalding in boiling water is a necessity on all farms.

THE EVENING MEETING.

At the evening session, besides a very excellent programme of music and song, several pithy and encouraging speeches were delivered.

Dr. Mearns, mayor of the city, welcomed the visitors in a very cordial and very complimentary address, the welcome being gratefully accepted by the President.

Mr. D. Derbyshire, President of the Eastern Dairymen's Association, spoke in his characteristic way, encouraging the earnest worker to go on and improve, and soundly rating the laggard. He touched upon the need of enriching our stores of knowledge. "Get well versed in your business," he said to the maker. "Go to a dairy school and learn the why and the how."

Mr. Nesbitt, President of the Board of Trade, spoke briefly, but with point; as also Mr. A. F. McLaren, M. P. Mr. Andrew Pattullo, M. P. P., of the Sentinel-Review, addressed the audience in a reminiscent way. He considers that the greatest educational power to-day in Ontario is that under the Department of Agriculture and worthily headed by the O. A. C.

WEDNESDAY MORNING.

A nominating committee was appointed, after which Mr. A. Wenger, proprietor of a cream-gathering creamery at Ayton, was the next speaker. Owing to the extreme disorder in the meeting, it was not possible to hear Mr. Wenger's remarks, but he shortly asked Mr. A. Smith, of Beachville, Superintendent of the Western Dairy School, to finish the address. Mr. Smith responded promptly, and spent the first part of his time in a somewhat laudatory account of the position held by the cream-gathering creamery. In the course of his remarks he spoke of the use of cement and skim milk mixed to the consistency

of a paint for a cheap cover for creameries inside and outside. The use of hand separators was strongly recommended, provided the work was carefully and efficiently done. If the cream is not delivered in perfectly sweet condition to the central manufacturing point, then it is quite impossible for the maker to turn out a fancy article. The speaker recommended the use of cream tanks instead of cans to draw cream from the farm to the factory, and the use of ice in the tanks was advised. Advice was offered to farmers to take off and send in a thicker or richer cream, as a thin cream means a loss in churning, a thin cream necessitating a high churning temperature, and a high churning temperature means a butter with high water content. The latter statement differs directly from the results of the careful and extended experimental work carried on by Prof. Dean at Guelph, and given by him at the Whitby convention, to the effect that temperature of churning does not materially affect the water content. Salt brine was recommended as a cure for mould—quite equal to formalin. The practice of selling butter regularly each week, or at least every two weeks, was considered better than holding.

Q. Can the Babcock test be used to test cream as satisfactorily as the oil test? A. I think that eventually the Babcock test will supersede oil test.

"Continuous Pasteurization of Milk for Buttermaking."—Mr. F. C. Harrison, in developing this topic, brought out these facts: That a temperature of 140 degrees F. is too low for successful pasteurization, a great number of bacteria being left in the milk. At 160 degrees F., the work is more thorough, but still incomplete. At 185 degrees F., the work was quite thorough—all-sufficient for the purpose. This temperature is sufficient also to kill the tubercle germ. The small number of undesirable germs left in the milk or cream are easily overcome by the use of a pure culture.

Mr. Ruddick followed this paper with a practical view and application of the principles of pasteurization, stating initially that Denmark makes pasteurization compulsory, and N. S. Wales and Victoria are considering a like procedure, and we are under the necessity of looking carefully into this matter. The details of this address will be found in the report of the Whitby convention in last issue of the "Advocate."

"Loss of Casein and Fat Sustained in Washing Curd."—This subject was handled by Prof. Harcourt, Guelph, in a very clear and concise way. Some makers wash every curd—not a necessary nor desirable practice. Proper washing does two things: (1) Removes some bad flavor. (2) Removes some acid.

Washing immediately after dipping may save a fast-working curd. Warm water at about 98 degrees F. should be used. There is no real danger of washing out too much acid. But the point of this address lay in the effect of washing on casein and fat losses.

BEFORE SALTING.		
	Loss of casein.	Loss of fat.
Normal curds.....	12.3 grams.	25.3 grams.
Washed curds.....	8.4 " "	25.0 " "

AFTER SALTING.		
	70.6 grams.	54 grams.
Normal.....	70.6 " "	54 " "
Washed.....	49.0 " "	36 " "

The total moisture in these cheese showed very small variations, nor was much difference found in acidity. The total loss of cheese amounted to about 1 lb. to each 1,000 lbs. milk.

THE CHEESE AND BUTTER EXHIBIT.

The exhibit of cheese and butter was one of very great interest to all the makers, and indeed to everybody. The number of entries and the status of the goods are given in the prize list accompanying. Mr. Steinhoff, judge of butter, stated to our representative that he considered the exhibit a most creditable one and showing an honest rivalry among makers that argues well for the future of the trade. Mr. McLaren spoke in a favorable strain also of the cheese exhibits, but drew attention to the fact that some of them were so badly off in flavor that they should never have been sent to the exhibition, and also that too many of the exhibits were scored down in finish—a condition which ought not to be in Western Ontario cheese.

As a director of Toronto Industrial Fair, Mr. McLaren drew attention to the fact that the repeated demands of this Association re the need of better accommodation for dairy products at the Industrial were now to be acceded to, as the Fair management had decided to erect suitable buildings for the accommodation of dairymen and dairy products, \$14,000 having been set aside for that purpose. This speaker also drew the attention of the audience to the great transportation problem that is such a live and growing topic among Canadian producers, and very intimately connected with the successful prosecution of the dairy industry. Among other data submitted, it was shown that the freight rates from Montreal to Liverpool on cheese were \$2.10 per ton higher than from Boston to Liverpool, and \$3.31 per ton higher on butter; indeed, the rates on butter were nearly double in the former over the latter case. All kinds of agricultural produce were subjected to a freight rate 25 per cent. higher than the same produce in the U. S.

The remedy for these things, the speaker indicated, lay along two lines, viz., improved waterways from our interior to the seaboard, and the appointment of a railway commission.

Mr. Wright, of the British Linde Refrigeration Co., spoke briefly on refrigeration for dairy products. He noted that the cold-air system is much superior to the usual pipe system, indicated the necessity of having perfect insulation in the buildings, and spoke in favor of the cooled compartments on board steamships for carrying cheese. At this juncture, Mr. Ruddick said that Hon. Mr. Fisher was endeavoring to obtain at least 25 vessels so fitted for next season's trade. The President here said that owing to the poor system of insulation and lack of air currents common to our refrigerator cars, the ice wasted rapidly in them and frequently they landed in Montreal with the original ice supply entirely wasted. This he showed might be improved by having midway icing stations. This fact and its suggested cure was strongly emphasized during the convention, notably by Mr. Hodson, Dominion Live Stock Commissioner, Ottawa.

Mr. Pattullo, M. P., addressed the meeting, by special request, on the topic—well-worn and disagreeable—"Cheese Markets, Buyers and Salesmen." Perhaps nothing very new was elicited out of the discussion, if we except two points, the first made by Mr. Pattullo, to the effect that he believed the ultimate solution might be found in the erecting of central curing rooms or stations. These could be built in a co-operative way where necessary, and by Government help. This he thought would solve the question for buyers and largely for salesmen, facilitating inspection, etc. The second point was set forth by Mr. McLaren, viz., that all cheeses should be inspected by buyers before buying, and thus stop the pernicious practice of buying "unsight unseen," and then taking them or not, as suited their pleasure and the condition of the markets. This opinion was also endorsed by Mr. D. Derbyshire.

Mr. McLaren, on rising to speak as to our exhibit of cheese in connection with the convention, referred almost solely to the need of better finish, the majority of the exhibits having been scored down more or less in this respect. Mr. McLaren also told us that we were to have a new \$14,000-building solely for the use of dairymen and their products at the Industrial Fair, Toronto. Dropping to the question of transportation, he showed the condition of our freight rates, etc., by an example. The freight rates on cheese from Montreal to Liverpool are \$5.43 per ton; and from Boston to Liverpool are \$3.30 per ton; on butter, \$6.68 and \$3.37 per ton, respectively. Rail haul in Canada is 25 per cent. higher on all kinds of agricultural produce than in the United States, and it is the improved waterways largely that have made this difference.

Mr. Steinhoff commented in general terms on the butter exhibit.

Mr. G. C. Creelman, Superintendent of Farmers' Institutes, addressed the meeting in a congratulatory way.

Mr. Eli Bourbeau, of the Dairymen's Association, Quebec, was introduced as the most live man in Quebec dairy interests. His speech was brief, but warmly received.

Hon. John Dryden spoke at length on matters of general interest to dairymen, emphasizing the fact that the Government were willing to cooperate in any way for their advancement, provided they showed a readiness to help themselves.

In accord with his promise, Prof. Dean sent some of his experimental cheese to the convention to be scored. Two cheese were sent; the first was put into cold storage directly from the hoop and held four months at a temperature of 40 degrees F. This cheese was a surprise to the whole convention, being of good texture, flaky and silky, with full flavor and no bitterness. The other cheese had been cured at 65 degrees F. for three weeks and then put into cold storage. Little difference was noticeable in flavor, but in point of texture this latter cheese was much inferior, being dry and without the fine mellow character that the first one possessed.

Mr. Hodson spoke briefly on the value of the convention meetings to all concerned, and declared that the right education of our agricultural classes is the safeguard of our country. He then touched on the necessity of working up all the by-product of the factory, and diverged to discuss the bacon industry, in the course of which he said: "Do not produce fat pork, but well-fed, lean meat. The United States can and do produce fat pork, and we must not come into competition with it. Always finish the pork before selling. A great proportion, probably 75 per cent., of the pigs being marketed just now are altogether too thin—not finished. A lean, well-fed pig is not a miserably-fed bag of bones, as some seem to think. We want light head, neck and shoulder, with length and depth of side and a good ham. Illustrations in profusion showed the right and wrong bacon hog. Avoid sag-backed pigs, but get a rounded back. Avoid also the shoulder open on top. Thick, fat pigs should

be sold early to local trade. Old sows and stags should be fed until very fat, as their chief value comes out of the lard tank. Do not kill off the young sows; sows do not reach their best until 4 to 5 years old." The speaker then directed his remarks to some of the "small things" in connection with the convention addresses. He spoke of the frequent "robbing" of iced cars, ice being frequently taken from them as the cars stood on sidings, etc. Cheese and butter should not be allowed to stand on wharves and at stations in a broiling sun. The time of holding these convention meetings he thought might be changed to advantage, as it now conflicts with the holding of Farmers' Institute meetings. Mr. Hodson suggested November or March as a better time. Then the persons who attend the Institute meetings and the speakers who address them would be at liberty to attend the Dairymen's Convention.

OFFICERS ELECTED.

Hon. President, Hon. Thos. Ballantyne, Stratford; Hon. Vice-President, John Prain, Harrison; President, Aaron Wenger, Ayton; 1st Vice-President, Jas. Connolly, Porter Hill; 2nd Vice-President, J. N. Paget, Canboro; 3rd Vice-President, Robt. Johnston, Bright.

Directors.—Div. 7, J. W. Steinhoff, Stratford; Div. 8, Harold Eagle, Attercliffe Station; Div. 9, Jno. H. Scott, Culloden; Div. 10, Thos. Ballantyne, Jr., Stratford; Div. 11, T. B. Millar, London; Div. 12, Jno. Brodie, Mapleton; Div. 13, A. F. McLaren, Stratford.

Representatives.—To Industrial Fair, Toronto: A. F. McLaren, Stratford; J. N. Paget, Canboro. To Western Fair, London: T. B. Millar, London; Jno. R. Isaac, London.

THE PRIZE BUTTER.

Following are the awards on the butter shown at the convention, and judged by Mr. J. W. Steinhoff:

CREAMERY BUTTER IN 56-LB. BOXES—17 EXHIBITS.

1st—E. M. Johnston, Innerkip. Flavor, 43.50; texture, 24.50; color, 15; salt, 10; finish, 5. Total, 98.

2nd—G. M. McKenzie, Ingersoll. Flavor, 43; texture, 24.50; color, 15; salt, 10; finish, 5. Total, 97.50.

3rd—Wm. Waddell, Kerwood. Flavor, 43; texture, 24; color, 15; salt, 10; finish, 5. Total, 97.

4th—Jas. Ireland, Beachville. Flavor, 43; texture, 23.50; color, 15; salt, 10; finish, 5. Total, 96.50.

CREAMERY BUTTER IN PRINTS—18 EXHIBITS.

1st—W. K. MacLeod, Vanneck. Flavor, 43.50; texture, 24; color, 15; salt, 10; finish, 5. Total, 97.50.

2nd—James Ireland, Beachville. Flavor, 43; texture, 24; color, 15; salt, 10; finish, 5. Total, 97.

3rd—J. R. Laing, Avonbank. Flavor, 42.50; texture, 24; color, 15; salt, 10; finish, 5. Total, 96.50.

THE PRIZE CHEESE.

The cheese awards, made by Mr. A. F. McLaren, M. P., were as follows:

SEPTEMBER WHITE CHEESE (21 exhibits).—1st, W. G. Medd, Medina; 2nd, W. J. Goodwin, Brussels; 3rd, T. O'Flynn, Tavistock; 4th, G. M. McKenzie, Ingersoll.

SEPTEMBER COLORED CHEESE (15 exhibits).—1st, W. B. Thomson, Nile; 2nd, Frank Boyes, Kingsmill; 3rd, J. H. Williams, Lyons; 4th, Connolly Bros., Thamesford.

OCTOBER WHITE CHEESE (23 exhibits).—1st, Frank Travis, Courtland; 2nd, Connolly Bros., Thamesford; 3rd, T. O'Flynn, Tavistock; 4th, Alex. McKay, Brookdale.

OCTOBER COLORED CHEESE (15 exhibits).—1st, Geo. A. Boyes, Putnam; 2nd, Jno. Connolly, Malcolm; 3rd, Frank Travis, Courtland; 4th, J. J. Parsons, Jarvis.

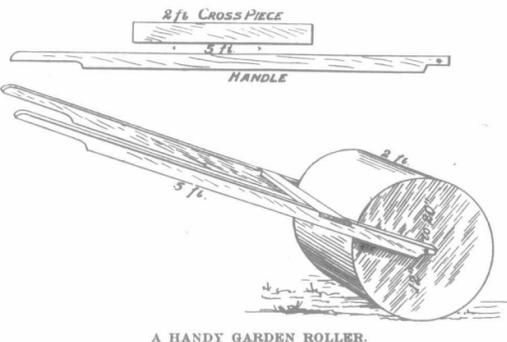
Warming Drinking Water for Cows.

Experiments have demonstrated that by taking the chill off their drinking water, the milk yield of cows has been so largely increased as to pay many times over for the cost. On this subject the Farmers' Gazette, of recent date, has this to say: "Where large numbers of animals are kept it may seem a big order to go to the trouble of heating the water given to them. The ordeal is not, however, so big as it may appear, as all that is required to be done is to add a certain quantity of hot water to the ordinary supply about to be given to the animals. The quantity so added need not be very much—just sufficient to take the chill off the contents of the troughs or other vessels in which water is being given. Dairymen in the neighborhood of towns, who find it necessary to keep up a full flow of milk all through the winter, find it a good practice to warm all the water given to their cows, experience having satisfied them that it pays well to go to the expense of doing so. The milk-yields of cows have been known to suffer very considerably through the consumption of large drafts of ice-cold water. Some dairymen make a point of having all the water given in their cows raised to a temperature of about 60 degrees. In our experience, however, it is not necessary to have it quite so warm as this; some very successful feeders of our acquaintance obtain excellent results by using water heated to only 48 degrees to 50 degrees, even in the very coldest weather."

GARDEN AND ORCHARD.

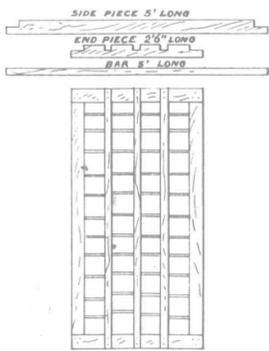
Preparing for Spring.

There are many things that can be done and planned for during the winter months, when time is not so precious as later on in the spring, to extend the growing season and help to make gardening a success. One way is to make a plan of the garden, allotting the parts found most suitable for certain crops the previous season, as though planning out the ground instead of on paper. I have found this to be a great help to me the past four years, as it saves me a lot of worry later on and I know fairly well how much seed, fertilizer and time it would take to prepare and plant the garden. Another useful thing to do is to study up the subject as much as possible and select from the catalogues the varieties you propose planting, and send for the seed required as soon after January as you can, before the spring rush commences. But the preparation of tools and adjuncts for garden work is the subject I will call your attention to. These two useful and cheap homemade contrivances, namely,



A HANDY GARDEN ROLLER.

a hotbed sash and hand roller, are made on a plan that I practice but have not seen published before. A hotbed sash comes very expensive, comparatively, when ordered ready made, but by this plan a very effective sash can be made in spare hours by anyone that can handle tools. It may be a rough job, but for strength and utility is all right. All material should be well planed and joined. Take a two-inch pine plank and rip it up in pieces three inches wide; halve the ends and join them, using wire nails, well clinched. When the four pieces are nailed together and squared, divide the end pieces for the bars. The bars can be an inch square, ripped out of pine board. Cut three slots in the end pieces, an inch wide and chisel them out; then bed the bars, making them so they will fit tight; nail them in with wire shingle-nails, when the sash will look something like the following sketch. Then rip a couple of laths in two and plane them and tack on the center of the bars on the opposite side from which they are inserted; this is to keep the glass apart. Give the sash a coat or two of paint, and it is ready for the glass. I find that waste glass and strips such as you can get at any hardware or paint shop for little or nothing, when cut to the proper width and set in, is quite satisfactory and the loss from breakage is not felt so much as larger-sized glass would be. Small brads can be used to hold the glass, or glazier's points and putty. All the material for the sash ought not to cost more than 25 or 30



SASH COMPLETED, SHOWING HOW BARS ARE LET IN.

cents, except paint and putty. The roller here shown is a very handy implement for firming the ground after the seed is sown, so as to hold the moisture till the seeds are up. Two pieces of 1 1/2 board or plank cut in the shape shown make the handles. The roller can be cut off a round log over a foot (two feet is better) in thickness. Peel off the bark, and smooth it as much as possible, using the plane to take off all lumps and straighten it. Two large wire spikes are then procured, and holes bored in the end of the handles; the spikes are then driven through the holes into the center of the roller. A piece of planed board can then be nailed across the handles, close enough to the roller to knock off any

lumps of clay that would likely stick to it, and the roller is finished, except for painting; a dark color is most suitable. Indian red or brown stone are good colors for sashes or tools. These two ways of making articles are not for the benefit of the man who farms for fun and has plenty of means, but to the everyday working farmer, gardener or amateur I trust this description may be of some value. I may contribute something on two other homemade appliances in the near future if the editor will bear with me as he has with my former contributions. Halifax Co., N. S. E. MACKINLAY.

Gardening Hints for February.

February is a month when little can be done in the way of preparation for the coming season of gardening work. Unless in very favorable localities, hotbeds cannot be started till well on in March, and except for making a few useful homemade contrivances, and studying up the various catalogues and books on gardening, which are of much benefit to the amateur, very little work is possible. A marker is a very great help in dividing up the garden into rows or beds, and in this month, when time is not so pressing, can be easily and cheaply made. It is so simple in construction that I will try and make the description of it as plain as I can without a sketch. Take a piece of 3x4 scantling, about three feet long or over, plane it on all sides, and divide the piece off into spaces four inches apart; bore, with a large-sized brace and bit or a small-sized auger, a number of holes through the scantling so as to make the holes four inches apart, three holes to the foot, or nine to the piece. Then take a round piece of hardwood the size of a broom handle, have it perfectly round so as to fit tightly in the holes, and cut into pieces eight to ten inches long, sharpening one end and insert each piece, or peg, tightly in place so as to make them even in appearance. After the pegs are in and well fitted, bore a hole in the center of the main piece, on a slant, using a larger auger and insert a round piece of hardwood about five or six feet long for the handle. The marker is now finished and is like a clumsy rake in appearance. To use it in a satisfactory way, have the plot of ground properly prepared, raked and ready for the seed or plants. Drive in a stake, tie a line to it and draw the other end taut to the end of the proposed row, and tie to another stake. When the line is in position, about three inches above the ground, adjust the pegs in the marker according to the distance apart you intend to plant the seed. If in a bed, four to eight inches is sufficient for certain seeds; if in rows, for hand culture, one to two feet is the usual distance required. If the marker is now taken and one end of it kept against the line, and drawn the length of the row or bed, as many parallel lines will be marked out as there are pegs in the marker, and all alike and the same distance from each other. If the ground is perfectly smooth and a weight is attached to the main piece, the marks will be sufficiently deep for most small seed, and running the roller over the ground after they are planted will cover them and firm the ground so that their chance of germination is surer. This may seem a complicated method to some, but in an ordinary garden, where seed drills and cultivators are not required, is a simple and expedient plan.

Another thing which can be done is the preparation of trellises or supports for tomato plants. There are many ways of making them. The hoop trellis is the best for a small number of plants, but when a large number is required, brush is a cheaper substitute. Take a barrel hoop, and nail three pieces of laths, sharpened at the end and of equal length, to the inside of the hoop so that the hoop will stand by itself as if on legs. One of these supports, when placed over the plant when it begins to run, supports the plant, keeps the fruit off the ground and increases the yield. The ladder trellis is also suitable for small gardens. It is made by nailing pieces of lath across two poles, each sharpened by stakes driven in the ground. There are other forms of supports, but these are the simplest and the ones I find to be the best for practical results. Care must be taken not to set the support till the plant really needs it. Some varieties are claimed to do well without any help, such as the Dwarf Champion, but the yield cannot compare with the other varieties; besides, they are the better of some support, as the wind and rain often breaks them. These supports can be made during this month and stored in a barn or outbuilding till needed. I have proved by experiment that supporting tomatoes nearly doubles the crop of perfect specimens, and the loss by rot, blight and worms is reduced to a minimum.

Last, but not least, this is the time to send for seed catalogues from reliable firms, such as advertise in the "Advocate." Pick out the sorts considered most suitable in your locality. The most cracked-up novelty, until it has proved to be valuable, is often not as good as the standard sorts. Send an order to the firm, with the money enclosed, and, as is the case with small seeds, the

postage is paid by the seller. The advantage of this plan, which has now become popular, is great. First, the buyer knows what he is getting; he gets the quantity required; he gets the seed fresh, as the firm's reputation depends on its good treatment of customers, and if secured as early as possible, before the spring rush commences, it saves much worry and bother. The plan of running to the corner grocery or drug store, fumbling in a box of musty packages, and then, after planting them, if they do come up, sometimes find something you do not want, should not be tolerated by any gardener who wishes to be successful. Halifax Co., N. S. E. M.

POULTRY.

Promoting Health in Fowls in Winter.

BY JOHN B. PETTIT.

All poultrymen recognize the fact that without healthy, vigorous fowls it is impossible to have a profitable flock. Birds that are "enjoying poor health," as Samantha would put it, will lay no eggs, and a hen that does not lay is not a very good source of revenue for her owner. And the more keenly is this felt during the winter months, when most hens are "out on strike," and eggs are away up in price.

Many of the diseases that poultry fall a prey to are directly traceable to bad treatment and improper management, and it is in the winter time that such management is most prevalent and disease is more in evidence.

One of the surest promoters of disease in poultry is a damp house. To keep the best constructed poultry houses free from dampness is a problem that puzzles all poultry fanciers. But the average farm henhouse is not well constructed. Too often it has a poor, leaky roof, which allows the rain to come through whenever there is the slightest shower, and drip down on to the floor and form a pool, or to give the birds themselves a thorough drenching. Or it may be that a window glass is out and allows the rain and snowstorms to beat in upon the inhabitants of the building. The remedy for these evils does not have to be mentioned, but simple as it is, how often it is neglected! But in the best poultry houses the litter and ceiling and walls will soon get wet unless careful attention is given. The breath of the fowls during the night creates a steam which on cold nights adheres to the walls in the shape of frost. During a protracted spell of severe weather this coating would get quite thick if allowed to accumulate. To prevent this the building should have some of the windows open every day. Generally the interior of the building becomes warm enough in the day to melt this frost, and if the windows are open it will dry up as it melts, and thus the dampness is done away with, whereas if the building were kept closely shut up, the frost would melt, form into drops and run down into the litter and over the fowls and create a very unhealthy state of affairs. Then there are the cracks and knot holes in many buildings that allow drafts to blow in on the fowls and start colds, which often wind up with that dread disease, roup, sweeping away the whole flock.

The cleanliness of the house must also be looked after. The dropping-boards should be cleaned off at least twice per week, and sometimes three times would not be too often. Our main poultry house is 72 feet long, having six departments, and consequently six roosts, and these can all be cleaned in twenty minutes. So it can be seen that it doesn't take a great amount of time to do this work. After each cleaning sprinkle a little fine dirt, ashes or sawdust on the boards, and you will find that it saves more than half the time needed in cleaning, as well as assisting in keeping down bad odors.

Do not fail to supply lots of grit to poultry in winter. It must be remembered that it is by means of this and this only that fowls can grind up their food, and if the grain and other food is not properly masticated, disease will very soon be the result. Crushed oyster shell and fine gravel, secured by sifting through a sieve, or any such grit will do. But do not compel a hen to eat pieces of broken glass. There is danger of serious injury resulting from such a practice. In the summer you will notice that biddy at times relishes a bit of gravel as much as a grain of corn. But these are hidden under the snow in winter, and we have to supply her with something to take their place as best we can.

Care should be exercised in supplying drinking water. All that some fowls get in winter with which to quench their thirst is snow to eat or the drainings from the barnyard. Is it any wonder that "dung-hill" poultry are very often unhealthy? Poultry should have clean, fresh water every day, and plenty of it. It should be given in receptacles that they cannot get their feet into, and these vessels should be emptied every night. In very severe weather in winter the chill should be taken off the water when first given in the morning, to assist in warming the birds up.

Two other things which should be provided

are a dust box and green food of some kind. The best material for the former is road dust. If this cannot be secured, use finely-sifted coal ashes. For green food use cabbage or mangels and sugar beets, or all three. These aid digestion, and must be used if egg production is desired.

Would the breeders of poultry try to at least partially follow these few hints on keeping health in the flock, we believe that there would be less chance of disease, and that their observance, connected with plenty of exercise, will produce hardy, healthy, and profitable poultry.

Profit on 19 Chickens.

Mr. Chris. Moore last week gave the result of a practical experiment in chicken feeding carried on by himself. About ten days before Christmas he bought nineteen Brahma chickens from a butcher, at eighteen cents apiece. Then he proceeded to fatten them systematically. The chickens were well housed, were given a regular grain ration and abundance of soft food, and the water they drank, which was given them at the same hour every day, had the chill taken off it. Last week Mr. Moore killed the chickens. When dressed, they made a fine appearance, looking more like small turkeys than chickens. Fourteen of them weighed eighty pounds, which at seven cents a pound (they were easily worth a cent a pound more than ordinary birds) would be \$5.60, or eighty cents a pair—double the price paid for ordinary chickens. The nineteen chickens cost Mr. Moore \$3.42, and their food cost \$1.25, a total of \$4.67. Mr. Moore had five chickens for his own use, which at forty cents apiece would be \$2. His profit, therefore, was \$2.93 on the expenditure of \$4.67—a very satisfactory percentage for less than four weeks. The experiment is only a further evidence of the wisdom of the farmers bringing their poultry to market properly finished. The farmer who sold the chickens a month ago got only twenty-five cents a pair for them—less than a quarter of their value when fattened. One thing is necessary for success, and that is to have good breeding, so as to get the frame to build on. With Plymouth Rocks, Mr. Moore believes he could have made even better showing.—Orillia (Ont.) Packet.

APIARY.

Why Bees Swarm.

BY MORLEY PETTIT.

It is the nature of all living things to "be fruitful and multiply and replenish the earth," and numerous and varied are the modes of reproduction. Eminent scientists have devoted years of their lives to this study. Not the least interesting method of increase is that of the honey-bee. It is twofold, involving increase of population of the individual colony and increase of colonies by voluntary division, which latter method is called swarming. The phenomenon of swarming may in its first stage be compared to the escape of steam from a safety-valve. The pressure is relieved when about two-thirds of the colony, accompanied by the queen, has issued from the hive. The swarm usually alights and clusters for a time on a neighboring tree, then goes to the woods if not "hived" by the watchful apiarist. The remaining bees in the "parent hive" soon have a new queen and in course of time regain their original population, and the apiary is increased by one.

It is impossible to foretell with accuracy the advent of a swarm, hence in the swarming season, unless artificial means are used to prevent swarms, an attendant must be constantly in the apiary. With the modern system of keeping bees in numerous out-apiaries, such attention is very expensive, and a great deal of thought is at present being given to the complete prevention of natural swarming. This can only be attained by becoming acquainted with the conditions under which bees swarm, and then preventing these conditions. It is an acknowledged fact that under the same conditions some bees swarm more than others, hence it may be safely inferred that swarming arises primarily from a divinely-implanted instinct, stronger in some races than in others. Other qualities being equal, it is obvious which race is preferable. Aside from instinct, there are a number of conditions which usually accompany the "swarming fever," as the desire to swarm is commonly called. Some of these I have tabulated.

(a) The super is crowded with honey, there is still plenty of nectar in the flowers; but the bees have no comb-space in which to store it, not even in the brood chamber, for they soon fill the space there not already occupied by brood, eggs and pollen. Then if the honey-flow continues they invariably prepare to swarm. Super space in the form of frames and starters, or even full sheets of foundation, seldom helps matters. They may work at them, but if they have not swarmed already that season they will soon.

(b) The colony has a queen with great egg-laying powers; but the brood-chamber is too small for her or has been crowded with honey and

pollen, so that she has an egg or a larva in every cell and young bees are not emerging from their cells rapidly enough to satisfy her desire and ability to replace them with eggs. The constant inflow of honey from the fields is stimulating her to lay, yet she must be idle or seek a new home with a wider field of usefulness.

(c) The secretion of nectar in the flowers is continuous but slow. The queen is constantly stimulated by the incoming sweet to lay, while the demands of the harvest are so light that the workers live much longer than is usual in harvest, and the hive becomes over-populated and crowded.

(d) The hive is poorly ventilated or is without sufficient protection from the direct rays of the sun.

(e) Bees often swarm when they are superseding their queen.

Another kind of swarming called "swarming out" is not for increase, but because the bees are dissatisfied, and the colony does not divide, but simply deserts the hive. They may be starving, and think to better themselves by going elsewhere. The hive may be too cold and open, or the combs may be soiled and filthy from dysentery in spring. Sometimes the entrance is too large and sometimes too small, or perhaps the colony is simply weak and discouraged. It is usually in the chilly days of spring that bees "swarm out," and they often try to get into other hives.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to the "Farmer's Advocate" are answered in this department free.

2nd.—Our purpose is to give help in real difficulties; therefore, we reserve the right to discard enquiries not of general interest, or which appear to be asked out of mere curiosity.

3rd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer, as a guarantee of good faith, though the name is not necessarily for publication.

4th.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

Veterinary.

MAMMITS BEFORE PARTURITION.

We have an Ayrshire heifer, coming three years old; expect her to calve soon; udder caked and swollen tremendously. She has a swelling under her belly. We have tried to milk her, but get nothing but bloody milk, and little of that. She is in good health otherwise. We are careful not to feed much but hay and straw. What else can be done? We want to save her, if possible.

Hastings Co., Ont.

D. H.

Inflammation of the udder sometimes occurs before parturition. The swelling along the abdomen need cause no alarm. Give her a pound of Epsom salts dissolved in a quart of water, and feed very lightly on dry food until about a week after calving. Bathe the udder long and often with warm water, or, better still, arrange a suspensory bandage to enclose the udder and fasten over the loins and hips, and apply a warm poultice of bran or other material to be kept up to the udder by the bandage. Keep the poultice warm and exclude all drafts. After bathing, or when changing poultices, rub the udder well with carbolic oil, made as follows: Put a pint of sweet oil in a jar and put therein six drams gum camphor; place the jar in a warm-water bath and allow it to remain until the camphor is dissolved. Do not try to milk until after parturition.

J. H. REED, V. S.

LAMENESS—QUITTOR.

I have a mare, seven years old. About two years ago last summer, her foot broke out just above the hoof at heel, which caused her to be lame. After some time she would get better, and then it would break out again. After breaking, it would grow down near hoof. What is the cause, and best treatment?

Boissevain.

Ans.—Your mare is suffering from what is termed quittor, which will now need the attentions of an expert veterinarian and the thorough use of the knife. Any other form of treatment is likely to be expensive and unsatisfactory. The cause of the trouble is usually a nail wound, in which matter (pus) formed and did not escape by the wound, but made its way out by the coronet. Until the wound is thoroughly opened up and cured no cure need be looked for.

BOTS AND THEIR TREATMENT.

A new remedy for the above troublesome parasite of horses, said to be successful, is bisulphide of carbon. While every horse is said to have bots, in few cases, comparatively, is trouble caused by them. The drug mentioned is given in three-dram doses at two-hour intervals, the drug being given three times. The bisulphide weakens the bot, and they are then in a fit condition to be removed, which is done with a dose of two drams of tartar emetic dissolved in water, and given one day later than the bisulphide. Better results will be had from the use of a purgative dose of aloes than from the tartar emetic. The purgative mentioned should not be used for mares in foal.

OCCULT SPAVIN.

I have a horse, twelve years old, lame on one hind leg. He took lame last June. At times he is all right. Then, again, he will go lame for half a day; sometimes a few minutes only. Then, again, he will be all right for a week. There is no enlargement at all. I pared his hoof down well, but could find nothing wrong. It appears to hurt him to step over in the stall. Can you tell me what is wrong, and what to do for him? He is doing well other ways.

F. E. M.

Melita.

Ans.—Your horse is afflicted with what is termed by the professional, occult spavin. To make the diagnosis more certain, what is termed the spavin test is given. It is as follows: One man takes the horse by the head, and on a word from the examiner trots the horse up. The examiner lifts the leg supposed to be affected and flexes it tight up to the body and holds the leg in that position for a minute or so; that done, he lets the leg down and gives the word to the groom. If the hock joint is affected, the horse will limp. The most effectual treatment is the hot iron; in many cases, a good blistering is, however, sufficient. Would advise consultation with a competent veterinarian, however, before resorting to heroic measures. The formula for a blister and method of application can be readily found in the veterinary columns of almost any of the issues of the "Advocate." We would advise you to get a copy of "Veterinary Elements" (price \$1.50) from this office and read up the subject.

STRINGHALT.

I have a colt rising three years old. He plowed with him a while in the fall, but have done nothing with him since. He has been standing in the stable all the time since we stopped plowing. Lately he is showing symptoms of stringhalt, lifting his feet up high when he moves around in stall. Can you tell me the cause, also give remedy?

E. S.

Ans.—Your colt is certainly affected with a form of chorea, known as stringhalt. It is purely a nervous disease, due to an affection of the spinal cord. The violent movements of the legs are involuntary and uncontrollable. In most cases it is a progressive disease, and the symptoms are usually more marked in cold weather. You certainly have adopted a very poor plan in keeping the colt standing constantly in the stable since plowing ceased. This may have been more or less the cause of the trouble. I would advise you to give him a purgative of about 8 drs. Barbadoes aloes and 2 drs. ginger. Feed bran only until purgation commences. After the bowels regain their normal condition, give regular exercise and give 3-dr. doses of bromide of potassium in damp food three times daily for four or five weeks. As the disease is of recent occurrence, has not become chronic, and has probably been induced by idleness, there is a slight probability that the above treatment may effect a cure.

J. H. REED, V. S.

MUSCULAR TUBERCULOSIS.

I have a very fine beef cow, about eight years old. About two years ago lump came upon soft part of her neck or throat, about half way between the jaw bones; used to break and run freely; would heal up, and break again. After a few months' standing, applied a poultice and removed the lump entirely, but, shortly after, lumps came in various parts of the fore legs, especially on the forearms, and on the back part of knee joint. These lumps are about as large as a robin's egg, and are not attached to the bone or flesh, and are not at all sore to work with. Would the cow be fit for beef in such a state? If not, could you prescribe a remedy?

P. E. I.

SUBSCRIBER.

Ans.—Symptoms given indicate muscular tuberculosis. The cow is certainly affected with a persistent eruptive disease. The absence of soreness in the lumps and the nature of the contents all point to tuberculosis. Her flesh would certainly be unfit for human food, and I do not consider her a safe animal to breed, nor yet to have among other cattle, and as there is little prospect of effecting a cure (for even though each lump were removed by an operation, it is very probable others would form), I would advise you to destroy her and burn the carcass.

J. H. REED, V. S.

HORSE SCOURING.

I have an old horse whose bowels at times are very loose or troubled with scours. I feed him cut oat straw and oat chop, and fed dry or wet it makes no difference. He is 21 years old, and when driven goes like fun if you want him to. He has this trouble more in the first part of the winter after coming off grass, and if driven regularly is all right, but after standing idle a day or two the trouble returns.

E. C.

Ontario Co., Ont.

Ans.—See answer on chronic diarrhea in mare, Jan. 1st issue, page 18, and answer on scouring on road, Jan. 15th, page 57.

Miscellaneous.

AILMENT IN CALVES AND PIGS.

Calves at six months old take a fever. Urine clear and manure soft; nose very hot and dry, with great fever. Do what we can for them, they die. This in hot, dry weather. Pigs cough now and then. Pigs blow like a broken-winded horse, at three months old. They eat well and seem to be healthy.

British Columbia.

Ans.—Calves should be kept in a clean, well-bedded, well-ventilated, darkened shed by day in summer when weather is hot and flies troublesome, and fed a light ration of bran and ground oats. If signs of fever appear, give a dose of castor oil and follow with a raw fresh egg or two daily, shell and all, for a few days. For cough in pigs give greasy food or raw linseed oil in food; give exercise and access to the ground or to ashes, charcoal or grit of some sort. Pigs that blow and puff have "thumps," caused by lack of exercise and too rich food. To prevent this, get them out on the ground in fine weather and compel gentle exercise. To cure, use the same treatment as above.

SUDDEN DEATH OF SHEEP.

I lost three good young sheep last fall. They appeared in good health, but within a few days I found the three paralyzed in the field. They were lying square up, with all four legs under them. If turned over on their side they would turn back to the same position. They had the run of the pasture and stubble fields, and were at liberty to go to shelter in wet weather.

Bruce Co., Ont.

Ans.—Only a post-mortem examination could determine the cause of death in these cases, and even that would likely fail. The probability is that it was apoplexy, caused by rush of blood to the brain. We have known similar cases, and could only attribute them to that cause, as there was no scouring or indications of inflammation of bowels or stomach. As a precaution, we would advise giving salt twice a week, or, better, keep it where the sheep can take it at will.

HAMPSHIRE SHEEP.

Would like to learn, through your paper, what is the difference between the Hampshire Down and Suffolk Down sheep, and if they are a good sheep to invest in, or how do they compare with the Oxford Down or Shropshire?

Ans.—The Hampshires are much like the Suffolk Downs, have strong heads, jet black faces and legs, and are rather larger, as a rule, than the Suffolks, being nearer the size of the Oxfords. The average weight of rams at maturity and in good flesh may be put at 250 lbs., and ewes at 200 lbs., but in show condition choice specimens may go 100 lbs. over these weights. The length and quality of fleece is about the same as that of the Suffolk and finer than the Oxfords. They have good early-maturing qualities, the ewes being great milkers, bringing their lambs forward rapidly. Probably no breed of sheep show such large lambs at four to eight months old. The rams make an excellent cross on common or long-wooled ewes, the cross-bred lambs growing very large and maturing early. The flesh of the Hampshire is well mixed, the lean with the fat, and is juicy and much in favor with the English butchers and feeders.

BRACING A ROUND SILO.

A round stave silo frequently is blown down during the first summer, when empty and dried out. Can this be prevented by a simple and cheap means, or is it sufficient to keep the bands tight as staves shrink? There are those who have had experience in this way who would oblige by giving it, or you can give us the information at your hands.

Halton Co., Ont.

Ans.—If silo is near to a building it can be sufficiently tied to the building either by means of two boards nailed to silo on building, or by means of two strands of strong fence wire from opposite sides of silo to building. We have seen this proven by both methods satisfactorily. In the absence of a building near enough, a tree or a well-braced post in the ground might do to tie to. Can readers suggest something better?

BEST TURKEY FOR MARKET.

Kindly let me know, through the "Advocate," which is the best turkey for the market and the most profitable to raise—the White Holland or the Bronze?

Wellington Co., Ont.

Ans.—The Bronze is generally the favorite, being hardy, good foragers, and making good weights.

PROBABLY NARRAGANSETT TURKEYS.

I notice in your paper a party from B. C. inquiring about English Gray turkeys. This name is not mentioned in the "Standard," and I am convinced they are the same variety as the Narragansett. A turkey under the name of "Cambridge," bred in England, is the same turkey as Narragansett, and I believe English Gray is the same variety under another name.

Middlesex Co., Ont.

A. ELLIOT.

OYSTER-SHELL BARK-LICE - KEROSENE EMULSION.

1. How often should apple trees be sprayed in winter for oyster-shell bark-lice? 2. How is the kerosene emulsion prepared for winter spraying? 3. How is the kerosene emulsion prepared for killing lice on pigs?

Wellington Co., Ont.

Ans.—1. For winter applications, lime white-wash or a solution of soft soap and washing soda is recommended, first removing the rough bark from the trunk. The insect winters in the egg state, and the wash corrodes the scale, allowing the eggs to be washed out and destroyed. The scale insect hatches out in May and spreads over the bark. They soon begin to secrete a shell. Being a sucking insect, at this season the affected trees should be sprayed with kerosene emulsion, tobacco water or a 25 per cent. crude petroleum solution.

2 and 3. To make kerosene emulsion, take hard soap 1/2 lb., boiling water 1 lb. and kerosene (coal oil) 2 gallons. Dissolve the soap in the hot water, and add the kerosene. Then churn with the force pump in the vessel 5 to 10 minutes, till it emulsifies or becomes creamy. In this condition it may be kept till needed. Dilute at the rate of one gallon to about 12 gallons of soft water, and for bark-lice spray the trees early in spring and about the middle of May. For lice on pigs it may be made stronger.

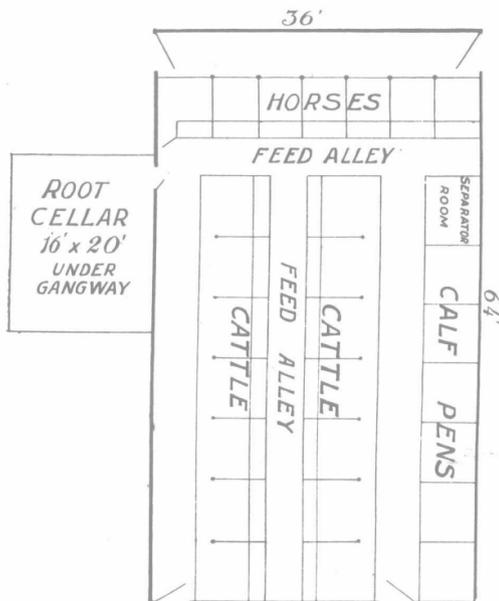
ARRANGEMENT OF STABLE.

1. I intend to remodel my barn next spring, and would like very much if you could give me some information about laying out the stabling so as to make it as handy as possible for choring. My barn will be 36x64 feet inside of wall. I would like to have about twenty-five head of grown cattle and have them tied, also calves and horses. I have six horses at present, but intend to have eight or nine. Also a room for cream separator and root-house.

2. Would like to know if bolting grain (peas and barley) for pigs is as good for them as getting it ground?

Huron Co., Ont.

Ans.—1. The sketch we give shows a plan of stable with room for seven horses, 27 cattle tied up, six boxes for calves, and a separator room. Three of the double cattle stalls are six feet wide, the others are seven feet. The passages behind the cattle are 5 1/2 feet wide, the feed passage



5 feet. A couple of colts could be tied in a cattle stall if more horses are kept than the stable will hold. More room could have been made by having horses stand with heads to the wall and feed from behind or above. It is much handier and safer, however, to feed from the front. The front of horse stable should be boarded tight to ceiling, so as to be shut off completely from the cow stable. By having chutes for hay coming down into the feed passages, feeding could be done conveniently. We could find no room inside for cellar, and so suggest what is quite common now, building it in the gangway.

2. Authorities now agree that cooking adds nothing to the value of grain for stock. Boiling would soften the grain, though, so that pigs could chew it more easily, and it would be as good for them as if ground. Some small amount, however, would be wasted by being swallowed whole and passing through them undigested.

CEDAR BLOCKS FOR A STABLE WALL.

Does cedar cut 18 or 20 inches long and bedded in mortar make a good wall for stable under a barn? If so, give best plan to build same.

Ans.—We have had no experience with a wall of this kind, and have never seen one so built. Can any of our readers who have answer?

FEEDING RATIONS FOR CATTLE.

Please to let me know, through the "Farmer's Advocate," how much hay and chopped mill-feed should be fed daily and at each feed to a last spring's calf, to a yearling, to a two-year-old, to a three-year-old, and to cows, and also to colts and horses? How prepared, and how many times a day should it be fed to them?

Antigonishe Co., N. S.

Ans.—No hard-and-fast rule can be laid down as to amount of feed that should be given that will apply in all cases to animals of the same age. The judgment and discretion of the feeder must be exercised, as some animals of the same class require more and some less to keep them in good condition. Then much depends upon the purpose or object in view. If an animal is intended primarily for beef it needs to be fed with the object of putting on flesh rapidly and gaining steadily in weight. Such an animal requires to be fed more liberally and with richer foods than one intended for dairy purposes, which may be carried along with rougher and less expensive foods until it comes into milking, when, to secure the best results, the feeding should, of course, be more liberal and the feed of better quality. The general rule is to feed, of hay, what the animals will eat up clean without wasting any, and of meal of mixed grains and bran for keeping cattle in thrifty, growing condition, about 1/2 lb. per day for each 100 lbs. of its live weight, and for fattening cattle or milking cows at the rate of 1 lb. per 100 lbs. of their weight. Cattle and horses are usually fed three times a day, but it is claimed by some that they will do quite as well fed twice daily, the same amount being given, provided they are allowed to rest quietly in the interim without being disturbed. It is largely a matter of forming a habit. If they are used to being fed five times a day they will look for it and fret if it is not forthcoming at the usual times, but, generally speaking, feeding three times a day in moderate quantity is safest. The usual feed of oats for working horses is one gallon three times daily. For idle horses one half the quantity, together with a fair amount of hay, should be sufficient, and colts in proportion according to age.

BUTTER NOT COMING.

We have churned three times and did not get butter either time. We had the cream at 64 degrees F., and the cream was ripe, but not too sour, as we were only about a week gathering a churning. After we had churned about half an hour, the cream got very frothy, but no signs of butter. We churned over four hours and it was still the same and tasted bitter. We feed the cows cut straw and cornstalks and mangolds, sprinkled with salt, and bran mash once a day. What is the trouble?

Huron Co.

Ans.—Probably churning at too low a temperature. In cold weather, with all "stripper" cows, there is often trouble in getting the butter to come. Cream kept a long time in the cold is apt to develop bitterness. Ripen your cream for 24 to 48 hours, and churn at 70 degrees F. We have heard of similar cases this winter where the cream was heated to 75 degrees, and then the butter came in about half an hour. Very high temperature is prejudicial to quality of butter, however.

FLAX ON NEW LAND.

Having been a subscriber to the "Farmer's Advocate" for some time, I must say that I look forward to the coming of each issue. I intend settling in the West this spring, and would like your opinion on the question of flax growing.

1. Can flax be grown successfully on new breaking so as to harvest and backset the land in the fall?

2. What is the selling price of flax in the Territories?

Stromness, Ont.

A. A. D.

Ans.—1. In a good many sections of the West flax can be grown successfully on breaking. The Mennonites of Southern and Eastern Manitoba have for many years sown flax on any land broken before the first of June, seeding about half a bushel to the acre. It can then be backset after the crop is off. There are few farmers outside the Mennonite reserves, however, that favor this plan, as it tends to encourage weeds and to dry out the sod so that it does not rot well. In fact, some people think that flax-growing is very bad for the land, but in our own experience we have not found any detrimental effects except from the encouragement of weeds, as flax is a very slow grower at the start and is a delicate plant, which gives weeds a good opportunity to get ahead.

2. The selling price of flax this fall in Winnipeg is about \$1.15 per bushel. There is very little grown in the Territories, and we have not seen any quotations from Western points, but it would be Winnipeg prices, less freight.

GOING IN DEBT FOR LAND.

Can a young man who has done well on a large rented farm risk going heavily in debt to buy a farm?

Huron Co., Ont.

JAS. H. BONE.

Ans.—See answer to question under "Starting Farming," in this issue.

TREATMENT OF NEGLECTED FARM.

Would you be kind enough to give me a short outline how to work a 200-acre farm. It has about 40 acres bush. The land has not been worked or looked after the last ten years, and there is quite a lot of wild oats on it.

Waterloo Co. H. J.
 Ans.—In all undertakings—farming no exception—it is well to work according to some definite, agreed-upon plan. Our correspondent says nothing about stock, but we would suggest, first, that stock sufficient to consume most of what is grown be kept. The particular class of stock that should be kept depends upon the inclination of the owner, the suitability of the farm, and the surroundings, such as markets, creameries, cheese factories, etc.

Second—Follow a regular system of crop rotation and have the arable portion of the farm divided into even-sized fields, in number corresponding to the years of rotation. Among the advantages of this method are that each part of the farm is in turn manured, has a cleaning crop, and has a change of crops. In any rotation that may be followed, one of the crops should be clover, another hoe crop—corn and roots. Avoid, in short, rotations especially having two grain crops in succession. We give examples of rotations of different lengths. Three-year rotation—hoe crop, spring grain seeded, clover; four-year—hoe crop, spring grain seeded, clover and timothy; hay or pasture; five-year—the same, with another year's pasture; a six-year—hoe crop, spring grain seeded, hay, hay, pasture, oats or peas or fall wheat. So on up to eight years. Variations of above will suggest themselves; manure before hoe crop. If wild oats are troublesome, drop spring grain, with the exception of barley, as much as possible, and grow fall wheat, hay, etc. The wild oats will thus be cut before they shed their seed. Grind all grain fed, and buy clean seed. Let the hoe crop, whether hand hoed or not, be kept clean. Otherwise it adds to the trouble instead of curing it.

Another totally different plan from what has been given would be to lay the land down to pasture, buy stock in spring and sell in fall, cultivating only a small clean portion of the farm.

MARKETS.

Every reader is invited to write something for this department that other farmers ought to know. Do it while you think of it. Put it on a post card if you haven't time to put it in a letter.

FARM GOSSIP.

Grain for Seed Improvement.

To the Editor "Farmer's Advocate":

Sir,—Another distribution will be made this season of samples of the most productive sorts of grain to Canadian farmers for the improvement of seed. The stock is of the very best and has been secured by the Director of the Experimental Farms from the record-breaking crops recently had in the Canadian Northwest. It will be worth while for farmers generally to renew their seed of oats when varieties which have produced more than 100 bushels per acre can be had. The distribution this spring will consist of samples of oats, spring wheat, barley, field peas, Indian corn, and potatoes. Every farmer may apply, but only one sample can be sent to each applicant, hence if an individual receives a sample of oats he cannot also receive one of wheat, barley or potatoes, and applications for more than one sample for one household cannot be entertained. These samples will be sent free of charge through the mail. Applications should be addressed to the Director of Experimental Farms, Ottawa, and may be sent in any time before the 15th of March, after which the lists will be closed, so that all the samples asked for may be sent out in good time for sowing. Parties writing should mention the sort of variety they would prefer, and should the available stock of the kind asked for be exhausted, some other good sort will be sent in its place.

W.M. SAUNDERS,
 Director Experimental Farms.
 Ottawa, Jan. 15th, 1902.

Cumberland County, N. S.

The farmers in this county should generally be in good spirits. Crops were fair, and prices considerably above the average. Hay, which is our staple crop about these marshes, was above an average crop, and the demand is good. Grain of all kinds was a light crop, and although the price of bran and other mill feed is very high, considerable is being imported. Breeders of pure-bred stock report trade active and prices satisfactory. Fewer cattle are feeding than for some time past, but perhaps more is being done in the dairy line. More roots, especially turnips, are raised than formerly, but vastly more might be profitably raised. Until the first of December we had an exceptionally fine and dry autumn, and have had very little cold yet. The mercury has not yet reached zero.

Most Valuable.

Sir,—I take pleasure in acknowledging the receipt of copies of the Christmas number of the "Farmer's Advocate" which you kindly sent. I consider your paper most valuable, and in proof of my opinion I have taken the liberty of making many excerpts from it in the report of this Department now being issued, a copy of which will be sent to you in due course.

I have the honor to be, sir,
 Your obedient servant,
 J. R. ANDERSON,
 Deputy Minister of Agriculture.

Victoria, B. C.

Macdonald Seed Grain Competition.

The selections of wheat and oats received from competitors in the "Seed Grain Competition" for which Sir William C. Macdonald, of Montreal, donated the sum of \$10,000, to be distributed in prizes, have been examined. The competitions are being conducted by about 800 farms throughout Canada. These prizes are awarded to boys and girls who have performed specified work in connection with the selection of seed grain. A set of prizes was arranged for each province in the Dominion, the Northwest Territories being considered as one province for this purpose.

The selections received for the yearly competition of 1901, each contained 100 selected heads of the variety with which the competitor is operating. Twenty-five points were given for every gram (by weight) of grain of good quality contained in those 100 heads, and one point was given for each and every grain which the 100 heads contained.

The expressions of appreciation which have been received from the parents and teachers of many of the boys and girls who have undertaken the work of managing a seed-grain plot have been most gratifying. The "nature study" connected with the selecting of seed grain according to the system which competitors are asked to follow will be as helpful as it has been interesting. I am convinced that a systematically continued selection of seed grain from the most vigorous and productive plants in the plots will lead to great improvement in the crops throughout the whole country.

The educational influence of the "Seed Grain Competition" is having a fine effect upon the boys and girls whose school years are nearly ended. These boys and girls may not again have an inducement sufficient to awaken and to develop a liking for careful and educational study of nature and nature's methods.

As is now well known, Macdonald Manual Training Schools have been started in seventeen cities or towns in Canada as object lessons of improvement and progress in educational aims and methods in public schools. The cordial and all connected with which they have received from the various provinces and school systems of the deep pleasure and satisfaction have been a source of deep pleasure and satisfaction to Sir William C. Macdonald and myself. It is our desire and hope that the plan now about to be begun for the purpose of assisting in the improvement of education at rural schools by means of school gardens, manual training and household science may bring real and lasting benefits to all in rural communities.

The cheques for the prizes for 1901 have been sent to the boys and girls. Some of these who did not receive a prize in the yearly competition of 1901 may win a prize in the main three-year competition which ends with the season of 1902.

The names of the successful competitors are on the following lists, in the order given, there being ten prizes: \$25, \$20, \$15, \$12, \$10, \$8, \$5, \$5, \$5, \$5.

LIST OF SUCCESSFUL COMPETITORS.

- FALL WHEAT (ONTARIO).**
 Bertie Andrew & Co. Sheridan
 Willie Murray Avening
 Ernest Cochrane Silver Water
 Alfred Mountain Avonbank
 Bessie Brimicombe Goderich
 C. E. Gies Heidelberg
 Claud Blake Lyons
 W. J. Armstrong Constance
 W. J. Dunlop McDonald's Corners
 Adam Stevenson Avonbank

- SPRING WHEAT (ONTARIO).**
 Pearl Henricks Headford
 Charlotte St. George & Co. Tramore
 Walter H. Farthing Silver Water
 W. J. Ross Braemar
 Marguerite Dellandrea Golden Valley
 John McN. Heslip McKellar
 Edith Fleming Ivanhoe
 David Fleming Ivanhoe
 Ormiston Brown Morley
 R. G. Brown Chard

- OATS (ONTARIO).**
 Wilbert Prouse Goderich
 John McDonald Porter Hill
 E. & M. Cochrane Ayr
 W. L. Stephens Aurora
 Maggie Marshall Doe Lake
 Edgar Sullivan Watford
 Harvey Lennox Magnetawan
 Alfred Mountain Avonbank
 John F. Cullingham Palermo
 Fred Wright Glanworth

- SPRING WHEAT (QUEBEC).**
 Calixte Perron Les Eboulements
 Telesphore Poirer Riviere Ouelle
 Amanda Courberon Cacouna
 Jos. A. Moore Huberdeau
 Henri Turgon Normandin
 Xavier Fortin St. Luc de Matane
 Chas. Tremblay Les Eboulements
 Almy Champoux St. Gertrude
 Jos. Girard Les Eboulements
 Chas. Jean D'Astons Notre Dame de Rimouski

- OATS (QUEBEC).**
 David Belanger Trois Pistoles
 Armand Fortin St. Luc de Matane
 C. & F. Courberon Cacouna
 Jos. Dery Les Grande Desert
 Arzelia Cornelier St. Liboire
 R. Anna Levasseur St. Ulric de Matane
 M. & C. Johnson Foster
 Augustin Cantin Normandin
 Emile Desilets St. Camille
 Phillippe Tailleur Ripon

- SPRING WHEAT (P. E. ISLAND).**
 Samuel B. Waugh North Bedeque
 Flora C. Livingston Hopefield
 Irene S. Wigginton Bridgetown
 Mary L. McNeill Elmsdale
 Daniel J. McLeod Rose Valley
 Malcolm McDonald Hampton
 Clara B. McLean Point Prim
 Willie A. Jenkins Vernon River Bridge
 Malcolm A. McNeill Little Sands
 Maud Halliday Belfast

- OATS (PRINCE EDWARD ISLAND).**
 Chas. A. McKinnon Graham's Road
 Mary B. McLeod South Granville
 Mabel McLean Lot 10
 Samuel J. McLeod Rose Valley
 John B. Livingston Hopefield
 Geofride Arsenault Urbinville
 James Marshbank New Annan
 Samuel Waugh North Bedeque
 Lizzie Kennedy Southport
 Simon J. McLean Point Prim

SPRING WHEAT (MANITOBA).

- Rowland C. Lumb Cartwright
 Gwendydd G. A. Lumb Cartwright
 George and Mary Hampton Rapid City
 Stewart E. Sherris Rapid City
 George Doney Thornhill
 J. Cundy, Jr. Rapid City
 Hugh Thompson Roden
 Andrew Thompson Roden
 Evelyn Cundy Rapid City
 Ernest Borland Clear Springs

OATS (MANITOBA).

- George and Mary E. Hampton Rapid City
 F. & R. Lundgreen Scandinavia
 Andrew Thompson Roden
 George Dow Gilbert Plains
 Earl A. L. McLaughlin Stockton Station
 John Wells Roland
 Thos. McKeand Medford
 Marion Sherris Rapid City
 C. & E. Lundgreen Scandinavia
 John S. McBain Portage la Prairie

SPRING WHEAT (N.-W. T.).

- Edith Fraser Steep Creek
 Marie L. Ripand Duck Lake
 Silas E. Wheeler Penhold
 Peter R. Abrams Rosthern
 S. Kirkham Saltcoats
 Emma Wheeler Penhold
 Martin Hamm Hague
 Steine Einarsson Logberg
 Peter Keith Fitzmaurice
 Arthur Mitchell Grenfell

OATS (NORTHWEST TERRITORIES).

- Talbot E. Steuck Abernethy
 Silas E. Wheeler Penhold
 Melrose Provost Flett's Spring
 S. Kirkham Saltcoats
 Jos. Neumeier Langenburg
 Annie Bourne Innisfail
 Marie Ripaud Duck Lake
 Arthur Mitchell Grenfell
 Florence Whiteside Star
 Clair Hunt Knee Hill Valley

SPRING WHEAT (NEW BRUNSWICK).

- J. B. Cormier Elm Tree
 Jos. A. Lagacy Green Point
 John B. Nichol Bathurst Village
 Jennie Mullin Peticoadiac
 Earl H. Dunphy Moran
 Maggie B. Keith Keats
 Basil J. Power Bathurst Village
 Jean Fournier Green Point
 Burton Hill St. Stephen
 Elise Rasmussen Foley Brook

OATS (NEW BRUNSWICK).

- Allan P. Nicol Bathurst Village
 Wilber McDonald Shippigan Island
 Ethel M. Shaw Tobique River
 Carl Rasmussen Foley Brook
 Lorne Colpitts Peticoadiac
 Harold P. Sorenson Foley Brook
 Basil J. Power Bathurst Village
 Carrie E. Read Read's
 Chas. H. McNutt Jeffrey's Corners
 Kenneth J. King Smith's Creek

SPRING WHEAT (NOVA SCOTIA).

- Charles Keys Elmsdale
 Geo. Mackay Millville
 Donald Hayman Westville
 Bertha Mackay Rogers Hill Center
 Aubrey Ripley Nappan
 Harold Barrs Hazel Hill
 J. R. Semple Brule
 John W. Sutherland Waterside
 Lawrence R. Treen Blue Sea Corner
 Kenneth Isley Berwick

OATS (NOVA SCOTIA).

- Bertha McKay Rogers Hill Center
 George Mackay Millville
 C. de Blois Denton Rosway
 Maggie Chisholm Ashdale
 Fern Sommerville Waterville
 Minnie D. Jollymore Mill Cove
 Milton Robinson Berwick
 Harry Brown Wallace Bay
 Christina Mackay Eurka
 Alma Long Dalhousie East

SPRING WHEAT (BRITISH COLUMBIA).

- Win. A. Middleton Vernon
 V. W. Menzies Pender Island
 Gilbert Mohr Enderby
 E. & H. Mohr Enderby
 Wm. Petersen Gabriola Island
 D. & D. Graham Armstrong
 Gordon Frederick Ladner
 Percival French Vernon
 Harry B. Biggar Langley Prairie
 Ella J. McLellan Beaver Point

OATS (BRITISH COLUMBIA).

- Morrice Middleton Vernon
 Ella J. McLellan Beaver Point
 D. & D. Graham Armstrong
 Gordon Frederick Ladner
 Harry B. Biggar Langley Prairie
 Gilbert Mohr Enderby
 Henry Petersen Gabriola Island
 Flora Petersen Gabriola Island
 Howard Mohr Enderby
 Malcolm Barr Mission City

N. B.—In awarding the prizes in the yearly competition with wheat for the Province of British Columbia, Masters Gordon Frederick, Percival French and Harry Biggar were reduced because of failure to select, according to instructions, the required amount of large heads to produce seed for their seed-grain plot for next year.

Worth Ten Times the Cost.

The readers of your paper keep far too silent on the benefits derived from it. It would be far better for all to let their light shine as brightly as possible. No person who reads your paper intelligently can help but be benefited more than ten times its cost. Wishing your staff of writers, and especially the person who writes the Quiet Hour, a happy and prosperous year,
 THOMAS A. BOWLES.
 Durham Co., Ont.

Hay for Klondyke.

In Mr. R. M. Palmer's recent article on "British Columbia Agriculture in 1901," it was stated that 70,000 tons of hay were required annually for the Klondyke. It should have read 10,000.

Crop Report of Experimental Farms.

Bulletin No. 39 of the Dominion Department of Agriculture, issued in December, 1901, by Dr. Wm. Saunders, Supt. of Experimental Farms, shows the results obtained in that year from the cultivation of a very large number of varieties of grain, fodder corn, field roots, and potatoes. The following is a summary of results as regards some leading crops.

The twelve varieties of oats which have produced the largest average crop for the past six or seven years on all the Experimental Farms, and hence, may, perhaps, be regarded as worthy of being placed at the head of the list for general cultivation in Canada, are the following:

	Per acre.
	Bush. Lbs.
1. Banner	76 14
2. American Beauty	75 33
3. Mennonite	75 23
4. Holstein Prolific	72 31
5. Bavarian	72 21
6. Buckbee's Illinois	72 4
7. Golden Beauty	71 32
8. Columbus	71 17
9. Golden Giant	71 8
10. Early Golden Prolific	71
11. Abundance	70 20
12. American Triumph	70 20

An average crop of 72 bushels 24 lbs. per acre. The twelve varieties of spring wheat which have produced the largest crops for the past six or seven years, taking the average of the results obtained on all the Experimental Farms, are:

	Per acre.
	Bush. Lbs.
1. Preston	33 58
2. Wellman's Fife	33 8
3. Monarch	33 8
4. Goose	32 50
5. Huron	32 45
6. Red Fife	32 30
7. White Fife	32 29
8. Hungarian	32 10
9. White Connell	32 6
10. White Russian	32 6
11. Rio Grande	32 6
12. Pringle's Champlain	31 56

An average crop of 32 bushels 36 lbs. per acre. The six varieties of Indian corn which have produced the largest crops for the past five to seven years, taking the average of the results obtained on all the Experimental Farms, are:

	Per acre.
	Tons. Lbs.
1. Cloud's Early Yellow, 5 yrs.	19 1,001
2. Red Cob Ensilage	19 651
3. Rural Thoroughbred White Flint	19 134
4. Selected Leaming, 6 yrs.	18 1,210
5. Early Butler, 5 yrs.	18 958
6. Giant Prolific Ensilage	17 1,976

An average crop of 18 tons 1,655 lbs. per acre. The results of the testing of varieties for another year strengthens the conclusions reached in the past as to the importance of choosing the best and most productive sorts for seed if we are to realize the largest crops. Further experience also confirms the view that there are marked and fairly constant differences in the productiveness of varieties grown side by side, under similar conditions. A few points in support of this will be cited.

Of the 41 different sorts of oats which have now been under trial for six or seven years at all the Dominion Experimental Farms, only 18 of these have at any time appeared in the list of the best twelve. Hence many of the same varieties appear every year in the productive list. The average crop given by these 12 best sorts for the past six or seven years has been 72 bushels 24 lbs. per acre, while the remaining 29 varieties have averaged during the same time 66 bushels 2 lbs., a difference in favor of the most productive sorts of 6 bushels 22 lbs. per acre. This receives additional significance when we recall the fact that every bushel of oats added to the average crop of the Dominion puts about one million dollars into the pockets of Canadian farmers.

In barley this constancy in productiveness is even more marked. Of the 30 different sorts which have been under trial for the past six or seven years, 10 of these have appeared in the best 12 every year for the whole period and 14 only have found their way during this time into the list of the best twelve. While the 12 most productive sorts have given an average crop for the whole period of 45 bushels 30 lbs. per acre, the remaining 22 sorts have averaged for the same period 41 bushels 45 lbs., or nearly four bushels less per acre.

In the returns for the trial plots of spring wheat similar evidence is found. Of the 31 varieties of this cereal which have been tested for six or seven consecutive years, 8 of these have appeared among the most productive every year for the whole period. Comparing the best twelve varieties for 1899 with the best twelve for 1900, we find that eleven of them are the same, and comparing the best twelve for 1900 with that for 1901, we find the lists exactly the same.

Similar evidence could be furnished from the trial plots of all the other crops, but enough has been brought forward to show that the opinions advanced are well founded. Should it become a general practice among farmers to choose for sowing those varieties which have been shown to be most productive and give them reasonably fair cultivation, there is no doubt that this would result in a material increase in the average crops of the country and thus make farming increasingly profitable.

Prince Edward Island.

We are enjoying the most delightful winter weather ever experienced on the Island. The thermometer has never been down near zero yet, and the days are most all bright and clear. There is just snow enough to make excellent travelling or to do the farm hauling. It is ideal weather for stock, especially where they are not very warmly housed. Fodder is somewhat scarce all over the Island, and very much so in some parts, and the high price for oats has tempted many farmers to sell off considerable of that grain, thus adding to the scarcity. However, as the stock of the country has been so much reduced in the fall, there will be no fodder famine here this year. There is less stall-feeding of beef here this winter than usual. Many of those that used to feed through are marketing their cattle now. Winter dairying, though carried on at most of the stations, is a very much smaller business than last year. It takes more courage than many farmers possess to feed 50-cent oats to milch cows even though butter is a good price. Quite a large number of hogs are being marketed yet, though the rush in that business is over for this season. The larger part of our hogs are shipped in carcass to the other Maritime Provinces.

Our Department of Agriculture have been purchasing pure-bred stock in Ontario. They have al-

ready bought a pure-bred Clydesdale stallion and some bulls, but they have not been brought here yet, and we have not been informed of their breeders or breeding.

Our Dept. of Agriculture, in connection with the Dominion Department, are carrying out quite a vigorous agricultural campaign here this winter. The meetings are under the auspices of the recently-organized Farmers' Institutes. The speakers are Prof. A. G. Gilbert, Poultry Manager Experimental Farm; H. R. Ross, of Sussex, N. B., and a Mr. Thomson, of Ontario, with some local talent. The meetings are being well attended by the farmers. Apart from this, the local Institutes are holding a great many agricultural meetings in their own localities. We think this educational campaign will have a marked effect on the future of our agriculture. W. S. January 21st, 1902.

Perth County, Ont.

As usual, our Farmers' Institute meeting was well attended. Transportation and sugar beets came in for the greatest share of attention. The Institute had sent a delegate to Michigan to investigate, and his report was heard with intense interest. Altogether it was a very favorable one. He said that to him the magnitude of the works was a revelation. Beets were coming in to the factory by the carload and scores of wagon loads, some of the latter coming as far as 20 miles, and frozen as hard as could be. The yield from an acre ran from ten to twenty tons, and equalled as high as one hundred dollars in some cases. The sentiment of the meeting seemed to be very favorable to the project of establishing a factory in St. Mary's. Certainly the town is favored with natural advantages, having abundance of water, lime, and comparatively cheap labor, and being situated in the midst of a community of agriculturists well versed in root cultivation and largely engaged in dairying, which might well go hand in hand, provided the pulp were returned to the farm. The principal objections to the project were only those which might be raised in regard to the establishment of a factory in any part of the Province, viz., the scarcity of labor, the fact that cane sugar can be produced cheaper than the beet, the low tariff, which is not improbable, and which might end in swamping the industry. The town has received several offers from capitalists to locate a factory here, and there certainly appears to be no more favorable location available in Western Ontario.

The question of railway discrimination in freight rates has evidently taken a firm hold of the minds of farmers, judging from the applause with which the remarks of the speaker on transportation were received. There is a growing feeling that it is the duty of the Institute to discuss these questions, even though they be a little "hefty" for untrained minds and often of a semi-political character.

In the evening meeting, Miss Laura Rose, Dairy Instructor at the Agricultural College, gave her popular lecture on the advantages of country life, slightly contrasting it with that of the town, and showing conclusively how well it would bear the comparison.

Unfortunately for agriculture, the Good Roads by-law for the town of St. Mary's was badly snowed under at the last election. This is the more to be regretted, as it seems probable that permanent improvements could be more cheaply made and maintained than by the present system of patching.

Many farm hands are now being hired for the summer, at a slight increase on last season's wages.

The remodelling of barns is constantly bringing forward the question as to what is the best form of power for grinding grain, cutting feed, etc., and of late years the tendency has been to favor the wind engine. But we notice that some, after a few years' standing, have become badly impaired. This is particularly so of a certain American make. At best they are too variable to be a satisfactory power, except for the lighter work. What we would like to see is an electric-car line on each concession connecting the villages and supplying electric power to the adjacent farms. We understand that such a project is on foot in our county to connect the City of Stratford with the town of Mitchell. If the line could carry heavy freight it would greatly lessen the expense in maintaining our none too passable roads. J.H.B.

Oxford Co., Ont.

We are having a beautiful winter, just enough snow to make good sleighing, and the temperature just about right. Live stock are doing very well. If we notice the cattle rubbing themselves much, we apply some insect destroyer (there are various kinds pretty good), or a mixture of half coal oil and half linseed oil does very well, rubbed into the skin with a brush or by the hands.

I think we are on the eve of a needed improvement in the way our threshing is done. Our threshers have been testing a blower to elevate the straw and chaff instead of the old-style straw carriers, and it is said that the blower will save at least three men in the straw mow or stack, as it will put the straw wherever required and send it even as high as the car track in the barn, and then no man will require to be directly in the dust, as the blower can be swung around anywhere without stopping the machine. Some other threshers have got a cutting box attached to the separator, which cuts the straw and sends it up through a blower to any desired point in the barn. It is said that by this method no help is required in the straw mow at all, as the cut straw goes into so much less space that if there is little empty space in the barn to commence with the cut straw can be all put in. But there are some drawbacks to this method. It takes so much extra power to drive the cutting box that an ordinary threshing engine is scarcely capable of doing the work in a safe or satisfactory manner. Then it is feared that there is more danger of fire. Our local fire insurance company had to pay the loss of one barn and contents that was burned up while a combined separator and cutting box was being used. Whether the fire was caused by fire flying from the cutting-box knives or by twine collecting around the axle of the cutting box is not known, but the fact remains that the fire originated about the cutting box. The whole outfit was burned. Then, again, if a farmer had some straw left over before harvest and wanted to move it out to make room for the new crop, he would find it a troublesome matter to handle the cut straw. I am therefore in favor of the blower to blow the straw in preference to the cutting box and blower, but certainly either will be a very great improvement on the old-style straw carriers.

Apples and eggs are selling for almost any price the farmer has a mind to ask for them, but very few have any of these commodities to sell. Our hens have just lately begun to come to a sense of their duty in endeavoring to do something to recoup us for the feed they eat. Our pigs are doing nicely, very thrifty on mangolds (raw), a little corn twice and slop once a day. Live hogs are keeping pretty steady in price, at about 6 1/2 cents. Beef cattle, according to quality, all the way from 3 1/4 to 5 cents, and there is considerable demand for beef. D. L.

Toronto Markets.

The receipts of live stock at the Toronto Cattle Market for the two weeks ending Saturday, January 25th, were large, a total of 390 car lots all told, composed of 6,732 cattle, 5,525 hogs, 4,848 sheep and lambs, and about 120 calves.

The quality of the fat cattle has not been as good as the season of the year should command. Too many green and too few choice heavy, finished exporters, and a very large number of light, half-finished young butchers' cattle have been brought forward.

Trade has been brisk for all choice, well-finished butchers' and shipping cattle, while the medium grades have sold at lower prices. Prices for sheep and lambs have ruled about steady, while the market for hogs has declined. Good calves are in demand, and are selling well at 5c. to 5 1/2c. per lb., live weight.

Export Cattle.—Extra choice lots of heavy exporters sold at \$5.15 to \$5.40 per cwt.; light green exporters sold at \$4.25 to \$4.40 per cwt.; and the better class of butchers', weighing from 1,100 to 1,200 lbs. each, sold for export purposes at \$4.60 to \$5 per cwt.

Export Bulls.—Export bulls have not been selling as well as for some time past. Choice heavy bulls sold at \$3.85 to \$4.25, and light at \$3.40 to \$3.75 per cwt.

Export Cows.—Export cows of good quality, 1,100 to 1,200 lbs. each, sold at \$3.50 to \$4.

Butchers' Cattle.—Choice picked lots of butchers' cattle, 1,000 to 1,050 lbs. each, sold at \$4.25 to \$4.35 per cwt.; loads of good butchers' at \$3.80 to \$4.00; loads of medium butchers' at \$3.40 to \$3.60; common butchers' at \$3.00 to \$3.25, and inferior (canners) butchers' at \$2.50 to \$2.65 per cwt.

Heavy Feeders.—Heavy feeders are in good demand, and are worth \$4.25 to \$4.50 per cwt. for short-keep steers, 1,100 to 1,200 lbs. each, while steers of the same weight, but not as good quality, sold at \$4 to \$4.25 per cwt. Light feeders, 1,000 to 1,050 lbs. each, are worth from \$3.75 to \$4 per cwt.

Milch Cows and Springers.—Good milch cows are in good demand, while common to medium, of which there are too many, are slow of sale. Prices range from \$30 to \$55 each.

Stockers.—Yearling steers, 500 to 800 lbs. each, sold at \$3 to \$3.37 1/2 per cwt. Off-colors, same weights, of poor quality, sold at \$2.50 to \$2.75 per cwt.

Calves.—Few good calves are coming forward, and are in good demand, at \$5 to \$5.50 per cwt. Sheep.—Ewes sold at \$3 to \$3.25 per cwt.; bucks at \$2.50 to \$2.75 per cwt.

Lambs.—Prices range from \$3.75 to \$4.60 per cwt., the latter price being for choice, heavy, graded ewes and wethers for export purposes.

Hogs.—Prices have declined, and select are selling at \$6.37 1/2, lights at \$6.12 1/2, and fats at \$6 per cwt. Mr. Wm. Harris stated that the prospects were for still lower prices.

	Extreme com- parative prices to-day.	Two weeks ago.	Same date last year.
Export cattle	\$ 5 40	\$ 5 25	\$ 5 00
Butchers' cattle	4 50	4 50	4 40
Bulls	4 25	4 30	4 25
Feeders	4 25	4 00	4 00
Stockers	3 37 1/2	3 00	3 25
Sheep (per cwt.)	3 25	3 50	3 50
Lambs (per cwt.)	4 60	4 50	4 65
Hogs	6 37 1/2	6 75	6 50
Milk cows	55 00	50 00	50 00

PRODUCE MARKET.

Wheat—Seven hundred bushels sold as follows: White, 200 bushels, at 72c. to 79c.; red, 100 bushels, at 75c. to 78c.; goose, 400 bushels, at 67c. to 67 1/2c. Barley.—Four hundred bushels sold, at 55c. to 63c.

Oats.—Eight hundred bushels sold, at 46 1/2c. to 47c.

Peas.—One hundred bushels sold, at 85c.

Hay.—Fifteen loads sold, at \$11 to \$13 per ton for timothy, and \$9 to \$9.50 per ton for clover or mixed hay.

Dressed Hogs.—Deliveries light; prices easy, at \$8 to \$8.25 per cwt.

Potatoes.—Prices range about 70c. per bag by the load from farmers' wagons.

Poultry.—Prices firm, at 50c. to \$1 per pair for chickens; ducks scarce, at 75c. to \$1.25 per pair; geese, 7c. to 9c. per lb.; turkeys, 10c. to 12 1/2c. per lb.

Eggs.—Strictly new-laid eggs are becoming more plentiful, selling at 27c. to 33c. per doz.

Butter.—Prices steady, at 17c. to 23c. per lb.

Hides and Wool.—No. 1 green, 7 1/2c. per lb.; No. 2 green, 6 1/2c. per lb.; No. 1 green, steers, 8 1/2c. per lb.; No. 2 green, steers, 7 1/2c.; hides, cured, 8c. per lb.; calfskins, No. 1, per lb., 9c.; No. 2 calfskins, 7c. per lb.; sheepskins, 70c. to 75c. each. Wool, fleece, 13c. per lb.; wool, unwashed, 7c. per lb.

British Cattle Markets.

London, Jan. 27.—There were no cattle offering to-day. United States sheep, 5 1/2d. to 5 3/4d. Saturday's prices: Cattle 6 1/2d.; sheep, 5 1/2d.; lambs, 7d.

Liverpool, Jan. 27.—Canadian cattle, 6 1/2d. to 6 3/4d.; sheep 5 1/2d.

Montreal Live Stock.

Montreal, Jan. 27.—A few best cattle sold at about 4 1/2c. per lb. Medium stock brought from 3 1/2c. to 4 1/2c. per lb., and the common dry cows and lean stock sold at from 2 1/2c. to 3 1/2c. per lb. Very fine large bulls were bought by shippers at from 4c. to 4 1/2c. per lb. Calves rather inferior, and sold at from \$2.50 to \$5 each. Sheep sold at 3 1/2c., and lambs at from 4c. to 4 1/2c. per lb. Fat hogs sold at from 6 1/2c. to 6 3/4c. per lb., good straight lots, weighed off the cars.

Chicago Live Stock.

Chicago, Jan. 27.—Cattle—Steady to 10c. lower; good to prime steers, \$6.20 to \$7.40; poor to medium, \$4 to \$6; stockers and feeders, \$2.25 to \$4.50.

Hogs—Closed 5c. to 10c. lower; mixed and butchers', \$5.90 to \$6.40; bulk of sales, \$5.90 to \$6.30.

Sheep—Lambs, steady to strong; good to choice wethers, \$4.30 to \$5; western sheep, fed, \$4 to \$5.25; native lambs, \$5.50 to \$5.90; western lambs, fed, \$5 to \$5.87.

East Buffalo Live Stock.

East Buffalo, Jan. 27.—Active for all butchers' grades, and 20c. to 30c. higher; shipping and export grades, fairly steady to 10c. higher; choice to prime steers, \$6 to \$6.75; fair to choice shipping steers, \$1.80 to \$3.90; bulls, \$3.60 to \$4.50; stockers and feeders, \$3 to \$4.50.

Hogs—Yorkers, \$6.25 to \$6.30; light, do., \$6 to \$6.15; mixed packers, \$6.40 to \$6.50.

Sheep and lambs—Choice lambs, \$5.85 to \$5.90; good to choice, \$5.60 to \$5.80; culls to fair, \$4.50 to \$5.50; sheep, choice handy wethers, \$4.50 to \$4.75; export ewes and wethers, \$4.25 to \$4.50.



A Pocketful of Sunshine.

A pocketful of sunshine
Is better far than gold;
It drowns the daily sorrows
Of the young and of the old;
It fills the world with pleasure,
In field, in lane and street,
And brightens every prospect
Of the mortals that we meet.

Travelling Notes.

IRELAND.

"Sure a terrible time I was out o' the way,
Over the sea, over the sea,
Till I come to Ireland one sunny day,—
Beththir for me, beththir for me.

"The first time me fut got the feel of the ground
I was strollin' along in an Irish city
That hasn't its aqul the whole world around
For the air, that is sweet an' the girls that are
pretty."
—Moira O'Neill.

It was in lovely summer weather that I travelled direct from Glasgow to Ireland, but, nevertheless, I will omit to describe the passage from Ardrossan to Belfast. It is needless. It is an unpleasant recollection. Suffice it to say that I came to Belfast, and was met at the wharf by a very handsome cousin whom I had not seen for fourteen years, who acted as my guide, so that I did not have occasion to accost the tall, straight policeman, with his military air and jaunty, good-for-nothing cap glued over his right ear. There seemed to me to be an air of good-humored kindness about every man, woman and child within eye- and ear-shot. A number of noisy, rattling jaunting-cars came up with cheery offer of service, and soon one of these same dashing, tipsy little vehicles was whirling us over the roads at breakneck speed, as if the fate of the nation depended upon post haste. The driver seemed bitten by a mania for swift motion the moment he touched the reins of the horse, and I had to hold on for dear life—only hoped that we would not run over any of the people, whom we made to scatter in every direction. Rory O'More, who was driving, was a true son of the soil, overflowing with good nature, his rosy face stretched in a constant smile, which was cheap at the shilling too much he charged for the ride. Before one has been in Ireland a day, a certain number of strangenesses where all is strange impress themselves upon one. Of these, perhaps the first is the omnipresence of the military element. Red-coated privates on the sidewalks; stately officers in dog-carts, on horseback or afoot; companies and squads going through drills in barrack yards, of infantry, of cavalry, of artillery, of constabulary, everywhere in town and country. One feels as if revolution were in the air. But no; there is no war and no enemy! Then the bogs—Ireland's coal mines! The immense wealth of its bog land is not yet exhausted, by any means, and a sight it was to see cords or bushes or stacks of the clean-cut black turf piled neatly to dry, all over the country. The long line of little whitewashed cottages down the village streets (see pictures); the beautiful fuchsia hedges, quite 8 ft. high and 3 ft. wide; the miles



THE COAL OF THE COUNTRY.

"Black turf! Black turf! Twelve sods a penny?"

of linen bleaching upon the grass; the curious and amusing brogue; the playing of Irish airs by Irish bands; the Round Towers which have so perplexed the archeological world, and of which some writer wrote that they "were most probably lighthouses which had come ashore at night for a spree and had forgotten the way back again";—by the time one has rambled about for ten days or a fortnight the effect of these surprises almost vanishes. It soon seemed the most natural thing in the world to sit on one of those low-backed "outside cars," travelling edgewise, so to speak, and though I laughed and made believe I liked it, I was glad enough to hold on by the ironwork while "the son of Nimshi" charged down the roads and through the streets.

I cannot give my readers "impressions of Ireland," as I did not go all over it, my object in going there at all being more especially to visit a friend who lives in County Fermanagh, but of that county and Donegal I saw a good deal, spending a very happy time there, too. The weather was fine, although traces of rain were evident in the greenness and freshness of its meadows and trees. As in England, the roads are good, and everywhere there are the most beautiful hedges. One is always coming upon some pretty little lake or river, and Lough Erne is a beautiful lake containing more than a hundred islands, many of them being well cultivated, and inhabited. There are the beautiful green lawns and fields everywhere, the kindly climate lending itself to their adorning.

The habit of building directly upon the ground, without the interposition of any proper foundation or cellar, cannot add either to health or comfort in such a wet climate, but the rich counteract the effect by fires in all the different rooms, while the poor accept the rheumatism and low fevers engendered as coming from the hand of God and a discipline not to be questioned.

The courtesy of the shop people was very marked. It was a pleasure to buy from such attentive salesmen. Prices of almost every kind were much lower than those to which I had been accustomed, in clothes for men and boys, cloth garments and personal furnishings more especially. The linens and laces were peculiarly fascinating. At Clones I saw a great deal of the lacemaking, the Irish lace noted all over Ireland. It is of the most exquisite and intricate crochet—a revived industry, owing, happily for the workers, to the fact that it has once more become most fashionable. Those who make it are earning more than they have been able to make for years. With this instalment of my Irish notes, I am sending some pictures, for which I hope space may be found in the present or an early issue of the "Farmer's Advocate." They can speak for themselves.

MOLLIE.

Ingle Nook Chats.

My dear Guests,—

"All succeed who deserve, though not perhaps as they hoped. An honorable defeat is better than a mean victory, and no one is really the worse for being beaten unless he loses heart. Though we may not be able to attain, there is no reason why we may not aspire."

The first clause of the above quotation may convey something of a reproach to those of us who have failed to distinguish ourselves in any special line, inasmuch as our being worthy is made the sole condition upon which success depends, and being unsuccessful stamps us as being undeserving.

At a casual glance this appears unfair and untrue, for by success we too often mean mere worldly gain, and certainly by this criterion many will be found unsuccessful whose noble qualities of mind and heart place them infinitely above "the common clod." Upon reading further, however, we shall find that such is not the idea intended to be conveyed by the writer, Sir John Lubbock, who continues thus: "An honorable defeat is better than a mean victory." There is, then, another standard by which we must calculate success or failure—the standard of our own inner consciousness of right or wrong, and he who wins by this standard gains life's most enviable guerdon, though he should be a thousand-fold defeated in the eyes of the world.

If we apply the first rule to the attainment of any certain object—for instance, to study—



GOING TO MARKET.

there is much truth in the statement that all succeed who deserve, for by patient application, even through apparently slow progress, we may all achieve a certain measure of success, and while we may not have reached the goal for which we set out, we shall at least be farther on than if we made no endeavor. Bishop Whately gives us a consoling reflection when he says, "He only is exempt from failures who makes no efforts." The trite remark that "not to go back is somewhat to advance" is equally true when reversed; we cannot simply stand still, but must go either onward or backward with the ever-surging tide of events around us. Our mental faculties speedily become dull if allowed to fall into disuse, and for this reason we should make a practice of pursuing some favorite study, or at least cultivate a taste for good reading. I say good reading advisedly, for poor literature of the dime-novel stamp, for example, is worse than none; for not only does it not improve our morals, but it also injures the memory. This taste for reading, if not inherent, may to a great degree be acquired, and he who possesses it has at least one corner-stone upon which to erect his edifice of happiness.

"Pleasures of Life," by Sir John Lubbock, from which I quoted at the beginning of this chat, is an interesting and instructive little volume, with essays to suit all tastes, whether they incline to art, music, poetry or science. This is but one suggestion, but this small book, a volume or two of poems, Ruskin's "Sesame and Lilies," and one or two humorous books into which one can peep when feeling at all "blue," will make a very fair beginning for the youthful reader. The subject of "books" is almost inexhaustible, but I must leave it and say a few words about

OUR COMPETITIONS.

It is something over a year since the Ingle Nook Contests began, and during that time they have brought us into touch with many new friends, and their kind words of encouragement have been very cheering indeed. Number XVII. is bringing out many new contributors, and to each of them a hearty welcome is extended.

"Marie," I enjoyed your pleasant letter, and hope you will continue to prove your interest in our Corner. "Bertie P." is very welcome, but I am sorry she sent her work to me, as I fear it will be too late by the time it reaches the "Advocate" office. When work is for the Ingle Nook it will be announced in that column. Dugald H.—This answer applies to your contribution also, but call at the Nook some other time. Watch for the announcement of an altogether new competition next issue.

THE HOSTESS.

Ingle Nook Chats, Pakenham, Ont.

Measure vs. Weight.

One teaspoonful equals one dram.
Two tablespoonfuls equal one ounce.
One wineglassful equals one gill.
An ordinary-sized teacup holds four fluid ounces, or one gill.
Ten eggs weigh about one pound.
One tablespoonful of butter weighs one ounce.
One quart of sifted flour, well heaped, weighs one pound.
One pint of best brown sugar weighs thirteen ounces.
Two level teacups of maple sugar weigh one pound.
Two tablespoonfuls of pulverized sugar, or flour, weigh one ounce.
Two teacupfuls of butter, well packed, weigh one pound.
One and one-third of a pint of pulverized sugar weighs one pound.
One generous pint of liquid, or one pint of chopped meat, packed solidly, weighs one pound.
An ordinary tumbler holds about half a pint.



The Irish Spinning Wheel.

This is one of the pictures which "Mollie" sent us from Ireland, and taken in conjunction with what she tells of the beautiful lace fabrics, a revived industry now becoming a profitable source of breadwinning, once more we can endorse the testimony of Ruskin which accompanies it: "The Irish people cannot only design beautiful things, but can also execute them with indefatigable industry." Irish linen is celebrated for beauty of texture and finish all the world over, and though scientific methods have driven the useful old spinning wheel into the corner, or made of it simply a relic for the rich man's drawing-room, yet so closely is it interwoven with the histories of the Irish homes of the past that in song and story alike its memory will never wholly die out.

H. A. B.

THE QUIET HOUR.

To-day or To-morrow?

"I know of a land where the streets are paved
With the things which we meant to achieve.
It is walled with the money we meant to have saved
And the pleasures for which we grieve.
The kind words unspoken, the promises broken,
And many a coveted boon,
Are stowed away there in that land somewhere—
The land of 'Pretty Soon.'

"There are uncut jewels of possible fame,
Lying about in the dust,
And many a noble and lofty aim
Covered with mould and rust.
And oh! this place, while it seems so near,
Is farther away than the moon,
Though our purpose is fair, yet we never get there—
The land of 'Pretty Soon.'

"The road that leads to that mystic land
Is strewn with pitiful wrecks,
And the ships that have sailed for its shining strand
Bear skeletons on their decks.
Farther at noon than it is at dawn,
Farther at night than at noon,
Oh! let us beware of that land down there—
The land of 'Pretty Soon.'

My father used to be very fond of the saying,
"To-morrow never comes"; and, as a child, the words often puzzled me. It seemed to me that to-morrow—Saturday or Sunday, as it might be—would surely come in time. The fact that although Saturday might come, to-morrow was still as far off as ever did become clear at last, but even then I did not at once understand the great significance of the truism.

"To-day" unsullied comes to thee—newborn,
To-morrow is not thine.
The sun may cease to shine
For thee ere earth shall greet its morn.
Be earnest, then, in thought and deed,
Nor fear approaching night.
Calm comes with evening light,
And hope and peace. Thy duty heed 'to-day.'

We can live only in the present. This is a truism, of course; but, though it is a self-evident fact, we are constantly forgetting it and trying our very hardest to live in the future—wasting strength in attempting to perform an impossibility.

Don't misunderstand me. We must never refuse to attempt a task just because it is impossible. When Gideon was told to deliver Israel from the Midianites, to conquer an innumerable army with only three hundred men, the apparent impossibility of success was not accepted as an excuse. When God says, "Have not I sent thee?" that is enough. His soldiers have no need to question whether the duty set them be impossible or not, for "with God all things are possible."

But it is folly to attempt impossibilities without His authority or help, and, as I said before, it is impossible to live in the ever-elusive "to-morrow." How often we hear people talk of the

great things they would do if they only had the opportunity. "If I were only rich," they say, "I would do a great deal to help the world." Is it only possible for rich people to do good? Our Lord seemed to think very differently, for, though He was rich, yet in order to help us effectually, He became poor. Do Christians really agree with the world, and trust implicitly in the power of the "almighty dollar?" The chief business of the Church often seems to be to raise money. Not to give money, but to raise it—generally a very different thing.

God has made us for a particular purpose, be sure of that. If He wants us to do good with money He will give us money. Let us see that we spend it as His stewards. But, after all, do you think that our chief business here is to do good or to be good? The two things should go hand-in-hand, shouldn't they? But, although it is hardly possible to be good without doing good, it is quite possible to do good without being good. If we are branches of the True Vine our chief business is to grow and bear fruit.

Instead of dreaming of the great things we hope to do some time, let us grasp the opportunities which present themselves every hour.

Tradition tells of an Eastern prince who asked Solomon for a maxim that would make him strong in misfortune and humble in prosperity. The maxim he received was: "Even this also will pass away." Our opportunities will pass, like everything else—and they never come back again. Let us make use of them to-day, remembering the familiar description of the ancient statue of Opportunity. It stood on its toes and had wings on its feet, to show that it could only stay a moment. A lock of hair hung on its forehead, as a sign that men might seize it if they would. The head was bald behind, showing that when it had once passed it could not be caught.

"To-day is added to our time,
Yet, while we speak, it glides away.
How soon shall we be past our prime,
For where, alas, is yesterday?
Gone—gone into eternity.
There every day in turn appears.
To-morrow? Oh, 'twill never be,
If we should live a thousand years!"

We did not come into this world by chance. God has called us to some particular work, and specially fitted us for this, our true vocation. Planning great things for to-morrow will not make up for the neglect of the work put into our hands to-day.

A vine was once entwined 'round a column of a ruined temple. One night part of the roof supported by this column was blown down. Next morning the gardener noticed that the vine was drooping. Examination proved that it had not been injured by the storm, what could be the matter? The leaves answered: "We have failed in the work the Master gave us to do. We were set here to support the temple roof, and it has fallen." The gardener smiled as he held up a cluster of rich purple grapes, and said: "This is the work the Master set thee to do and thou hast done it." Then a thrill of new life stirred through every twig. It is very important that we should not mistake our vocation. There is another way in which we are apt to waste our strength by trying to live in to-morrow instead of in to-day. I mean, of course, in being anxious and worried about the future. I can't take up that question now, for our editor will be down on me if I take up too much space, but I should like to tell you what one old woman thought about it.

She says: "I never found the work any the forwarder for worrying about it over night. You can't mend a thing before it's torn; and if you get a hundred pieces ready, the rent'll always be sure just to go in the way that fits none of 'em. Things be perverse most times, and there's no way that I know of being up with them beforehand."

Our business, then, is with to-day. Are we going to waste it, or lay out its hours as precious talents committed to us in trust by our Master? To Him we must render an account.

"Lose this day loitering, 'twill be the same story
To-morrow, and the next more dilatory.
The indecision brings its own delays,
And days are lost, lamenting o'er lost days.
Are you in earnest? Seize this very minute.
What you can do, and think you can, begin it.
Boldness has genius, power, magic in it.
Only engage, and then the mind grows heated.
Begin it, and the work will be completed."

HOPE.

To Cure a Child of Croup.

Wring flannel cloths out of hot water and apply them to the throat, changing them frequently. Make a tent over the crib by means of sheets over a screen or umbrella, then place a small teakettle over an alcohol lamp near the crib and let the child inhale the moist vapor which may be conducted inside the tent, care being taken that the child does not come close enough to the hot steam to get burnt. If the attack is severe you may give ten drops of ipecac every fifteen minutes until vomiting results. It would be best to keep the patient indoors for a day or two after the attack.—(Emelyn Lincoln Coolidge, M. D., in the January Ladies' Home Journal.

On Some Practical Topics.

(NO. 1.)

ON CENTRALIZATION OF SCHOOLS IN RURAL DISTRICTS.

In the final paragraph of an admirable editorial on the first page of the "Advocate" of the 15th of January, headed "An Important Educational Announcement," its readers are invited to give an opinion regarding the proposition to centralize country schools; possible legislation to make such action permissible being foreshadowed.

The writer has come across a very clear presentation of the subject in the Canadian Teacher of 1st September, and as it is a magazine which may not fall into the hands of those who are not strictly educationists amongst "Advocate" subscribers, an opportunity is asked to make some quotations which may help towards the formation of a fair consideration of the same before the invitation to give such an opinion is accepted.

The Canadian Teacher says: "The improvement of school conditions for the children of country districts is the most important topic for consideration by the people of Canada to-day. The country school is the great formative force in the nation's life. To the school more than anything else must we look for the character of our future legislators, for the uprightness of our future judges, for the dignity of our future pastors, and the integrity of our future citizens. . . . But, someone will say, how do you propose to give us better and more experienced teachers, and how can you increase the salary sufficiently to induce such teachers to remain in the service? The Canadian Teacher believes that the solution lies in the CENTRALIZATION OF SCHOOLS. By this we mean the closing of the different schools, and the transportation of the children to and from that school in waggons at the public expense.

"By this system pupils from every part of the township enjoy a graded-school education. With the grading of the school and the larger number of pupils come teachers of a more highly-educated class. Higher branches of study are taught, the teachers are more conversant with the needs of their profession. The salaries are higher, the health of the pupils is preserved, because they are not compelled to walk to school in slush, snow and rain, to sit with damp, and, perhaps, wet feet, in ill-ventilated buildings. There is no lounging by the wayside. The use of indecent and obscene language is prohibited in the waggons, thus all opportunities for quarrelling or improper conduct on the way to and from school is removed. The attendance is larger and truancy is unknown, and the boards of education exercise as much care in the selection of drivers as they do in that of teachers. . . . In many parts of the United States this plan has been tried and found a complete success. . . .

"The educational influence of a central school over that of eight or nine widely-scattered, neglected buildings is beyond controversy. On the playground all the big boys of the township play baseball. Think what it is to get all the boys of a township—country boys, I mean—on one playground! There will grow up a unity. Each boy, having studied and played with other boys of the entire township, will be stronger for it.

"The youth of the farm dreams and longs for the intenser life of the city. He feels an almost irresistible desire to get closer to the nerve center. The great outside world is calling him, and his nature answers the call. Country life demands and must speedily have more of city advantages. With the free transportation of children our youth can be educated at home, be at home evenings and not on the streets of a distant city. The Canadian Teacher looks for objectors to the plan. Progress is rarely along the path of least resistance.

"But to the man, rich or poor, who has a family of growing children, living in a country district, far from a city, any reasonable proposition to better the educational facilities for his children ought to receive from him a candid consideration.

By centralization all the children of the township have the same chance for higher educational advantages, which under the present plan only five or ten per cent. are able to get by leaving home and going to the city. With a central graded school and a High School course the children can be at home during the evenings under the care of their parents. The people of the country districts are entitled to receive the fullest benefits for money expended. Better means of education, better training, stronger characters, the possibility of all these must appeal to every parent and to every public-spirited citizen of any community.

"By centralization we go a long way towards the solution of the problem, 'How to keep the boys on the farm.' We bring to the farm that which he goes to the city and town to secure. Such a school may become the social and intel-

lectual center of the community life. With a library room, music, debating club, etc., our boys and girls will hesitate to leave home, and such a school, for the uncertainties of city life. Surely this enrichment and preservation of country life is of vast importance. And so is the preservation of the simplicity of manners and dress, the ruggedness of farm life, the peace, quiet and contentment of its homes. All these are items which argue eloquently for a rural consolidation which is expedient, economical, and wise."

The article from which the above extracts are taken contains many more most valuable arguments, which limited space forbids our transcribing, many of which, however, would naturally present themselves to the thoughtful mind. But even apart from the plea that "centralization will decrease the cost per capita, and furnish a more efficient teaching force, at better salaries," there remains the indisputable fact that it would indeed be the best answer to the question which means so much to the agricultural population of Canada, "How shall we keep our boys and girls upon the farm?"

H. A. B.

THE CHILDREN'S CORNER.

About Dolls.

"A farewell kiss upon thy face,
That little face that's smiling ever,
One farewell kiss, a fond embrace,
Then, Dolly, you and I must sever!
For I, alas! I'm growing old:
I will be twelve years old to-morrow!
Too old to play with dolls, I'm told,
And yet I lay thee by with sorrow!
I'll comb and brush your golden hair;
I'll tie a ribbon in your tresses;
Then wrap you up with loving care,
With all your tiny frocks and dresses.
And oft in time to come, I'll take
A peep at thee, and thus erase
The years that intervene, and wake
The happy thought of childish days."

Santa Claus brought thousands of dolls to the little Canadian children last Christmas. How many thousand have been broken to pieces already, do you think? A small niece of mine, who is only three years old, was almost too rich to be happy. Like the old woman in the shoe, she had so many children she didn't know what to do. Her father said he couldn't sit down anywhere without first clearing some of her property off the chair. Another little niece, who is only two, had ten dolls. I say "had," for most of them have vanished by this time. However, you who read this page have probably reached the age of the little girl who has to put away her doll, with a farewell kiss, being too old to play with it. I hope you are not one of those unnatural children who scornfully say, "I never cared for dolls," for there is something very beautiful in the womanly tenderness of the dear little mothers towards their doll babies. I am sure you will sympathize with the little girl who

"... sat in her little rocking-chair, a-sighing
and twirling her thumbs:
'O, everything for my doll is done, and never, never,
to mending comes!
I haven't a morsel of sewing, dear mother, in all the
town.
Can't you find me one doll, no matter how small,
who will wear out her gown?'"

I dare say some of the grown-up mothers would be rather thankful if their live-dolls didn't wear out their gowns, or grow out of them, as fast as they do. But mothers shouldn't spend all their time dressing their children, and leave them to grow up dunces, should they? Of course, I know that the alphabet is quite out of date now, but still no one would blame the small teacher who tried her very hardest to teach her doll the names of those queer-looking letters which mean so much. This is how she gave the lesson.

"Come here, you nigoramus!
I'm 'shamed to have to 'fess
You don't know any letter
'Cept just your crooked S.
Now listen, and I'll tell you:
This round hole's name is O,
And when you put a tail in,
It makes a Q, you know.
And if it has a front door
To walk in at, it's C.
Then make a seat right here
To sit on, and it's G.
And this tall letter, dolly,
Is I, and stands for me;
And when it puts a hat on,
It makes a cup of T.
And curly I is J, dear;
And half of B is P;
And E without his slippers on
Is only F, you see.
You turn A upside downward,
And people call it V;
And if it's twice, like this one,
W 'till be.
Now, dolly, when you hear 'em,
You'll know a great big heap—
'Most as much as me. O, dolly!
I b'lieve you've gone to sleep!"

Perhaps it is just as well, after all, that dolls do get broken so quickly, and that the children are always ready for new ones. There are plenty of people who spend their lives making dolls, and if no one wanted to buy them, they and their children might starve. Nearly all the people in one town in France are working at the dolls' heads.

They mix lime and earth together. Then this bisque, as it is called, is washed and strained over and over again, until it is beautifully white, when it is poured into moulds of different sizes. These ghastly, eyeless heads are turned out of the moulds, women fasten in the eyes, and they are baked for two days and nights. Just fancy two or three thousand heads starting at each other in an oven! I should think they would feel it a very pleasant change to be sent out here to cool off. After being baked, they are polished with sandpaper, and the cheeks and eyelashes are painted. Then the poor things go into the oven again for about half a day. Dolls mean work, not play, in that town. Probably the children are tired of the sight of them, and would much rather play with something else.

A soldier doll once fell in love with one of these French beauties, and there was a wedding in Doll land. Would you like to hear this love story?

The little French doll was a dear little doll,
Tricked out in the sweetest of dresses;
But eyes were of hue
A most delicate blue,
And dark as the night were her tresses.
Her dear little mouth was futed and red,
And this little French doll was so very well-bred
That whenever accosted her little mouth said:
'Mamma! Mamma!'

"The stockinet doll, with one arm and one leg,
Had once been a handsome young fellow,
But now he appeared
Rather frowzy and bleared
In his torn regimentals of yellow;
Yet his heart gave a curious thump as he lay
In the little toy cart near the window one day
And heard the sweet voice of that French dolly say:
'Mamma! Mamma!'

"He listened so long and he listened so hard
That anon he grew ever so tender,
For it's everywhere known
That the feminine tone
Gets way with all masculine gender.
He up and he wooed her with soldierly zest,
But all she'd reply to the love he professed
Were these plaintive words (which perhaps you have
gess'd):
'Mamma! Mamma!'

"Her mother—a sweet little lady of five—
Vouchsafed her parental protection,
And although stockinet
Wasn't blue-blooded, yet
She really could make no objection.
So soldier and dolly were wedded one day,
And a moment ago, as I journeyed that way,
I'm sure that I heard a wee baby voice say:
'Mamma! Mamma!'

Though most dolls are rather short-lived, one, at least, is quite old enough to be a great-great-grandmother. She came from England to America more than 200 years ago. Her dress, of brocade and velvet, stands out like a balloon over an enormous hoop skirt. She has lost one of her arms, but looks very young and well, in spite of her two centuries of life. She is kept carefully wrapped up, as the older she gets the more valuable she becomes. Of course, no children are ever allowed to handle her.

I hope you don't feel bored with all this talk about dolls. Even the children of the 20th century were young once.

COUSIN DOROTHY.

The Essay Competition.

Our "Essay Competition" proved to be very popular with our readers, no fewer than eighty-two descriptions of our beautiful Christmas front cover having been sent in, thus making the task of deciding a difficult one, as numbers of the essays were of good literary merit. Some otherwise excellent ones greatly exceeded the length agreed upon, and so had to be thrown out on that account. The winner of the first prize is Mrs. Frank Hunter, Norval, Ont., whose essay appears in our present issue. The second prize goes to M. W. Shepherd, Riceville, Ont., Prescott Co.; while Miss Agnes Laing, Wentworth Co., Ont., earns third prize.

We take this opportunity of thanking the several essayists for the many kind and appreciative expressions of regard for and interest in our "Farmer's Advocate," and beg to assure them that it shall be our aim in the future, as it has been in the past, to keep its pages up to the high standard of excellence which alone will satisfy our readers.

Among other writers deserving of special mention are:

Mrs. Spencer, Mrs. Doolittle, Mrs. Todd (Geneva, Que.); Misses Maria Hopkins, Annie E. Todd, Mary B. Salkeld, Louise Wetmore (King's Co., New Bruns.), Carrie Easton (Charlottetown, P. E. I.), M. McVannel, M. L. Cooke, J. McVannel, Mina A. Hume, Mamie Sanders, Rachel Quinn; Messrs. Peter McCallum, E. Mackinley (Halifax, N. S.), Jno. A. McKillop, Geo. Young, Albert Nicholson, and G. J. McC— (St. George's, P. E. I.).

FIRST-PRIZE ESSAY.

You ask us to look on your Christmas cover, and tell you what we see.

I am sure that on no two of your many readers will it make the same impression. To me, at

the first glance, comes up one of my earliest memories; of a lovely summer day, a short, pleasant drive over a delightful country road; then a shouting, cheering, surging mass of people; and in the midst of it, high perched on my father's shoulder, I looked, almost in awe, at a slender, smooth-faced boy of nineteen: the Prince of Wales, heir to the British Crown.

As I look on the rotund figure, silvering beard and aging face of our King, the thought arises that Father Time has laid his hand no more gently on the son of the Royal house than on thousands of his loyal Canadian subjects who that day surrounded him, as the maple leaves, emblems of our country, do in the picture, reminding us that true nobility consists, not in birth or station, but in that "other merit" to which the lowliest-born may attain; of the equality and brotherhood of man, flight of time and certainty of death.

I look again, and my happy, happy school-days rise vividly before me; when my heart thrilled with mingled pity and admiration at the pathetic story of the blind Bohemian king who, beneath a waving crest of three ostrich feathers (I must confess that in after years, I often wished for just such a trio), first bore the motto, "Ich dien," into the, for him, fatal battlefield of Cressy, A. D. 1346. This motto was then adopted by the Prince of Wales, and ever since by his successors.

1866,—in fancy I can feel, again, the earth throb beneath my feet, as I childishly imagined then that it vibrated to the music of "Tramp, tramp, tramp, the boys are marching," as on another delightful day we welcomed home from Ridgeway our brave volunteers, who, in the spirit if not in the letter, carried with them the same motto, "I serve."

Also, your natal year: dear "Advocate," accept my congratulations. May long life, ever increasing and outstretching success be yours, who, in your public service, so efficiently instruct, entertain and uplift.

Another glance, and above, below, all around, are the ever-present, marvellous works of God; in the incomprehensible vastness of space, the innumerable stars, each filling his allotted place, working out the great plan of the Creator, and showing forth His unsearchable riches and infinite power.

From the whole seems to come this message, "I give you a motto, appropriate it: NOW, for time is fleeting; and with steadfast, earnest purpose, and faithful, trusting prayer, strive to so serve your Heavenly Father, earthly king, country and fellow man, that in that Great Day you shall hear His "Well done, good and faithful servant, enter thou into the joy of thy Lord."

Norval, Ont.

SARAH HUNTER.

The Sleighing Party.

At the present time there is an epidemic abroad throughout most civilized parts of Canada. It is always confined to the winter season. Its symptoms are somewhat akin to those of brain fever and hydrophobia, and its effects are sometimes as disastrous as those of smallpox. It is chiefly juveniles and elderly people who affect the juvenile that are attacked by this epidemic, which is commonly known as the "sleighbing party."

As a rule, people fight shy of epidemics, but there is a large number of individuals of a "taking" nature, who "count their many blessings," as it were, by dwelling at length on the multiplicity of ailments to which they have fallen heir. I once knew an old lady of unusual activity, who gloried in the recollection of having "had" almost every known disease, from mumps to rheumatism of the heart; in fact, she declared she had been dead entirely on more than one occasion, and was a living example of the wonders of modern science. To such as she, no doubt, the sleighbing party will be hailed with delight.

To begin with, to experience the malady in its worst phase, the night must be moonless and all but starless, with the temperature somewhat below zero. A good thing is to have a high, slender pleasure sleigh (it is aristocratic-looking, and is so elevating to the spirits), and if one horse is blind and the other one balks, so much the better. A necessary feature is plenty of girls in the company, as they are so cheerful; they are always ready to giggle at every stump and snowbank, and to squeal if the sleigh swerves an inch. Possibly this will not be difficult of attainment, as—strange though it may appear—there is quite frequently a dearth of the masculine element at sleighbing parties as well as at the weekly prayer-meeting. You may count on the round trip not exceeding twelve miles in length, but that depends largely on circumstances; and its duration depends on circumstances altogether.

In starting out, be sure not to burden yourself with too many wraps. They just make that much more for the horses to pull, and one must always consider their feeling—particularly the balky one's. And besides, why not be original? Doubtless all the other ladies will be swathed in

old shawls, and ancient overshoes, and scarfs tied over their ears, but don't you be so silly — just perch that little creation of wings and velvet and ribbon on your head, button your kid gloves, and seat yourself gracefully, a little apart from the others in the sleigh, if possible. Then, with the weather auspicious, the driver officious, and the horses capricious, away you go! After a while, your ears, fingers and toes may feel chilly, but if you are a Christian Scientist you won't mind that at all, and if you are not a Christian Scientist you must just think what frights the others are and how nice you look, and there is a good deal of satisfaction in knowing that.

Of course, on the sleighing party, everybody is supposed to sing. It doesn't make any difference whether you can follow the tune or not, and it doesn't make much difference what you sing; it is not an uncommon thing for the affecting strains of "Home, Sweet Home," and "Meerschaaum Pipe" to mingle, on the sleighing party, and when accompanied by giggles, screams, and thumpings with the feet on the sleigh-bottom, it is almost as good as an Indian "pow-wow," ex-

cept for the fire. Then, all at once, the fire comes too. There is a scraping and grinding, with sparks flying like lightning, and the balky horse throws back his head — you have run aground!

"All hands out and push!" shouts the driver. Now, when about a dozen girls can hardly budge, let alone get their "hands out," for wraps, and then, when they do push, and a talky horse pushes in the opposite direction, and a blind horse pulls in still another direction, and an angry driver jumps and hops in nearly every direction under the stars,—well, you begin to think the sleighing party about as bad as the ague. However, you get back on the straight path eventually, and off you go again, through gaps and across fields. Presently there is another halt.

"I say!" yells the driver again. "some of you people back there climb out and hunt up the track. I can't find it!"

It isn't pleasant news, but out you tumble, and snuff around through the deep snow, only to find that you have been touring around the field in a circle; in short, have been enjoying a regular "merry-go-round." By and bye, by dint of

"inchin' along," your destination is reached.

On the return trip, the sleigh-bells have it all their own way. There is no singing, no giggling, and but little squealing. The worst of the fever is over, and you are slumbering while nearing the turning-point. It comes. The blind horse pulls the balky one off the road. The balky one throws back his head. There is no denying that you are "stuck." Then both horses back up. They are on their mettle, in very truth, and over the bank goes the sleigh, and out rolls its cargo, a jumbled mass of scarfs, robes, feet, arms, and shrieks. The bank is steep, and at the bottom there is a line of brambles, and beyond the brambles a barbed-wire fence—

On the afternoon of that day, or the morning of the next, you find yourself still alive; but your fingers and toes refuse to obey orders, your face is "furrowed," and your ears are nearer the size of a donkey's than they were a few days ago; and if you don't consider "the sleighing party" the worst malady you have ever suffered from, you deserve to have it all over again.

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GOSSIP.

The date for the Toronto Industrial Exhibition has been fixed to open Saturday, Aug. 30th, the formal opening to be on Monday, Sept. 1st (Labor Day), and to close Saturday, Sept. 13th. A despatch from Ottawa states that it has been decided to hold the exhibition there the week following that at Toronto.

Attention is directed to the advertisement of Mr. R. J. Mackie, of Oshawa, who is offering for immediate sale seven Hereford bulls, ranging in age from one year to two years, all fit for service. Mr. Mackie's herd of pure-bred Herefords has been established thirty years, and was founded on imported animals, and throughout all these years the herd has been kept up to a high standard. The animals offered for sale here are a nice even lot, showing splendid conformation, coupled with grand quality. He is also offering a few extra good heifers.

Farmer's knife premium withdrawn till further announcement. Supply exhausted.

The report of the annual meeting of the Dominion Swine Breeders' Association has been crowded out of this issue, but will appear in our next.

Dominion Sheep Breeders' Annual Meeting.

The annual meeting of the Dominion Sheep Breeders' Association was held in the Palmer House, Toronto, January 24th, the President, Mr. A. W. Smith, in the chair. The Secretary-Treasurer's financial statement showed the receipts for the year as having been \$2,083, and the expenditures \$2,591.18, leaving a balance due the treasurer of \$508.18. Committees were appointed to act with those from the other live-stock associations regarding improvements in the management of fairs and the preparation of a model prize list for general adoption by fair associations, and also in reference to Government assistance towards an exhibit of Canadian live-stock at the St. Louis Exhibition in 1903. The following classification adopted by a committee of the Association at a meeting in Toronto during the Industrial Exhibition, 1901, was submitted:

- 1.—Ram, two shears and over.
- 2.—Shearing ram.
- 3.—Ram lamb.
- 4.—Shearing ewe.
- 5.—Ewe lamb.
- 6.—Pen, ram lamb and three ewe lambs, bred by exhibitor.
- 7.—Pen, ram any age; two shearing ewes; two ewe lambs.
- 8.—Pen, Canadian bred, not shown in section 7; ram any age; two shearing ewes; two ewe lambs; bred and owned by exhibitor. A resolution was adopted amending this classification by making sections 7 and 8 read: Pen, ram any age, two ewes one year old and under three, and two ewe lambs.

The following officers were elected for 1902: President, R. H. Harding, Thorndale; Vice-President, J. M. Gardhouse, Highfield; Secretary-Treasurer, A. P. Westervelt, Toronto. Directors—General Director, A. W. Smith, Maple Lodge; Cotswolds, D. McCrae, Guelph; Leicesters, A. Whitelaw, Guelph; Hampshires and Suffolks, John Kelly, Shakespear; Dorsets, John A. McGillivray, Uxbridge; Southdowns, John Jackson, Abingdon; Oxfords, James Tolton, Walkerton; Lincolns, John T. Gibson, Denfield; Merinos, W. M. Smith, Fairfield Plains; Shropshires, D. G. Hanmer, Mt. Vernon; Ontario Agricultural College, G. E. Day, Guelph. Auditor, J. M. Duff, Guelph. Delegates to Fair Boards: Toronto Industrial, J. M. Gardhouse, Highfield, and John Jackson, Abingdon; Ottawa, F. W. Hodson; London, A. W. Smith and A. P. Westervelt; Provincial Winter Fair, A. W. Smith, John Jackson and James Tolton.

Ontario Winter Fair Annual Meeting.

The annual meeting of the directors of the Ontario Provincial Winter Fair, Guelph, was held in the Palmer House, Toronto, January 24th, with the President, A. W. Smith, in the chair.

The financial statement showed the receipts of the year to be \$10,722.95 and the expenditure an equal amount. The principal items in the receipts were: Entry fees, \$1,050, and gate receipts, \$1,445; and in the expenditures, prizes, \$7,000.

It was decided to hold the next fair on the week following the Chicago International, providing the period is suitable, and if not, the executive is authorized to fix a time.

The judges will be required in the future, after making awards in the ring, to explain for educational purposes where one animal is superior to another.

In the grade classes, all animals will have to be owned and fed by the exhibitor.

It was decided that the dairy test at next exhibition should commence on the Monday of fair week and finish on Wednesday at noon.

On motion of Mr. Clemons, it was agreed that at the next exhibition the cows should be milked on Monday at noon, instead of 9 a. m. as previously, and the test continue for 48 hours.

The following officers were elected: President, A. W. Smith, Maple Lodge. Vice-President, F. W. Hodson, Ottawa.

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Cash to accompany names in every case. Subscriptions credited a year in advance from date received.

The WILLIAM WELD CO., Ltd., London, Ontario.

Want a Good Watch?

WE have succeeded in procuring from one of the most reliable jewelers in Canada a complete list of Gents' and Ladies' Watches of sufficient variety to suit every one, and have no hesitation in recommending them to our readers as premiums worthy of an effort to secure. These are not by any means trashy goods, but first-class in every particular, and we assure you that you will be pleased with whatever of the above premiums you may obtain. Let us hear from you at an early date with a good list of new subscribers accompanied by the cash, and take your choice.

Gents' Watches.

	New Subscribers.
No. 1. Yankee Nickel Watch.....	2
No. 2. Trump Nickel Watch.....	4
No. 3. Trump Gun Metal Watch....	5
No. 4. No. 14 Silver Watch.....	8
No. 5. 7 Jeweled Gent's Elgin in 3 oz. Nickel Case.....	10
No. 6. 7 Jeweled Gent's Elgin in Gun Metal Case.....	11
No. 7. 7 Jeweled Gent's Elgin in Sterling Silver Case....	14
No. 8. 7 Jeweled Gent's Elgin in 20-year Filled Case.....	18
No. 9. 7 Jeweled Gent's Elgin in 25-year Filled Case.....	21
No. 10. 15 Jeweled Gent's Elgin in 3 oz. Nickel Case.....	15
No. 11. 15 Jeweled Gent's Elgin in Gun Metal Case.....	15
No. 12. 15 Jeweled Gent's Elgin in Sterling Silver Case....	18
No. 13. 15 Jeweled Gent's Elgin in 20-year Filled Case.....	21
No. 14. 15 Jeweled Gent's Elgin in 25-year Filled Case.....	25

Ladies' Watches.

	New Subscribers.
No. 15. Gun Metal Swiss Chatelaine.....	4
No. 16. Sterling Silver Swiss Chatelaine.....	6
No. 17. Nickel American O. F., large size.....	5
No. 18. Gun Metal American O. F., large size.....	5
No. 19. Nickel, small size.....	9
No. 20. Gun Metal, small size.....	10
No. 21. Sterling Silver, small size....	10
No. 22. 7 Jeweled Elgin in 20-year Filled Hunting Case....	20
No. 23. 7 Jeweled Elgin in 25-year Filled Hunting Case....	22
No. 24. 15 Jeweled Elgin in 20-year Filled Hunting Case....	23
No. 25. 15 Jeweled Elgin in 25-year Filled Hunting Case....	25

Description of Watches.

The accompanying cuts fairly well represent all the Ladies' and Gents' Watches, and a description of each as numbered is as follows:

No. 1. American Nickel Key-wind Boy's Watch that is absolutely guaranteed to keep good time and give satisfaction.

No. 2. Gent's Nickel American O. F. Watch; stem wind, and push-in stem and turn to set hands. This is a very strong, reliable Watch.

No. 3. Same as No. 2, excepting that it has Gun Metal case instead of Nickel case.

No. 4. Is a smaller-sized Gent's Watch, has sterling silver case, O. F. Screw Back and Bezel; stem wind, and push-in stem and turn to set hands. This is the lowest-priced and most reliable Boy's or small Gent's Silver Watch that is on the market.

No. 5. Is fitted with 7-Jeweled Nickel, first-quality Elgin movement. The case is a 3-oz. O. F. Nickel case; stem wind and set; screw back and bezel case.

No. 6. Same movement in Gun Metal or Black Steel screw back and bezel case.

No. 7. Same movement with Sterling Silver O. F. screw back and bezel case.

No. 8. Same movement in 20-year guaranteed Gold Filled O. F. screw back and bezel case.

No. 9. Same movement in 25-year guaranteed Gold Filled O. F. screw back and bezel case.

Nos. 10, 11, 12, 13 and 14 are fitted in the same style of cases as Nos. 5, 6, 7, 8 and 9; the difference is in the movement, and the movement is 15-Jeweled Nickel, first-quality Elgin movement.

No. 15. Is a small-sized Swiss O. F. Gun Metal Chatelaine Watch.

No. 16. Is the same, only with Sterling Silver case, which can be had nicely engraved.

Nos. 17 and 18 are a good-quality American Watch, O. F. stem wind, and push-in stem and turn to set hands. These are a little larger than the usual Ladies' Watches, and are smaller than the usual Boys' Watches, though can be used for either Boys, Girls or Young Ladies.

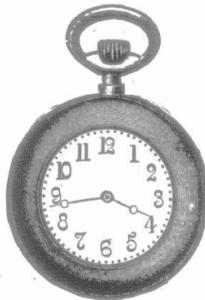
Nos. 19, 20 and 21 are small sized; in fact, are the exact size of cut. These are American Watches, O. F. stem wind, and push-in stem and turn to set hands, and are first-class timekeepers. Will give perfect satisfaction.

If a nice leather wrist case is desired with these watches, send two extra subscribers.

Nos. 22, 23, 24 and 25 are similar to the accompanying cut. These are regular Ladies' Hunting Watches. Nos. 22 and 24 are fitted in 20-year guaranteed Gold Filled cases, nicely ornamented, or to be had in plain or plain engine turned, and the same applies to Nos. 23 and 25, excepting that they are fitted in 25-year guaranteed Gold Filled cases, and 14k Gold Filled; 22 and 23 are fitted with 7-Jeweled Nickel, first-quality Elgin movements. Nos. 24 and 25 are fitted with 15-Jeweled Nickel, first-quality Elgin movements.

When making your choice of Watch as premium, be sure to mention its number as given in premium list, also whether Lady's or Gent's.

The WM. WELD CO., Ltd., London, Ontario.





**Cured of Piles
After Many Years.**

Mrs. D. E. Reed, of Albany, says: "I would not take \$500 and be placed back where I was before I used the Pyramid Pile cure; I suffered for years, and it is now 18 months since I used it, and not the slightest trace of the trouble has returned." For sale by all druggists. Little book, "Piles, Causes and Cure," mailed free. Pyramid Drug Co., Marshall, Mich.—Adv. om

SHIP YOUR FURS TO
McMillan Fur & Wool Co.
MINNEAPOLIS, MINN.
WRITE FOR CIRCULARS

Dominion Cattle Breeders' Annual Meeting.

The annual meeting of the Dominion Cattle Breeders' Association was held in the Palmer House, Toronto, January 23rd. In the absence of Mr. Richard Gibson, Delaware, Ont., the President, who was snowbound, Mr. A. W. Smith, Maple Lodge, presided at the opening session. Secretary A. P. Westervelt, Toronto, in his annual statement referred to the prosperous condition of the live-stock industry, and the unparalleled success of the Provincial Winter Fair at Guelph and the great value of its educational features, and the development of the live-stock trade between the Provinces, which had been very marked and gratifying.

In 1899 the value of stock purchased through the live-stock associations amounted to \$2,254. In 1900 the trade increased to \$4,958; while since January, 1901, the value of stock bought and shipped, both east and west, through the live-stock associations, amounted to over \$50,000.

The report also referred to the growth of the live-stock associations. In ten years the attendance at the Winter Fair has grown from about 500 to 20,000, and prizes offered from \$325 to \$6,863. The membership of the live-stock associations in seven years has grown from 258 to 2,204. During the past year \$97,000 has passed through the hands of the live-stock associations.

A committee was appointed to look into the matter of a live-stock exhibit at the World's Fair at St. Louis in 1903, and to seek Government assistance towards a similar exhibit to that at the Pan-American and Chicago Expositions.

A committee was also appointed to prepare a model prize list and rules for the district and township fairs, as well as the larger exhibitions, and to meet with the committee of the Canadian Fairs Association for this purpose on Feb. 18.

Officers for the ensuing year were elected as follows: President, Arthur Johnston, Greenwood; Vice-President, A. W. Smith, Maple Lodge; Vice-Presidents for Provinces: Ontario, H. Wade, Toronto; Manitoba, Hon. T. Greenway, Crystal City; Northwest Territories, Chas. W. Peterson, Calgary; Quebec, H. D. Smith, Compton; Nova Scotia, E. B. Eldarkin, Amherst; New Brunswick, T. W. Peters, British Columbia, G. H. Hadwin, Duncan's; Prince Edward Island, Judge F. Hazzard, Charlottetown; Newfoundland, Hon. Thos. C. Duder, St. John's. Directors: James Bowman, Guelph, for Polled Angus; Alfred Stone, Guelph, and W. K. Gooding, for Herefords; T. Porter, Mt. Denis, and R. McCullough, Snelgrove, for Jerseys; D. McCrae, Guelph, and Robert Shaw, Brantford, for Galloways. General director J. M. Gardhouse, Highfield; Ontario Agricultural College representative, Prof. G. E. Day, Guelph; auditor, J. M. Duff, Guelph. Delegates: To Toronto Fair Board, John A. McGillivray, Uxbridge, and A. P. Westervelt, Toronto; to London Fair Board, R. Gibson, Delaware, and Capt. T. E. Robson, Ilderton; to Brantford Fair Board, G. W. Clemons, St. George, and J. R. Alexander, Brantford; to Ottawa Fair Board, J. G. Clark and F. W. Hodson, Ottawa; to Provincial Winter Fair, G. W. Clemons, St. George; John T. Gibson, Denfield, and John Bright, Myrtle.

GOSSIP.

Menie Stock and Poultry Farm, the property of Wm. Stewart & Son, Menie P. O., is situated in the County of Northumberland, two miles from Hoards' Station and six miles from Campbellford, on the G. T. R. line running between Belleville and Peterboro. The Messrs. Stewart are widely known in connection with their splendid herd of imported and home-bred Ayrshire cattle and choice poultry. The herd of Ayrshires, which now numbers 31 head, was originally founded on the great show cows, Princess Minnie 537 and Lady Minnie 535. Later purchases were the noted prizewinning cows, Jean Armour 2058 and Red Rose 2884, from the late David Morton, Hamilton. The principal families represented are Sprightlys, by the cow, Sprightly 2nd (Imp.) 1210, by Auchendenan 1; dam Sprightly 586. There is a particularly nice yearling bull out of her and sired by Hover-a-Blink 9806. The Primrose family is represented by the cow, Imp. Primrose 1205, by Prince Charlie of Dunlop 959; dam Primrose of Harperland 3313. There is also a yearling bull out of her by Hover-a-Blink, that is hard to beat. The stock bulls that have been used on the herd were: General Middleton 443; White Prince (Imp.) 808, and Glencairn of Burnside 8153, by Imp. Glencairn 3rd. The present stock bull is Hover-a-Blink 9806, winner of first at Toronto, 1901. He was sired by Dainty Lad of Elm Shade 2245, by Imp. Silver King; dam, Jean Armour 2058, by Imp. Royal Chief. His show-ring record speaks for his quality and individuality, and needs no comment. Other winnings of the herd at Toronto last fall were third on bull calf and first on three-year-old cow. At London, first and second on yearling bull, first and third on bull calf, first on cow, first and third on three-year-old cow, first and third on two-year-old heifers, second on yearling heifer and sweepstakes on cow. The many females in the herd are a splendid lot. Mr. Stewart reports sales for the last year by far the best he ever had.

In poultry the following varieties are kept: Silver Grey and Colored Dorkings; Houdans; Minorca (Black); Indian Games; White-crested Black; Silver and Gold-crested Polands; Silver Spangled; Golden Pencilled and Black Hamburgs; Single-combed, Rose-combed, White and Brown Leghorns; Sebright Bantams; Partridge Cochins; Aylesbury and Rouen ducks; Chinese geese, and Bronze turkeys. Birds of Mr. Stewart's breeding won the gold medal on best collection of White Leghorns at Montreal Poultry Show this year.

GEO. ISAAC'S IMPORTED SHORT-HORNS AND CLYDESDALE STALLIONS.

Mr. Geo. Isaac, whose farm is at Bomanton, Ont., about 12 miles north of Cobourg station on the G. T. R., is well known throughout Canada and the United States as an importer and breeder of Shorthorn cattle and Clydesdale horses. On a recent visit by a representative of the "Farmer's Advocate," Mr. Isaac was found in the peculiar position, for an importer and breeder, of having only one pure-bred Shorthorn in his stables, being, with that single exception, completely sold out, but having a new importation in quarantine. His recent sales were: To Alexander Burns, Rockwood, Ont., the imported bull, Lord Kitchener 8393, and the imported heifers, Sunbeam 6th 8401 and Mary 8394; to E. D. Robinson, Markham, Ont., the imported bull, Rustic Chief, Vol. 22, and the three imported heifers, Bessie 8460, Roan Rose 8398 and Dorothy Princess 8383; to James Cowan, Seaforth, Ont., the two imported heifers, Celia 10th 8381 and Queen Charlotte 8387; to W. A. Cullis, Fenelon Falls, Ont., the imported bull, Lord Douglas 8392; to Hector Cowan, Pauline, Iowa, 18 head, all imported and all heifers. Mr. Isaac has at present in quarantine at Quebec 24 head, of which the Scottish Farmer says: "Mr. Sylvester Campbell, Kinellar, has just shipped from Glasgow, per *Concordia*, a valuable consignment of Shorthorns to Mr. Geo. Isaac, Bomanton, Ont., which consists of 16 one-year-old heifers, 7 heifer calves, and 1 bull calf. From the old-established herd at Heatherwick, Inverurie, 5 heifers of the famous Mayflower family, 3 of which are sired by the famous bull, Prince of Archers, and the others by the Merr bull, Golden Hope. The bull calf is Nonpareil Archer, out of a Kinellar-bred Nonpareil cow and sired by Prince of Archers. He is a calf of great promise and sure to be a judge's choice; in fact, Mr. Bruce says he is the best calf he ever bred. The others are of the Kinellar, Mina, Claret, Lady Ythan, Lovelace, Orange Blossom, Lovat Broadhooks, Marchioness, Primrose, Honeycomb, Brawith Bud and Maid of Promise families." Mr. Isaac expects this grand lot home about March 1st. In one of the commodious box stalls we saw the imported Clydesdale stallion, Baron, Vol. 22, sired by Royal Concut 10271; dam Bud of Hatton Castle 10554, by Earl of Buchan 1126. He is a beautiful brown, coming four years old, as smooth as they make them, with perfect feet and legs, an extra well balanced body, good action, and altogether a very sweet horse. In another stall is the imported stallion, Gay Gordon, Vol. 22, coming four years old, sired by Prince Robert 7135; dam Lady Roy, Vol. 23, by Gilderoy 2nd 5038.

PRACTICAL PROOF.

ST. GEORGE, ONT., JAN. 16TH, '02.

THE DE LAVAL SEPARATOR COMPANY, TORONTO:

Dear Sirs,—As superintendent of the Canadian dairy cattle at the Pan-American Exposition, Buffalo, 1901, I had access to every part of the Model Dairy and Laboratories at all times. As a result of my daily observations of the work of the U. S. and De Laval separators, I was thoroughly convinced of the absolute superiority of the De Laval in every respect.

It was regularly operated by the attaches of the Model Dairy, and its work, under such ordinary conditions, was much more satisfactory than that of the competing machine in the hands of experts, under the most favorable conditions of thin cream and excessive speed. During the first run of the U. S. there was complaint from the breed managers on account of its poor work. In the second run it required experts and abnormal and unpractical conditions to produce better results.

I have since purchased a No. 2 De Laval separator, and, having used it for some time, will state that it fully meets my expectations, and pleases me in every particular.

Yours truly,
G. W. CLEMONS.

THE DE LAVAL SEPARATOR CO'Y,
ONTARIO OFFICES: 77 YORK ST., TORONTO, ONT.

CHICAGO, PHILADELPHIA, SAN FRANCISCO,
MONTREAL, WINNIPEG, NEW YORK.

Good Calves Are Raised Where

**BIBBY'S
"CREAM
EQUIVALENT"
IS USED.**

FOR supplementing the supply of whole milk or for enriching separated or skimmed milk, or if necessary for raising the calves without any milk whatever after a few weeks old. It is by far the most popular calf food on the market.

Price: 50-lb. bag, \$2.00; 100-lb. bag, \$3.50; freight prepaid to nearest railroad station.

To be obtained from local dealers, or direct from

**J. BIBBY & SONS,
10 Bay Street. TORONTO.**

He is a horse of very commanding appearance, standing 17 hands high, very symmetrically built, on the best of feet and legs, with large, flat bone, and perfect action. He is a dark bay with black points. These horses are for sale and are well worth looking after.

The great auction sale of Mr. Robert Miller's herd of Shorthorns, to take place at Stouffville, Ont., on Feb. 5th,

the day after the annual meeting at Toronto of the Dominion Shorthorn Breeders' Association, promises to be the most important and attractive event in stock circles in Canada in recent years. The catalogue represents a rich variety of first-class Shorthorn families, and the cattle are claimed to be as good as their pedigrees. We bespeak a bumper attendance of stockmen at the sale and anticipate a wide distribution of the stock.

Zanzibar Paints

are MORE DURABLE, DRY QUICKER,
COVER BETTER, HAVE HIGHER GLOSS,
than old-process paints.

And

ARE MORE ECONOMICAL

both in first and ultimate cost.

The high price of Linseed-Oil Paints, and the poor quality of low-priced paints made from Water Emulsions and cheap paint oils, etc., have caused the neglect of your buildings, probably.

Zanzibar Paints

contain NO WATER, NO CHEAP PAINT OILS,
NO LINSEED OR PETROLEUM OILS.

They are superior in point of service and appearance to any other paint made for houses, barns, agricultural implements, wagons, roofs, fences, etc.

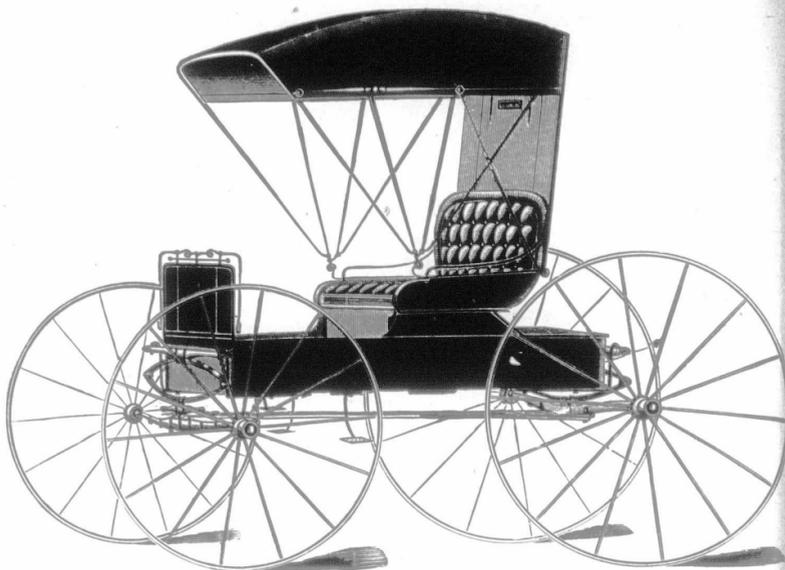
USE **ZANZIBAR CARRIAGE BLACK** FOR YOUR BUGGIES.
WEATHER-PROOF; VERY DURABLE; BRILLIANT GLOSS.

Ask any dealer for ZANZIBAR PAINTS, or write direct to factory.

The Zanzibar Paint Co., Limited,
Atlantic Avenue, TORONTO, ONTARIO.

J. M. Gardhouse, Highfield, Ont., reports his sales this season in all lines of stock the best he has had for many years, the demand for females being very brisk. Since the International Show at Chicago 17 head of Leicesters have been sold, among the lot the ram, The Sultan, winner of the first prize at Chicago, and the shearing ewe that won second at the same show. Some of the late sales in Shorthorns are: Violet of Rosedale, by Imp. Guardsman, and half-sister to St. Valentine and Violet of Hadden Hill, to Wm. Wilson, Brampton. Clarissa's Gem, a pure Scotch heifer, of the Claret family, by the Marr

Missie bull, Scottish Pride, and a good red bull calf by Imp. Loyalty, also Crimson Lady, of the Crimson Flower family, sired by Imp. Prime Minister, and Fairy Flake, by Imp. Prime Minister, dam by the Brawith Bud bull, Guardsman, to C. Hintz & Sons, Ohio. We have still four choice young bulls, three reds and one roan, from 10 to 15 months. Our recent purchase, the imported Shire stallion, Newham's Duke, is moving along nicely and is admired by all who have seen him, although he is only in growing condition. He has quality with quantity, and that is what is required.



THE ABOVE IS ONE OF THE STYLES OF BUGGIES MADE BY

John Campbell & Son,
LONDON, ONTARIO.

Catalogue and prices on application.

George Rice, Currie's Crossing, Ont., has recently made a sale of six fine Holsteins from his Brookbank Farm herd, including the noted cow, Iosco's Pride, winner of first prize and championship at the Toronto and Pan-American Exhibitions, to Dr. A. L. Lewin, Pittsburg, Pa.

MR. C. B. JEFFS' DISPERSION SALE.

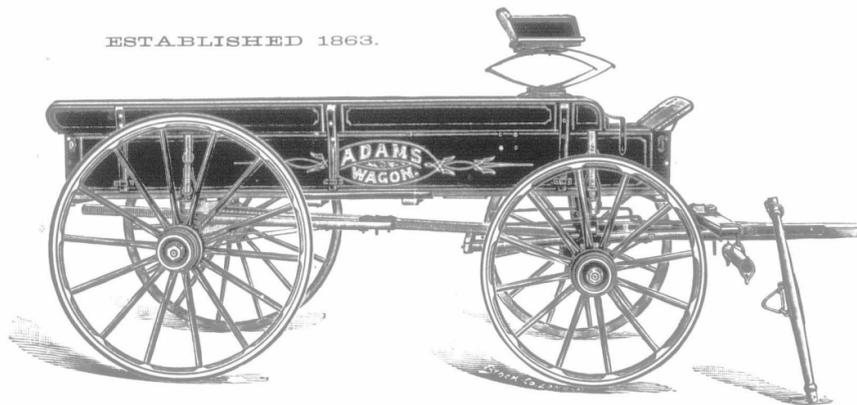
On Feb. 18th, as advertised in this issue, Mr. C. B. Jeffs, Bond Head, Ont., having leased his farms, will sell at auction, without reserve, his entire herd of 20 Shorthorn cattle and his flock of 45 Southdown sheep, at his farm, near Bradford on the Northern division and Beeton on the North-western division of the G. T. R., about 40 miles north of Toronto. Mr. Jeffs, formerly of the firm of E. Jeffs & Sons, has a herd built on sound foundation stock, most of the cows being deep milkers, high-class bulls of Booth and Cruickshank blood having been used for many years, the young stock showing steady improvement in beefing quality, while the females yet remain in large measure their good milking qualities, which tell in the condition of the lusty calves which are raised from year to year, the bull calves finding ready sale to farmers engaged in raising and feeding beef cattle and to breeders desiring to build up dual-purpose herds adapted to both beef and milk production, observant breeders having learned that the best milking

cows are, as a rule, the best breeders. We have not at this writing the catalogue of the cattle to be sold, but enough is known of the character of the herd to justify the opinion that a useful lot of cattle will be found in this sale, and we advise all interested to note the advertisement and apply early for the catalogue, which will furnish particulars.

Since the above was in type, a letter received from Mr. Jeffs says: "The herd is in good healthy condition, and a good even lot, the cows having calves at foot or being in calf to the slashing big stock bull, Kinellar Chief 35624. The bulls are a good, even lot, of the right type. Among the heifers are a number of prizewinners, and all are in good shape. The herd was established by the owner's father in 1867, and no expense has been spared in securing good bulls to strengthen and build it up. Among the sires that have been used were: Imp. British Statesman (42847), bred at Kinellar, Beaten in Canada only by Barmpton Hero; Prince Arthur 3682, half-brother to the champion Sir Arthur Ingram, and fully his equal; Imported Killerby 6377, by Gravesend; Joyful Lad 18711, bred at the O.A.C.; and Prince Arthur 23377, a Centennial Isabella, of Russell breeding. The Southdowns are a grand lot. The flock was founded on Jackson stock, and the best rams procurable have been used. There will be no reserve."

THE WAGON THAT MAKES CANADA FAMOUS.

ESTABLISHED 1863.



WE MAKE A SPECIALTY OF ALL KINDS OF

**FARM WAGONS, FARM TRUCKS,
HEAVY TEAMING WAGONS,
LOG TRUCKS,**

AND A FULL LINE OF **LORRIES**, AND THE BEST AND CHEAPEST COMBINATION

HAY AND STOCK RACK

IN THE MARKET. WRITE US FOR CATALOGUE AND PRICES.

ADAMS WAGON COMPANY, LIMITED.

HEAD OFFICE AND WORKS: BRANTFORD, ONTARIO.

BRANCHES:

WINNIPEG,

OTTAWA,

MONTREAL.



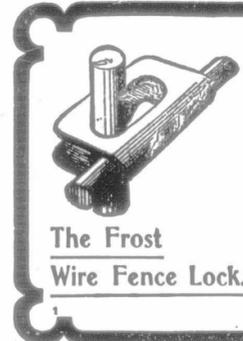
We beg to call your attention to a new and indispensable article in

Barclay's Patent Attachment

FOR THE CURE OF BALKING AND KICKING HORSES.

Will control any vice known to a horse. Invaluable for breaking in colts. Can be adjusted in two minutes, and used with any harness, vehicle or implement. Sent, charges paid, to any part of Canada, with full directions for use, on receipt of price, \$5. Reliable representatives wanted. For further information, address

THE BARCLAY MFG. CO., Brougham, Ont.



The Frost Wire Fence Lock.

AGENTS WANTED

To Sell Frost Wire Fence.

The strongest fence sold, made entirely from High Carbon Spring Steel wire. No tie wires or kinks to weaken the wire. The cross wires are held in place by the patented FROST LOCK. It never weakens or slips. Exclusive territory given to good men.

THE FROST WIRE FENCE CO., LIMITED
WELLAND, ONT.
Write for Catalog.

4 Imp. Clydesdale Stallions 4

Clymphion, Vol. 24, 2 years old, bay; Bucepholus, Vol. 24, 2 years old, black; Voyageur, Vol. 24, 2 years old, brown; Lord Garley, Vol. 23, 4 years old, brown. Representing the blood of Golden Sovereign, Sir Christopher, Montrave Matchless, and Royal Garth.

GEO. G. STEWART,
P. O. and Station, Howick, Quebec.

AUCTION SALE

SHORTHORNS

12 HEAD:

8 Females 4 Bull Calves

All Bates blood. Good milking strain.

SALE ON WEDNESDAY, 12th FEB'Y, 1902

LOT 24, CON. 3, NORTH OXFORD.

2 miles north of Thamesford, C. P. R., 14 miles from London, Ontario.

D. BAIGENT, THAMESFORD, ONT.

Dispersion Sale of Shorthorns and Southdowns,

ON TUESDAY, FEB. 18TH, 1902.

We will sell on above date our entire herd of 20 Shorthorns and 45 Southdowns, together with the usual farm stock and implements. Trains met at Beeton and Bradford Stations. Catalogues on application. Without reserve, as proprietor has leased his farms.

W. J. PHILLIPS, C. B. JEFFS,
Auctioneer. BOND HEAD, ONT.

SECOND ANNUAL ONTARIO PROVINCIAL AUCTION SALES

OF PURE-BRED CATTLE AND SWINE

will be conducted under the auspices of

The Dominion Cattle, Sheep and Swine Breeders' Associations

At OTTAWA, ONT., FEB. 12th, 1902,

and at

GUELPH, ONT., FEB. 26th, 1902.

Selected stock. Nothing but good representatives of each breed will be allowed to enter and be put up for sale. Orders to buy may be placed with the Secretary, and will be honorably discharged.

Reduced Passenger Rates. Special Rates to Buyers.

A grand opportunity for anyone wishing to procure registered stock. For copy of rules, catalogue and full particulars apply to

A. W. SMITH, A. P. WESTERVELT,
President, Secretary,
Maple Lodge, Ont. Parliament Bldgs.,
Toronto, Ont.

WM. SMITH, COLUMBUS, ONT.,

IMPORTER AND BREEDER OF
Clydesdale Horses & Shorthorn Cattle

GOSSIP.

Mr. James Riddell, of Beeton, Ont., is offering for sale in our advertising columns, a choice lot of young Shorthorns. The herd is headed by Royal Robe 22918, bred by Mr. John Miller, of Markham; got by Aberdeen 18949, a first-prize winner at Toronto; dam Mara 22330, by Imp. Vice Consul, a Cruickshank Victoria bull and a champion at Toronto Exhibition.

FOR SALE: TWO EXTRA GOOD

SHORTHORN BULLS

Twenty months old; red; also younger ones, as well as a number of heifers or young cows in calf or calf at foot.

YORKSHIRE SWINE—BOARS AND SOWS.

RICH. GIBSON, DELAWARE, ONT.

Riverside Holsteins

Five bulls, 9 to 11 months old, for sale. Victor De Kol, Pietertje and Johanna Rue 4th's Lad head the herd.

MATT. RICHARDSON & SON,
HALDIMAND CO. CALEDONIA, ONT.

CLYDE & SHIRE HORSES, SHORTHORN CATTLE and LEICESTER SHEEP.

One Clyde stallion, rising 3 years old, sired by Lewie Gordon; one stallion colt (Clyde), sired by the unbeaten King of the Clydes, g. dam an imp. prize-winning mare; also four choice Shorthorn bulls, reds and roan, from 10 to 15 months old. Write for prices or come and see us. My motto: "The best is none too good." J. M. GARDHOUSE,
"Rosedale Stock Farm," Highfield P. O.
MALTON, G. T. R.; WESTON, C. P. R.
Rosedale Farm is thirteen miles west of Toronto.

CLYDESDALES

Shires and Hackneys.

OUR new importation of Clyde, Shire and Hackney stallions, comprising winners at leading shows in England and Scotland, arrived at our stables January 22nd. We have now over 20 imported stallions, all of which we are offering at living prices, including the champion Shire stallion, Beishazzar.

Bawden & McDonell, Exeter, Ont.

OAKLAWN FARM

THE GREATEST IMPORTING AND BREEDING ESTABLISHMENT IN THE WORLD.

PERCHERONS, FRENCH COACHERS.

On hand upward of 500 HEAD.

Our late importations included the Principal Prize Winners at the Great Shows of France.

At the recent

INTERNATIONAL LIVE-STOCK EXPOSITION

at Chicago, the Oaklawn Percherons won every Championship, First Prize, and Gold Medal and every Second Prize in classes. Notwithstanding the superior quality of our horses and the amply fair and certain terms of our breeding guaranty, backed by our well-known responsibility, it is a fact that our prices are lower than can be obtained elsewhere in America. Catalogue sent on application.

DUNHAM, FLETCHER & COLEMAN,
WAYNE, DU PAGE CO., ILLINOIS.

GOSSIP.

A proprietary stock food, said to have given very satisfactory results where used, is advertised in this issue by E. Hersee, manufacturer, Woodstock, Ont.

A handsome, well-developed and nicely-bred, registered Shorthorn heifer, 18 months old, is advertised in this issue for sale by Mr. H. F. Whetter, London, Ont. She is a rich red in color, with a good coat of soft-handling hair, is level in form, well-proportioned and of good size and quality, and was served in November by Duke of Richmond 29691, a good bull, of rich breeding, formerly used in the herd of Capt. T. E. Robson. She comes of a deep-milking family, and is worth looking after.

Referring to the engraving, on another page in this issue, of Mr. Richard Gibson's splendid prizewinning yearling Shropshire wether, the following statement represents his winnings in December last at the International and the Ontario Provincial Winter Shows: At Chicago he was first in his class, also first in American Shropshire special, and one of the pair that won the silver cup for best pair of wethers in the show, any age or breed. He was first in his class at Guelph, and first for American Shropshire special. He was defeated only once, and that time by a lamb from same flock, when showing for best Shropshire wether, any age or breed. The decision was not popular, but the judge at Chicago said the lamb would dress out the best carcass.

MAPLE GROVE SHORTHORNS.

Maple Grove Stock Farm lies in the County of Durham, Ont., about 10 miles north of Port Hope, and is only a short distance from Garden Hill station on the G. T. line running from Port Hope to Peterboro. The owner, Mr. W. B. Campbell, whose P. O. is Campbellcroft, is the happy owner of about 23 head of excellent Shorthorns of the low-down, beefy sort. Prominent among the dams is the imported cow, Victoria, a rich roan, built on the up-to-date pattern, imported by Cargill & Son, and is proving herself a producer of her kind. She was sired by the great bull, Matadore 67461, a grandson of the 300-guinea bull, Scottish Archer; dam Lady Cashmere, by Naim 63035. There is a splendid two-year-old bull out of her, Victor, imported in dam, sired by Prince Charlie 73263. He is white, and individually is all that could be desired. There is also another son of hers, 10 months old, Orange Duke 2nd, sired by Imp. Orange Duke, a roan, all quality from the ground up. Among the other good dams is: Marigold 1/502, by Challenge 2933, by Barmpton Hero; dam Rosabella 2nd 4507, by The Baron 326. She is one of the big, broad, fleshy sort, and has bred Mr. Campbell a number of good ones. Another good one is Bloom 11274, by Challenge 2933; dam Rose 3rd 4556, by Baron. She is a typical animal and a prize-winner at Toronto. A daughter of hers is Glory, Vol. 14, by Imp. Prime Minister 15280, and like her mother, an extra good one. There is also a full sister of hers. One of the stock bulls in use a couple of years ago was Royal James 28562, by King William 21565; dam Lovely Gem 26762, by Imp. King James 17100. There are three two-year-old bulls sired by him: Kipling 2nd 33195, a nice roan, out of the cow, Bloom. Another is James 33196, out of Glory 2nd, a full sister of Glory, described above. The third one is out of Glory. These bulls are almost identical in breeding, and are a grand, good lot, being low-down, deep, fleshy fellows, and should be grand stock bulls. The present herd bull is Imp. Orange Duke 28872, bred by the Duke of Richmond; sired by the Missie-bred bull, Musgrave 64470, by the Cruickshank Clipper bull, Criterion 57123; dam Rose Hope 6th, by Strongbow 52220. He is a roan, weighing 2,400 lbs., beef from the ground up, and exceedingly even in make-up. There is still another son of his, 10 months old, Prince of Orange 39492, out of the grand cow, Glory 2nd, by Imp. Prime Minister. He is also white, but in conformation is a model. In all, Mr. Campbell is offering five bulls for sale, four two-year-olds, and this 10-months-old youngster. These bulls are well worth looking after, as they are not only bred right, but are splendid animals. Mr. Campbell is also the patentee of an ingenious yet simple apparatus for rapid and accurate feeding of stock, particulars of which will be given in a later issue of the "Advocate," when Mr. Campbell will offer the patent for sale.

An eleven-bar coiled spring wire fence, woven 12 inches apart, will cost only about 34c. per rod for labor and material, if you purchase a

London Fence Machine.

No farm rights or restrictions. The London stands for all that is best in wire fencing. Best machines. Best wire. Best stretchers. Twice the fence for the same money. Twice the quality and durability in the fence. Twice the speed and wearing qualities in our machines. London machines are cheaper and better than ever. Write for our new Catalogue. Everything for fencing at lowest prices.

LONDON FENCE MACHINE CO. (LIMITED), LONDON, ONTARIO.

HORSEMEN! THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

None genuine without the signature of The Lawrence, Williams & Co. Sole Importers & Proprietors for the U.S. & CANADAS, CLEVELAND, O.

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle, SUPPURES A.L. CAUTERY or FIRING. Impossible to produce scurf or blenish. Every bottle is warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by Express, charges paid, with full directions for its use. Send for free descriptive circulars. THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

Wagon World Awheel.

Half a million of these steel wheels have been sent out on our own wagons and to fit other wagons. It is the wheel that determines the life of any wagon, and this is the longest lived wheel made. Do you want a low down Handy Wagon to use about the place? We will fit out your old wagon with Electric Wheels of any size and any shape tire, straight or staggered spokes. No cracked hubs, no loose spokes, no rotten felloes, no resetting. Write for the big new catalogue. It's free. Electric Wheel Co., Box 253, Quincy, Ill.



Simple, durable, easy to turn and clean. Five different dairy sizes.

WRITE FOR CIRCULARS AND INFORMATION. AGENTS WANTED.

C. RICHARDSON & CO., P. O. Box 1048, St. Mary's, Ont.

Mason & Risch Pianos

Will suit you in every respect. Prices to suit. Some second-hand ones of different makes at greatly reduced prices.

PIANO PARLORS: 211 DUNDAS STREET, LONDON.

IMP. CLYDESDALES AND AYRSHIRES. The three imp. stallions, Copyright, Baron Frederick and Baron Laing, and the Canadian-bred stallion, Laurentin. Ayrshires all ages; and poultry, utility breeds. Eggs for sale. ROBT. NESS & SONS, Howick, Que., P.O. & Sta.

4 Imp. Clydesdale Stallions

31 Imported Shorthorn Cows and Heifers. 7 Canadian-bred Cows and Heifers. 3 Imported Shorthorn Bulls. 5 Canadian-bred Bulls.

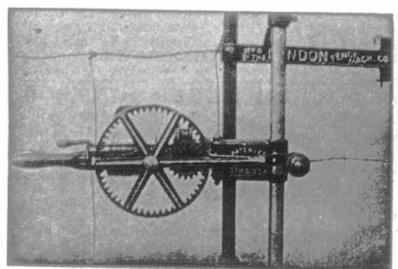
GEO. ISAAC & BROS., SOMANTON, ONT. COBourg STATION, G. T. R.

Wm. Brash, Ashburn, Ont.,

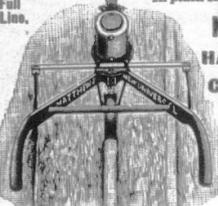
BREEDER OF CLYDESDALE HORSES and SHORTHORN CATTLE.

Shires, Shorthorns, and Leicesters.

Young stock of both sexes for sale. Imported Prince Louis = 32082 = heads the herd. Write for prices or come and see them. John Gardhouse, Highfield P. O. Weston, G. T. R. and C. P. R.



SEE THE SEED DROP.
In plain sight of the operator.
MATTHEWS' New Universal HAND SEEDERS AND CULTIVATORS.
Used by the most successful gardeners. They do perfect work. Open furrow, drop seed, cover any desired depth. Cultivating attachments. Latest and best. Popular prices.
AMES PLOW CO.
83 Market St. BOSTON.



Clydesdales

Two stallions for sale, rising two and three years old. Correspondence solicited. om
Josiah Hallman & Sons, Washington, Ont.

IMPORTED CLYDESDALES

For Sale—4 Imported Stallions and 1 Filly.
Ratpayer, bay, rising 6 years, the largest horse in Canada, sire Prince of Carruchan. **Coyton**, black, rising 4, will make a horse 2,200 pounds, sire Ethiopia. **Baltevaia Fashion**, roan, rising 3, will make a horse 2,000 pounds or over, sire Prince of Fashion. Choice gift, a very large horse, sire Good Gift. **Jessamine**, brown, rising 3, a very fine mare, sire Gold Mine. Prices right, and must be sold. Apply to om

NEIL SMITH, BRAMPTON, ONT.

Smith & Richardson

COLUMBUS, ONT., IMPORTERS OF
CLYDESDALE STALLIONS.

Our latest importation of 4 stallions is the best we ever made, weighing from 2,000 to 2,200 lbs., and of the well-known Darnley and Prince of Wales breeding. We have a number of pure-bred mares; also some young Canadian-bred stallions and fillies. Write for prices. om

Railway Stations: **Oshawa, G. T. R. ; Myrtle, C. P. R.**
Long-distance telephone at Columbus.

High-class Herefords

We have for sale the following choice young stock, which have been bred from imported and American sires. Intending buyers will do well to inspect the following: 18 young bulls, 2 aged bulls, 20 young heifers. Correspondence invited. om

A. S. HUNTER, DURHAM, ONT.

HEREFORDS.
Seven bulls, from 12 months to 2 years old, by Clarion and Clarion 2nd, and out of dams from imp. stock. Also a few choice heifers. Write for particulars. om
R. J. MACKIE, Oshawa, P. O. and Station.

The Sunnyside Herefords.

Imp. Sunny Slope Tom 1st No. 86085 at head of herd. The blood of Lord Wilton, Garfield, Grove 3rd and Beau Real represented. Special offering: 5 bulls, from 8 to 14 mos.; 10 cows and heifers, from 10 mos. to 3 yrs. old. Inspection and correspondence solicited. om
O'NEIL BROS., Southgate, Ont.
Lucan station, G. T. R. Ilderton station, L., H. & B.

90 HEAD
High-quality, Early-maturing
Herefords
Prizewinners.
Young bulls, cows, heifers.



The blood of "Corrector," "Eureka," "Ancient Briton," and "Rupert," on an "Anxiety" foundation. Send for illustrated catalogue. om
H. D. SMITH, COMPTON, QUE.

ABERDEEN-ANGUS CATTLE
Won grand championship over all beef breeds, alive and dressed, at Smithfield; grand championship over all breeds and crosses in carcass competition at International Show, Chicago, and the Ontario Provincial Winter Fair, 1901. Elm Park Lad, grand champion carcass, Chicago, was bred and fed by me till June, 1901; the grade Angus steer winning grand sweepstakes, dressed carcass, at Guelph was fed and exhibited by me. Kyma's Heir, champion bull 1 years at Toronto, heads my herd. Young bulls, cows and heifers for sale. **JAMES BOWMAN, Guelph, Ontario.**

6-POLLED ANGUS BULLS—6
Six young bulls, from 6 to 16 months old; prize-winners among them. All for sale. om
Alex. McKinnon, Hillsburg P. O. and Station.

HIGH PARK STOCK FARM.
GALLOWAYS of the choicest breeding and most fashionable strains. Inspection or correspondence invited. **A. M. & ROBERT SHAW, om P. O. Box 294, Brantford, Ont.**

GOSSIP.

Wm. Shier, Marlette, Mich.: "Inclosed find P. O. order for \$1, being renewal for 'Advocate' for 1902. We could not farm successfully even in Michigan without the 'Farmer's Advocate.' It gives us the fullest reports of the live-stock industry not only of the American continent, but also that of Europe, which largely controls our prices. Your reports of the live-stock fairs are fuller and more reliable than any that comes to our hand. Wishing you remunerative success."

Henry Arkell & Son, Teeswater, Ont.: "We consider the 'Farmer's Advocate' the best agricultural paper published, and would not be without it for twice what we now pay for it. Our advertisement has paid us well; many of our customers have mentioned seeing it in the paper. We have done a good trade in Oxfords in 1901, selling in all 110 head, most of them going to our retail trade. Our last shipment was 10 shearing ewes, bred to our imported ram, Earl of Fairford 2nd, and two ram lambs, to Windsor, Nova Scotia. We hope in 1902 to hear from all of our old customers and many new ones. Wishing the 'Advocate' every success."

Colwill Bros., breeders of Shorthorn cattle and Tamworth hogs, Newcastle, Ont., write: "Our sales in Tamworths were never so numerous as during the past four months, and we still have on hand a lot of fine young boars and sows from three to four months old; also a number of beautiful young sows two months old, which we are offering at very reasonable prices, quality considered, as we want to make room for our spring litters. These young pigs are all from our sweepstakes herd at Toronto last fall."

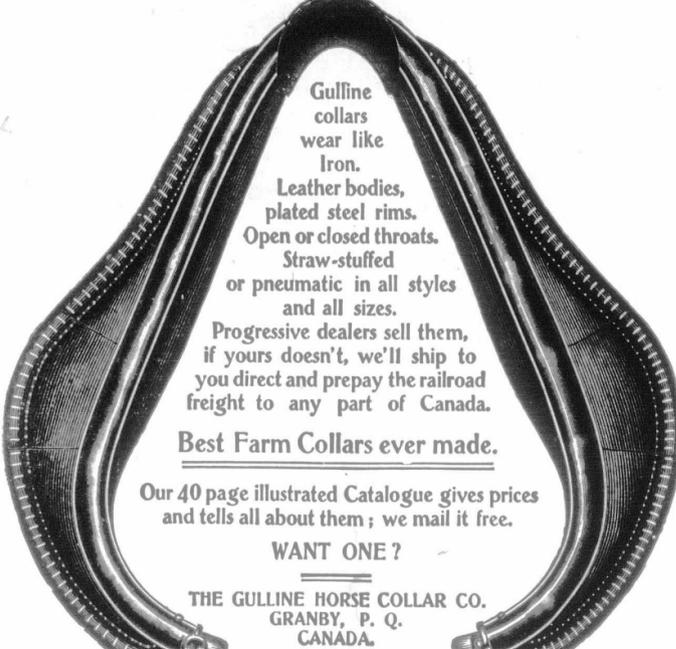
High-class Hackney stallions, mares and fillies are advertised in this issue by Mr. Frederick C. Stevens, Attica, N. Y., whose Maplewood stud ranks highest in America in show-yard records, winning more first prizes and championships at the leading horse shows than any other. At the Pan-American and the New York National Shows, Mr. Stevens' entries swept nearly everything in sight. The great sires at the head of the stud have a world-wide reputation. See the advertisement, and send to Mr. E. T. Gay, the manager, for the catalogue.

Mr. Israel Groff, Alma, Ont., writes: "My stock is doing well. My stock bull, Royal Hero, by Imp. Royal Sailor, dam Mildred, by Imp. Hospodar, is doing extra well, both as an individual and stock-getter. His calves are of good size and quality. I have still two fine young bulls and a few heifers for sale. My Berkshires are also doing well. I have sold my stock boar, Crown Prince, to Snell & Lyons, of Snellgrove; one young boar to Geo. Miller, Florida. I have still two young boars four months old; have just received a young boar from Mr. Thos. Teasdale, Concord, to place at the head of my Berkshires; also a young sow from Snell & Lyons. I am feeding 24 head of export cattle, and the results are very encouraging. Gain in weight and also in price is better than it has been for some time."

Springburn Stock Farm lies in the County of Dundas, about 7 miles north of Morrisburg station on the main line of the G. T. R. The owners, Messrs. H. J. Whittaker & Sons, whose post office is North Williamsburg, Ont., are the owners of a large and well-selected herd of Ayrshire cattle. Oxford Down sheep and Berkshire pigs are also bred on this well-appointed farm. Among the many choice cows in the herd is Bess 2449, by Imp. White Prince 808; dam Princess of Menie 537. She belongs to the Primrose family, and is a grand type of dairy cow. Another choice cow is Ayrshire Maggie 9358, by Jack the Lad of Maple Grove, grandsire Imp. Carlyle of Lessnessock; dam Daisy Queen 2984, by Orphan Boy. A daughter of hers, Love 13752, by Lord Minto, grandsire Kelso Boy 6229, is a model. Another good one is Faucy 13750, by Jack the Lad of Maple Grove; dam Bess, described above. The bulls that have been in use are: Orphan Boy 1425, by Imp. White Prince; Jack the Lad of Maple Grove 2133, by Imp. Carlyle of Lessnessock 1655; dam Imp. Blink Bonny 2043; and Lord Minto 10133. The younger animals of the herd are all sired by the above choicely-bred bulls, and, as might be expected, are an extra nice lot. Mr. Whittaker reports the demand for this favorite dairy breed as the best he ever experienced, but he still has a few left he would price.

The Oxford Down sheep are of the well-known Arkell breeding, and are descended directly from imported stock. They are a large, well-formed and well-covered lot, and among them are four ram lambs, which individually are hard to beat that are for sale.

The Berkshires are from the herd of Reid & Co., of Hintonburg. They combine size, length, smoothness and quality to a very marked degree. There are a few fall boars for sale that are good ones.



Gulline collars wear like Iron.
Leather bodies, plated steel rims.
Open or closed throats.
Straw-stuffed or pneumatic in all styles and all sizes.
Progressive dealers sell them, if yours doesn't, we'll ship to you direct and prepay the railroad freight to any part of Canada.
Best Farm Collars ever made.
Our 40 page illustrated Catalogue gives prices and tells all about them; we mail it free.
WANT ONE?
THE GULLINE HORSE COLLAR CO.
GRANBY, P. Q. CANADA.

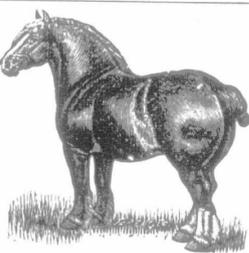
Imported Stallions for Sale.



THIRD consignment, per S.S. "Orthis" from Glasgow, due to arrive end of January, 1902.
DALGETY BROS., DUNDEE, SCOTLAND, the largest importers and exporters of horses in Canada, have on hand just now a choice selection of above, including several prizewinners. Our third consignment includes some extra good horses, being sired by such noted sires as Mains of Airies, King's Knight, Royal Stamp, etc., etc. They combine size, quality and action, and all good colors; age, from two years upwards; and will be for sale at
BLACK HORSE HOTEL, FRONT STREET, TORONTO, ONT., on Tuesday, 4th February, for one week; after that at our own stables, London, Ont. Any one in need of a good stallion should not miss seeing our stock before buying. Prices right. Apply: om

JAMES DALGETY, 229 HYMAN STREET, LONDON, ONTARIO.

JOHN BRIGHT,
MYRTLE, ONTARIO,
BREEDER OF
Clydesdale Horses
AND
SHORTHORN CATTLE.....



SHORTHORNS.
For Sale: 16 head of bulls and bull calves; also a large and choice lot of cows and heifers of all ages.
CLYDESDALES.
11 registered mares, 6 of which are in foal to such notables as Royal Cairnton, Prince Patrick and Lord Lyndock; also 2 young stallions.
Myrtle P. O. and R. R. Stn., G. T. R. and C. P. R.

MAPLEWOOD HACKNEYS.

PROPERTY OF **FREDERICK C. STEVENS,** ATTICA, N. Y.,

Have won more challenge cups, more championships, more first prizes, and more value in prizes during the past seven years than all the other Hackneys of America combined.

THIS IS THE PLACE TO BUY FOUNDATION STOCK.
Stallions of all ages, mares in foal, young mares and fillies. The best three carriage horse sires in America at the head of this stud: Langton Performer, Clifton 2nd, and Fandango. om
SEND FOR CATALOGUE TO E. T. GAY, MANAGER, ATTICA, N. Y.



LATELY IMPORTED A FRESH LOT OF

Clydesdale Stallions,

Comprising sons and grandsons of many of the most noted Scotch showyard winners and sires, all in the pink of condition without surplus flesh, and personally selected to meet the best Canadian markets, having, without exception, the best of bone, hair, feet, and action, coupled with true Clyde character. I will make further importations as the times demand. Inspection invited.
Prices consistent with quality. om

ROBERT GRAHAM,
Ringwood P. O., Ont.
Stouffville Station, G. T. R., and telegraph office.

GOSSIP.
Col. R. McEwen, Byron, Ont., breeder of high-class collie dogs, has received from Mr. Richard Clark, West Lorne, to whom he recently shipped a typical young bitch, the following very satisfactory acknowledgment: "The dog arrived all right. You said if I was not satisfied with her I should send her

back. But don't look for her back, unless you have a little extra to send after her. She could not suit me better in color and every way. I forgot to ask you what you called her around home? I don't expect it would be the same as her registered name. You can let me know when you send her pedigree. I had an old neighbor looking at her who used to be a dog fancier. He thought she was about perfect."

TROUT CREEK HERD OF Shorthorns

Won first prize for herd and the championship for best bull and best female, any age, at Toronto Industrial and Pan-American Exhibitions, 1901. We keep constantly in our herd a choice lot of imported and Canadian-bred cattle of both sexes. Personal inspection invited. Parties desiring to see the herd will be met on arrival of trains if notice is given. Visitors always welcome. Address:

JAMES SMITH,
Manager,
MILLGROVE, ONT.

W. D. FLATT,
378 HESS ST., SOUTH,
Hamilton, Ontario.



Our customers say that the King Washer is the best. Before buying a washer, get prices of King Washer. We have agents in nearly every city, town and village in Canada handling our goods. If your dealer does not handle them, write direct to us for particulars.
H. A. Clemens & Co.,
GUELPH, ONT.

FOR SALE: DURHAM HEIFER, IN CALF.
First-class pedigree. Address:
H. FRANK WETTER, Westminster,
London P. O.

Mercer's Shorthorns for Sale

BULLS and heifers from such families as Matchless, Clarets, Missies, Stamfords, Fashions, Buttercups, Isabellas, Princesses, Beatrices, and other choice families. Herd headed by Village Squire = 24993 = (he by Abbotsford), assisted by a son of old Royal Sailor (imp.). Cows and heifers in calf. Four nice young bulls. Our herd stands at the head of the show-ring in this northern country. Over 40 head now in the herd. Intending visitors drop a card and they will be met at the C. P. R. station, Markdale, one mile from farm. Write for prices. No business, no harm. Our motto: "The best is none too good."
THOS. MERCER, MARKDALE, ONT.

Jersevs for Sale: From high-testing stock—registered A. J. C. C. Cow 3 years old, due to calve May 11th, \$60. Bull 9 months old, \$40. Heifer 5 months old, \$25. Or to clear out lot now, will take \$115.
R. DODDS, P. O. Box 606, Guelph, Ont.

FOR SALE:
Three young St. Lambert bulls; best breeding, color and dairy form.
T. PORTER, MOUNT DENNIS, ONT.

IMPORTED JERSEY BULL
FOR SALE:
The prizewinning sire, imported

DISTINCTION'S GOLDEN
Is docile and sound. His get have won the family prizes for three years at Toronto Exhibition.
APPLY
ROBERT DAVIES,
THORNCLIFFE STOCK FARM, TODMORDEN,
or 34 Toronto St., Toronto.

GREEN GROVE HERD OF SHORTHORNS.
This herd is headed by the famous show bull, Spicy Robin = 28259 = (bred by J. & W. B. Watt), grandson of Imp. Royal Sailor, and of the noted English family, and contains such noted tribes as Nonpareils, Crimson Fuchsias, Mysies, Butterfllys, and Langushes. Shorthorns of both sexes. Also a choice litter of Yorkshires, about 4 mos. old, for sale. Address: om
George D. Fletcher, Blakham P. O., Ont.
Erin Shipping Station, C. P. R.

SHORTHORNS, SHROPSHIRE, COTSWOLDS.
We are now offering a number of heifers and heifer calves; a few bull calves; a number of cows; all bred in the purple and as good as the best. Also Shropshire and Cotswold sheep. om
JOSEPH BELL ESTATE, Bradford P. O. & Sta.

J. & W. B. WATT,
SALEM, ONTARIO
(POST AND TELEGRAPH OFFICE),
BREEDERS OF—
Shorthorn Cattle, Clydesdale Horses, Leicester and Oxford Sheep, and Berkshire Pigs.

Our herd contains such families as Matchless, English Ladys, Mildreds, Village Buds, Missies, Stamfords, Clarets, and Marthas. Royal Wonder = 34682 =, junior champion of 1901, now heads the herd. A choice lot of young bulls and a few females for sale. We offer our whole flock of Leicesters for sale—thirty-five ewes and ewe lambs and fifteen rams.
Farms 2 miles from Elora Stn., G. T. R. and C. P. R., 12 miles north of Guelph.

SHORTHORNS AND LINCOLNS.
A. D. MCGUGAN, RODNEY, ONT.
Herd headed by the great sire and sweepstakes bull, Abbotsford. Grand crop of calves from imported and home-bred cows. Bulls one year and under for sale—reds and dark roans. Ram and ewe lambs for sale at reasonable prices. om

FOR SALE:
Nine Shorthorn bulls, from 8 to 15 months old. Also pure-bred Clydesdale stallion, bred from imported stock, rising 2 yrs.; brown in color. om
McDONALD BROS., WOODSTOCK, ONT.

FOR SALE:
Nine Shorthorn bulls, from 8 to 15 months old. Also pure-bred Clydesdale stallion, bred from imported stock, rising 2 yrs.; brown in color. om
McDONALD BROS., WOODSTOCK, ONT.

A QUICK, SHARP CUT
hurts much less than a bruise, crush or tear. Done with the **DEHORNING KEYSTONE KNIFE** is the safest. Quick, sharp cut. Cuts from four sides at once. Cannot crush bruise or tear. Most humane method of dehorning known. Look highest award World's Fair. Write for free circulars before buying.
Owned and Manufactured by **R. H. McKenna, V. S., Picton, Ont.**

FOR SALE:
SHORTHORNS: 7 young bulls, from 8 to 10 mos. old, sired by Let's Lad and out of deep-milking cows. **H. E. HIND, Hagersville P. O. and Station, G. T. R. and M. C. R.** om

BELLEVUE SHORTHORNS.
Both sexes. IMPORTED AND HOME BREED. All ages. Prizewinners at home and abroad.

EDWIN BATTYE,
GORE BAY P. O. AND PORT.
MANITOULIN ISLAND, ONT.

WE HAVE FOR SALE
10 SHORTHORN BULLS
From 6 to 18 months old. Nearly all from imp. dams, and sired by the imp. Golden Drop bull, Royal Prince. Catalogue upon application. om
John Miller & Sons, Brougham P. O.
CLARRMONT STATION, C. P. R. ONT.

Short horns
For Sale: Choice young cows and heifers in calf to imp. bull. A few choice heifer calves. Bulls of various ages. Shropshire ram lambs, out of imp. Mansell-bred ewes. Prices moderate. om
G. A. BRODIE, - BETHESDA, ONT.
Stouffville Station, G. T. R.

Maple Lodge Stock Farm.
ESTABLISHED 1854.
SHORTHORNS.—First-prize milking strains, best Scotch breeding. Young bulls and heifers for sale.
LEICESTERS.—A grand lot of ewes, bred to our imported rams, and a few choice rams, now for sale. Also Bronze turkeys. om
A. W. SMITH,
Ailsa Craig Station, Maple Lodge P. O., G. T. R., 3 1/2 miles. ONT.

SHORTHORNS.
Fashionably bred, of both sexes and all ages. om Nothing reserved.
H. PARKER, Durham P. O. and Station.

J. R. McCallum, Iona Station, Ont.
Offers young **SHORTHORN BULLS** and **HEIFERS**, of choice breeding, at reasonable prices. Iona Stn. on M. C. R., half a mile from farm.

SHORTHORNS (IMPORTED).
Five choice young bulls, from 6 to 10 months old, by Imp. Capt. Mayfly, out of Indian Chief dams.
JAMES A. CRERAR, om
Shakespeare P. O. and Station, G. T. R.

ROSEVALE SHORTHORNS
Are of the up-to-date sort. We have for sale a number of young bulls and heifers of all ages. Marengo Heydon Duke (imp.) heads the herd. om
W. J. SHEAN & CO
Cwen Sound, Ont.

SHORTHORNS AND LINCOLNS.
A. D. MCGUGAN, RODNEY, ONT.
Herd headed by the great sire and sweepstakes bull, Abbotsford. Grand crop of calves from imported and home-bred cows. Bulls one year and under for sale—reds and dark roans. Ram and ewe lambs for sale at reasonable prices. om

SHORTHORNS
For immediate sale. 2 bulls 10 months old, 1 bull 18 months old; bred right and built right. Also pigs of both breeds, both sexes and different ages. om
C. & J. CARRUTHERS, Cobourg P. O. & Stn.

SHORTHORNS FOR SALE:
Seven choice young bulls, from 9 to 12 months old. Also a few choice heifers, in calf to the grandly bred Marr bull, Spicy Marquis (imp.). om
JAS. GIBB, Brookdale, Ont.

SHORTHORN CATTLE AND LINCOLN SHEEP.
Imp. Prime Minister at head of herd. Seven young bulls for sale—good ones. Also a few females. Stud rams all imported from H. Dudding, Esq.; the same blood as the 1000-guinea ram.
J. T. GIBSON,
om **DENFIELD, ONT.**

Bonnie Burn Stock Farm. 40 rods north of Stouffville Station, Ont., offers Shorthorn bulls and heifers with calf. Shropshire ewes with lamb, and Berkshire pigs. All at farmers' prices. Inspection invited. om
D. H. RUSSELL, Stouffville, Ontario.

"ORCHARD HILL" SHORTHORNS.
Herd comprises representatives of best Scotch-bred families, with Lord Lavender at head. Young animals of both sexes for sale.
om ARTHUR JOHNSTON, Vandeleur, Ont.

LAKE VIEW STOCK FARM.
SCOTCH SHORTHORNS, both sexes, all ages. As good as the best.
Meaford Station, **JAMES BOWES,**
G. T. R. North. om **Strathairn P. O.**

Dairy Feed.
The percentage of digestible protein is the first consideration in dairy feeding. 100 lbs. prime cotton-seed meal contains as much protein as 600 lbs. corn meal. Cotton-seed and gluten meals increase dairy farmers' profits. Cotton-seed meal, gluten meal, hay, straw and feed grain for sale by
H. L. BREEN, 41-45 Cottingham St., Toronto.

10 SHORTHORNS FOR SALE
Sired by Scottish Chief and (imp.) Chief of Stars, and from prizewinning dams. Also cows, heifers, and Berkshire pigs. om
ALEX. LOVE, - EAGLE P. O.
BISMARCK STATION ON M. C. R.

High-Class Shorthorns
and **YORKSHIRE PIGS.**
GRAND show bulls, 16 months old, by Imp. Sirius; 8 bulls from 8 months old up; low-down, thick, fleshy fellows; all bulls of great substance. A few cows and heifers in calf. Yorkshires—A lot of young pigs 3 months old and down. om
JAS. McARTHUR, - Goble's, Ontario.

SPRINGBANK FARM.
Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale.
JAS. TOLTON, WALKERTON, ONT.

New Ontario.
DO YOU WANT A FARM?
WRITE for information concerning Government lands for homesteading in the various districts of New Ontario.
Hon. E. J. DAVIS,
Commissioner of Crown Lands,
TORONTO, ONT.

Shorthorns, Yorkshires and Berkshires
For immediate sale. 2 bulls 10 months old, 1 bull 18 months old; bred right and built right. Also pigs of both breeds, both sexes and different ages. om
C. & J. CARRUTHERS, Cobourg P. O. & Stn.

MAKE THE GROCER'S PROFITS.
Why pay your local storekeeper \$1 for 85 cts. worth of goods? Buy direct from the manufacturer and importer and save one seventh of your grocery bills.
The average family spends \$280 a year for groceries; we can save you \$40 of this. At the end of each year put this \$40 in the bank at the regular bank interest of 6% and when you are twenty years older you will have a nest egg of \$141.13 to your credit.
Do not lose any more of your hard-earned money, but write at once for price lists and we will astonish you. Bank references. om
CRIGHTON & CO.,
Wholesale Grocers, Toronto, Ontario.

"VIGILANT" NEST
SLIDING—ADJUSTABLE
(Patented Can. & U.S.)
The only nest in the World which positively prevents hens from eating their eggs.
Simple—Effective—Durable
No springs—Eggs cannot break. The inclined nest gathers them safely in lower section. Prevents fleas, or parasites, etc. Everlasting, never failing, comfortable. Thousands now in use. Ask your dealer for it or write to **L. P. Morin, Inventor, Mfr.**
12 Antoine St., St. Hyacinthe, Que.
Price 45c. each. **AGENTS WANTED.**



SHORTHORN BULLS.
Scotch-bred and rare good ones. Also females all ages. Write for particulars, or, better, come and see them. **DAVID MILNE & SON,** om
Huron Co., Ont. **Ethel, P. O.**
Ethel Station, G. T. R., half mile from farm.

SHORTHORNS: We are offering 3 extra choice yearling bulls, all from imported sires, straight Cruickshank, with Lavendar and Miss Ramsden dams. **THOS. ALLIN & BROS.,** om
Oshawa, Ont.

Shorthorns, Berkshires, Leicesters
Am offering at present the grand stock boar, Crown Prince; also some young ones. om
ISRAEL GROFF, ALMA, ONTARIO.

Shorthorns and Leicesters.
Herd Established 1855.
A number of young bulls, cows and heifers for sale. Imported Christopher = 28859 = heads the herd of large cows of grand milking qualities. Also a number of Leicesters of both sexes, from imported foundation.
JAMES DOUGLAS,
CALEDONIA, ONT.

Shorthorns for Sale.
6 heifers (all in calf), from Imp. British Statesman; also 2 young bulls, 18 months old. Write for prices. **LOUIS ELLARD, Loretto P. O., Beeton Stn.** om

ASHTON FRONT VIEW STOCK FARM.
Six Shorthorn Bulls for sale, from 8 to 15 months old; all of choice breeding. Also Cotswolds of all ages for sale at all times. Visitors welcome. **A. J. WATSON, Castlederg, Ont. C. P. R.** Station and Telegraph Office, Bolton; or G. T. R., Palgrave. om

JOHN DRYDEN,
BROOKLIN, ONTARIO,
BREEDER OF
CRUICKSHANK SHORTHORNS AND CHOICE SHROPSHIRE SHEEP.
Choice Young Bulls and Ram Lambs for sale. Write for prices. om

HAWTHORN HERD
of deep-milking Shorthorns for sale. Six young bulls of first-class quality and breeding and from all dairy cows. **WM. GRAINGER & SON,** om
Londesboro, Ont.

SHORTHORNS (imported)
One bull, 2 years old, and 1 imported cow, and 7 home-bred heifers.
THOS. RUSSELL, EXETER, ONT.

Scotch Shorthorns.
100 HEAD TO SELECT FROM.
Herd headed by Imp. Diamond Jubilee = 28861 = and Double Gold = 37852 =. February offering: 14 grand young bulls and cows and heifers of all ages. Farm 1 mile north of town. om

MAPLE GROVE SHORTHORNS.
I am now offering 5 bulls from 10 months to 2 years old; imp. and home-bred; of the low, fleshy sort. Write for prices. **W. B. CAMPBELL,** om
Campbellcroft P. O. Garden Hill Station.

SHORTHORNS FOR SALE.
Three dark red bulls, 12 mos. old, got by Diamond Jubilee (Imp.). One rich roan, 10 months old, got by Favorite 24690. For prices write. om
E. & C. PARKINSON,
Thornbury P. O. and station: **G. T. R.**

CHOICE SHORTHORNS.
4 bulls, from 5 to 17 months old, sired by Ashburn Duke; also a few heifers, sired by Indian Duke; for sale. om
J. R. HARVIE, Orillia P. O. and Station.

SHORTHORNS FOR SALE.
Two bulls ten months old, two heifers one year old, one three years old in calf. Write for prices. om
JAS. RIDDEL, BEETON P. O. and STN.

PLEASE MENTION FARMER'S ADVOCATE.

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One bull, 2 years old, and 1 imported cow, and 7 home-bred heifers.
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Campbellcroft P. O. Garden Hill Station.

Are Quick To See

Good Doctors are Quick to See and Appreciate Real Merit in New Medicines.

Stuart's Dyspepsia Tablets are a discovery of great value to the medical profession and the public. They are an unfailling specific in all cases of dyspepsia and disordered digestion. Almost everybody's digestion is disordered more or less, and the commonest thing they do



for it is to take some one of the many so-called blood purifiers, which in many cases are merely strong cathartics. Such things are not needed. If the organs are in a clogged condition, they need only a little help and they will right themselves. Cathartics irritate the sensitive linings of the stomach and bowels and often do more harm than good.

Purging is not what is needed. The thing to do is to put the food in condition to be readily digested and assimilated. Stuart's Dyspepsia Tablets do this perfectly. They partly digest what is eaten and give the stomach just the help it needs. They stimulate the secretion and excretion of the digestive fluids and relieve the congested condition of the glands and membranes. They put the whole digestive system in condition to do its work. When that is done you need take no more tablets, unless you eat what does not agree with you. Then take one or two tablets—give them needed help—and you will have no trouble.

It's a common-sense medicine and a common-sense treatment and it will cure every time. Not only cure the disease, but cure the cause. Goes about it in a perfectly sensible and scientific way.

We have testimonials enough to fill a book, but we don't publish many of them. However—Mrs. E. M. Faith, of Byrd's Creek, Wis., says: "I have taken all the Tablets I got of you, and they have done their work well in my case, for I feel like a different person altogether. I don't doubt if I had not got them I should have been at rest by this time."

H. E. Willard, Onslow, Ia., says: "Mr. White, of Canton, was telling me of your Dyspepsia Tablets curing him of dyspepsia, from which he had suffered for eight years. As I am a sufferer myself, I wish you to send me a package by return mail."

Phil Brooks, Detroit, Mich., says: "Your dyspepsia cure has worked wonders in my case. I suffered for years from dyspepsia, but am now entirely cured and enjoy life as I never have before. I gladly recommend them."

It will cost 50c. to find out just how much Stuart's Dyspepsia Tablets will help you. Try them—that's the best way to decide.

All druggists sell them. A little book on stomach diseases will be mailed free by addressing F. A. Stuart Co., Marshall, Mich.—Adv. om

GEO. RAIKES, BARRIE, ONT.,

BREEDER OF

SHORTHORNS & SHROPSHIRE.

YOUNG STOCK FOR SALE.

SHORTHORNS.

Scotch and Scotch-topped. War Eagle—27600— at head of herd. Young bulls, cows and heifers for sale. Railway station: Coldwater, Midland branch, G. T. R. Write for prices. S. Dunlap, Eady P. O., Ont. om

Agents Wanted

for the New Pictorial Stock Doctor and Live Stock Cyclopedic, revised to 1901 with the assistance of the Professors of the Ontario Agricultural College, Guelph. The finest illustrated, cheapest and best book of its kind ever published. Large wages to agents. A full-page announcement of this book appeared in the ADVOCATE of the issue of June 1st. Particulars mailed free. Address WORLD PUBLISHING Co., Guelph, Ont.

To Rid Stock of Lice

AND ALL SKIN DISEASES.

Also to Keep Poultry Healthy

USE

WEST'S FLUID

Which is also a SURE CURE OF CONTAGIOUS ABORTION. STANDARD SHEEP DIP IS CHEAP AND GOOD. Pedigree forms free to customers. Manufacturers:

The West Chemical Co., TORONTO, ONT.

GOSSIP.

ISALEIGH GOSSIP AYRSHIRES.

The engraving, on another page in this issue, of the young Ayrshire bull, Utopia 13726, is representative of the young stock in the noted Isaleigh Grange herd of Mr. J. N. Greenshields, Danville, Que. He was sired by that excellent bull, Matchless, perhaps the best son of Imp. Glencairn 3rd, and of the grand old cow, Imp. Nellie Osborne, the champion Ayrshire female of the World's Fair at Chicago in 1893, and is out of the equally grand cow, imported Nellie of Barcheskie, whose prizewinning record is a remarkable one, having won first at Kilmarnock in 1888, Nellie Osborne being second; 1st at Ayr and Kirkcudbright in 1889, and first and gold medal at Highland Society Show, and first at the Royal Show of England. This young bull has model dairy form and ancestry, and should find a place at the head of some high-class herd. In the advertisement, in another column, will be found a statement of the stock offered for sale at Isaleigh Grange.

JOHN BRIGHT'S SHORTHORNS AND CLYDESDALES.

About 1½ miles south of Myrtle station, on the G. T. and C. P. Railroads, in the County of Ontario, lies the well-appointed farm of Mr. John Bright, containing 260 acres of choicest agricultural land, the home of one of his large and choice herds of Shorthorn cattle, while also in the commodious stables can be seen what is probably the best collection of registered Canadian Clydesdales to be found together in the Dominion. This grand aggregation of Clydesdales is made up of 11 registered mares and two stallions, the mares being sired by such noted horses as Sir Erskine (Imp.) 2119, McMaster (Imp.) 361, Bakerfield (Imp.) 497, Young Chancellor (Imp.) 171, Galloway (Imp.) 930, Blacksmith (Imp.) 1042, Sir Arthur (Imp.) 1371, Pride of Perth (Imp.) 282, General Gordon 2662, Erskine's Pride (Imp.) 1332, Eastfield's Laddie (Imp.) 1127; and out of dams such as the following: Countess of Beath (Imp.) 2671, Lady Jane (Imp.) 1387, Daisy (Imp.) 977; etc. Six of these mares are now in foal to Imp. Prince Patrick 6773, the champion prize stallion at Chicago in 1893; Lord Lyndoch (Imp.) 4530, who won first and championship at Chicago in 1883, and first at same place in 1888; and that great horse, Royal Cairnton (Imp.) 2730, winner of more prizes, age considered, than any other horse living, never having to take second place in his class. These mares and fillies are an ideal lot, showing size, quality, conformation, bone, feet and action all harmoniously blended, which, together with their choice breeding, makes them very desirable animals from which to breed draft horses of the best pattern. The stallion, The Royal Arch, is rising four in July, a bright bay, will weigh 1,900 in good condition. Stands up well in front, with fine arched neck, strong back and loins, big good feet and ankles, nice flat bone, well feathered with silky hair. He was sired by Erskine's Pride (Imp.) 1332 (4987), a prizewinner in Toronto two years in succession. The two-year-old is Erskine's Heir 3114, sired by Sir Erskine 2119; dam Polly Minty 16, by Young Chancellor 171. He is a chestnut, a big, rangy colt, that bids fair to make a horse considerably over a ton.

The herd of Shorthorns now numbers something over 50 head, and was founded ten years ago, on some grandly-built representatives of the Duchess, Fairfax, Princess, Flattery and Lavinia families, on which have been used such noted imported Scotch-bred bulls as Baron Aberdeen 1215, Oxford 2725, Lord Roseberry 2714, Hospodar 2706, and Indian Agent 16999, son of the great Imp. Indian Chief. The present stock sire is the Kinellar Rosebud bred bull, Bonnie Lad 25927, by Imp. Blue Ribbon 17095; dam Balled Girl 27054, by Imp. Sittyton Stamp 18963. He is a solid red, a deep, lengthy, massive fellow, weighing 2,500 pounds, one of the low-down, fleshy sort, very evenly built, that is proving himself a sire of more than ordinary merit, stamping his calves with his own desirable conformation. Among the many excellent dams are the cows: Lady May 2nd, by Royal Duke 14374; dam Lady May, by Imp. Hospodar; Mayflower Maid, by Imp. Vensgarth; dam Mayflower, by Waxwork 3995; Idonia Queen, by Indian Agent; dam Lizzie Fairfax, by Imp. Oxford; Nelly Duchess, by Imp. Lord Roseberry; dam Lady Duchess, by Imp. Baron Aberdeen; Speedy, by Imp. Oxford; dam Speedvale Minna, by Barnumpton Gem 6502; Kate Logan 3rd, by Indian Agent; dam by Imp. Lord Roseberry. Such is the breeding of a few of the animals of this splendid herd, the major part of the herd being sired by the stock bulls mentioned above. Almost without an exception, these animals are of the low-down, fleshy, up-to-date sort, and the many young heifers and bulls in the herd, from their grand conformation, coupled with their rich breeding, make an aggregation that are a pleasure indeed to look upon, and when it is known that nearly every animal in the herd is registered in the American Herdbook, it leaves little to be desired. Mr. Bright reports sales exceptionally good, nearly every mail bringing orders and letters of enquiry from nearly every part of the continent.

45 Head Imported and Home-bred Scotch Shorthorns of the best families and of the greatest merit

WILL BE SOLD BY AUCTION, ON

Wednesday, the 5th day of February, 1902,

BY

Robert Miller, Stouffville, Ontario.

Sale will consist of absolutely straight cattle of the most valuable ages and in the most valuable condition, of the following families: Cruickshank Village Girls, Village Blossoms, Lavenders, Brawth Buds, Broadhooks, Butterflies, Duchesses of Gloster, Floras, Nonpareils, and Secrets; Marr Missies, Claras, Princesses Royal, and Floras; Campbell Clarets and Minas.

THERE WILL BE NO RESERVE. ASK FOR CATALOGUE.

R. W. BARCLAY, WEST LIBERTY, IOWA, AUCTIONEER.

Stouffville is 27 miles from Toronto. Farm 1¼ miles from station.

Annual meeting of Shorthorn Association will be held in Toronto day before sale.

LESS LABOR AND MORE MONEY ON THE FARM.

BUY A LOW-DOWN, THICK-FLUSHED

Hillhurst Shorthorn Bull,

Scotch-topped, from Cumberland, Gloucestershire, or Canadian dairy strain, and raise DEEP-MILKING, BIG-FRAMED COWS AND BABY BEEF in nature's way. Many cows that do not pay board at the pail will give a handsome return in growing beef. Four handsome young bulls, seven to nine months old, reds and roans, by the celebrated imported sires, "Joy of Morning" and "Scottish Hero," for sale at moderate prices. Low freights.

M. H. COCHRANE, COMPTON CO., P. Q.,

G.T.R., 117 MILES EAST OF MONTREAL.

HILLHURST STATION.

SCOTCH SHORTHORNS.

We are now offering a few young bulls, from 6 to 11 months; also a few heifers, from 6 months to 2 years; all showing No. 1 quality.

W. G. HOWDEN, -om COLUMBUS P. O.

SHORTHORNS:

We are offering for sale 8 bulls, from 8 months to 3 years old, by Mungo 2nd and Scottish Bard. Also a few cows bred to Baron's Heir.

ROBT.-GLEN, Owen Sound, Ontario.

SHORTHORNS.

One bull, 1 year old; two bulls, 7 months old; a few heifers of choice breeding and superior quality.

om AMOS SMITH, Trowbridge P. O., Ont.

Listowel station.

W. J. WALKER, EADY P. O., ONTARIO,

BREEDER OF

Scotch and Scotch-topped Shorthorns, Barred Plymouth Rock fowls, and Bronze turkeys.

R. R. station: Coldwater. G.T.R. Write for prices.

W. G. PETTIT & SON,

FREEMAN P. O., ONT.,

IMPORTERS AND BREEDERS OF

Scotch Shorthorns and Shropshire Sheep,

Are offering 10 Imp. bulls from 10 months to 2 years old; 10 home-bred bulls from Imp. stock, 10 to 15 months old; 40 Imp. cows and heifers, all ages. Home-bred cows and heifers all ages. Also a grand lot of ram and ewe lambs and yearling ewes for sale.

Burlington Jct. Stn. Tele. & Phone, G. T. R.

SHORTHORN BULLS.

RARE GOOD BULLS. SCOTCH-BRED BULLS.

Write for bull catalogue free.

H. SMITH, Hay P. O., Huron Co., Ont.

Exeter Station on G. T. R., half a mile from farm

Hillside Shorthorns and Shropshires.

Bulls, from 8 to 18 months old; heifers, various ages, of true type and fashionable breeding; also 25 ram lambs and 15 ewe lambs, from imp. sire. Will quote prices right for quick sales.

om L. Burnett, Greenbank P. O., Ont.; Uxbridge Stn., G. T. R.

Charles Rankin

WYEBRIDGE, ONT.,

IMPORTER AND BREEDER OF

SHORTHORNS,

OXFORD DOWNS

AND BERKSHIRE PIGS.

Young stock always on hand.



Shorthorns and Berkshires

Four young bulls, 6 to 12 months old. Pigs, 2 to 6 months old. Pairs supplied not akin.

om MAC CAMPBELL, NORTHWOOD, ONT.

R. Mitchell & Son, Nelson, Ontario.

Scotch Shorthorns.

Twenty-five (imp.) bulls and heifers of following families: Jill, Roan Lady, Augusta, Rosebud, Mayflower, Rosemary, Beauty, Victoria, Orange Blossom and Princess Royal. Also home-bred heifers in calf to imp. bulls and choice bull calves.

o Burlington Jct. Station and Tele. Office.

ATTENTION, STOCKMAN!

Every day we get the highest recommendations from farmers of the results obtained by using

Hersee's Reliable Stock Food.

Some on their horses, others on their cows and calves. Now, it's profit we want, with the least possible expense. These stockmen are getting good results, why not you? Ask your dealer for it, and take no other. Stock book free.

E. HERSEE, Manufacturer,

Woodstock, Ontario.

Queenston Heights Shorthorns

SCOTCH AND SCOTCH TOPPED.

Headed by the Sittyton Secret bull, Imp. Derby, assisted by Lord Montalis = 39279=, sired by Hon. John Dryden's Duthie-bred Collinny Archer. Young stock of both sexes for sale.

HUDSON USHER, QUEENSTON, ONTARIO.

Farm 3 miles north of Niagara Falls.

SHORTHORNS.

We are offering three choicely-bred young bulls, 1 yr. old, two 8 months old—heavy-milking strain.

om JAMES BROWN, NORVAL STN. and P. O.

AYRSHIRES AND YORKSHIRES.

We always have on hand choice individuals, male or female, of above breeds. Write us.

om ALEX. HUME & CO., Menle, Ontario.

FOR SALE ABERDEEN-ANGUS BULL

A CHOICE

Nine months old. Sire Fairy Prince No. 307, dam Kyma 2nd O. E. F. No. 123. For particulars apply or come and see.

JNO. J. BELL.

G. T. R. station, Elmvalle, Ont. Waverley P. O.

PLEASE MENTION FARMER'S ADVOCATE.

SHORTHORNS AND BERKSHIRES.



Choice calves of both sexes; a fine lot of young sows of the Highclere family, bred to Lee Duke -\$733-. Also Barred Rock fowls.

JOHN RACEY, JR., Lennoxville, Que.

Spring Brook Holsteins, Tamworths, B. Rocks



One bull, 11 mos. old; 2 calves, 6 weeks old; 4 yearling heifers in calf; 2 cows; also heifer calves, all DeKols. Two Tamworth boars ready for service. Sows and young pigs ready to ship.

A. C. Hallman, New Dundee, Ontario.

Brookbank Holsteins

16 to 25 lbs. of butter in 7 days' official test are the records of this herd of Holstein cows. Heifers of equivalent records. Bulls for sale whose sires and dams are in the Advanced Registry, with large official butter records.

GEO. RICE, Currie's Crossing, Ontario. OXFORD COUNTY.

Ridgedale Farm Holstein-Friesians for Sale.

2 yearling bulls; also bull and heifer calves; all of choice breeding. Prices always reasonable. Write, or come and see them. R. W. WALKER, Utica P. O. Shipping stations: Port Perry, G. T. B.; Myrtle, C.P.R. om

SUCCESS WITH HOLSTEINS

depends on starting right. Brookside has furnished foundation stock for some of the best herds in the country. We have 250 head, and if you want to establish or strengthen a herd, can supply you with animals of the right sort. We have 50 young bulls on hand, and females bred to the best sires living. Let us know just what you want. Catalogue of bulls now ready. We also have six fine thoroughbred Jersey Red cows, 6 months old, for sale, \$9 to \$10 each.

HENRY STEVENS & SONS, LACONA, OSWEGO CO., N. Y. om

We have now on hand young females sired by Nero of Glen Rouge 50241, and cows and heifers bred to him.

E. B. HINMAN & SON, GRAFTON, ONT.

CHOICE JERSEYS.

AM offering 1 cow 5 years old, due to calve Feb. 6, very choice; bull calf 11 months old, registered, and cheap. W. M. HASKETT, Avon Manor, Markdale, Ont.

4 HOLSTEIN BULLS 4

FOR SALE: From 4 to 7 months old, having sires in their pedigrees from such strains as Inka, Netherland, Royal Aaggie, and Tritonia Prince, and out of imported females that have proven their worth at the fair. THOS. B. CARLAW & SON, Warkworth.

Maple Glen Stock Farm.

EXHIBITION OFFERING: Two bull calves under 1 year. Also a Sylva and an Abekirk bull calf, with spring and fall heifer calves of Sylva breeding, bred from winners and ones that will make winners. Prices according to quality.

C. J. GILROY & SON, Brockville, on C.P.R. and G.T.R. Glen Buell, Ont.

BRAMPTON JERSEY HERD



Offers: 3 St. Lambert bulls from 6 to 14 months old, out of high testing cows; 1 yearling and 5 bull calves, sired by Brampton's Monarch (imp.). Four young bulls sired by him won 1st, 2nd and 3rd prizes under one year, and 1st prize under six months, also 1st, 2nd and 3rd at London and Ottawa, in 1901. The best is none too good. These young bulls have never been beaten. Get one to head your herd.

B. H. BULL & SON, BRAMPTON, ONT. G. T. R. and C. P. R. Stations.

F. L. GREEN,

BREEDER OF Jersey Cattle and Yorkshire Pigs. Choice stock of each sex for sale.

PICKERING STATION, G. T. R. GREENWOOD P. O. CLAREMONT STATION, C. P. R.

FOR SALE: A SPLENDID LOT OF

Jersey Cattle.

41 HEAD TO CHOOSE FROM.

Close descendants of my most noted prizewinners, and closely related to many animals I have sold that have won easily in the Northwest and all over Canada. My shipments last summer ranged from Manitoba to State of Delaware, U. S.

MRS. E. M. JONES, BOX 324. BROCKVILLE, ONT., CAN.

Jerseys and Cotswolds.

For sale, three-year-old stock bull, Count of Pine Ridge 53662, a grandson of Adelaide of St. Lambert, that gave 824 lbs. milk in a day, and 2,005 lbs. in a month. Also two of his sons—one year old, and a few daughters; and a useful lot of Cotswold rams and ewes. For particulars and price write: WILLIAM WILLIS, Newmarket, Ontario.

RIDGELING CASTRATION.

om- Dr. J. Wilson, V. S., Wingham, Ont., Specialist in the castration of ridgeling horses and colts. Terms and testimonials on application.

WINDMILLS

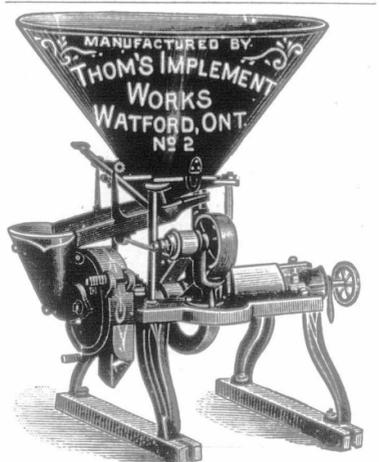


Canadian Airmotor

A neat ornament on YOUR BARN.

More than this: It will "hustle" for you all the year around. Ask your neighbor who has one

ONT. WIND ENGINE & PUMP CO. LIMITED. TORONTO, ONT.



Our Special Offer on Grinders

STILL OPEN.

TO advertise the superior working qualities of our up-to-date Grinders, we offer to place one machine in every Township at a special cut price, it being understood that the special price has nothing to do with the regular selling price. The first to place their order is the only person entitled to the consideration. Our aim and object is to create a demand by the merits of the machine being known. One machine at work in a neighborhood is the best kind of advertising.

THOM'S IMPLEMENT WORKS, WATFORD, ONT. ESTABLISHED 1875.

SHREDDED WHEAT BISCUIT. The doctors prescribe it and take their own medicine. "I am prescribing Shredded Whole Wheat Biscuit, as well as using them myself." ALFRED K. HILL, M.D., Editor of New York Medical Times. THE SHREDDED WHEAT CO., 61 Front Street East, TORONTO. Shredded Whole Wheat Biscuit For Sale by all Grocers.

LAWNRIDGE STOCK FARM.

JERSEYS FOR SALE: Yearling bull, 5 bull calves, also some very fine registered cows, heifers and heifer calves—fresh calved and springers. One hundred head to select from. Cows a specialty.

J. L. CLARK, Norval station: G. T. R. Norval P. O.

IN WRITING PLEASE MENTION FARMER'S ADVOCATE.

NOTICE:

I desire to thank the farmers and others for their ever-increasing patronage. We are changing the process of manufacture and improving the quality of Queenston cement from year to year, and beg to assure my patrons that the improvements I am making this winter will still add to the wonderfully good reputation of Queenston cement. I will do all in my power to assist the farmers in getting up first-class buildings that are cheap and labor-saving, with first-class sanitation by a proper system of ventilation held under my own patent. Until the 15th day of March, 1902, Queenston cement will be sold at a reduced price. On and after Feby. 1st I will add a draughtsman to my office staff, and to all patrons of Queenston cement pencil sketches of the most approved farm structures will be furnished free of charge. For particulars write me at this office, or see my agents.

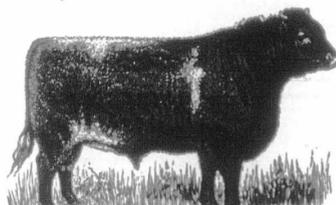
Isaac Usher, Queenston, Ontario.

Spring Grove Stock Farm.

Shorthorn Cattle

AND Lincoln Sheep.

HERD prize and sweep-stake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by the Marr Missie bull, Imp. Wanderer's Last, last of the



get of the great sire, Wanderer, of the Cruikshank Brawith Bud tribe. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply om

T. E. Robson, ILDERTON, ONT.

ARTHUR JOHNSTON, GREENWOOD, ONTARIO.

BREEDER OF POST OFFICE AND TELEGRAPH OFFICE. IMPORTER OF

SHORTHORNS ONLY.

FOR SALE: 9 imported bulls and bull calves. 11 home-bred bulls and bull calves, from imported cows and by imported bulls. 17 home-bred bull calves. A large and excellent lot of young cows and heifers of various ages.

RAILWAY STATIONS: PICKERING, G. T. R., 22 MILES EAST OF TORONTO. CLAREMONT, C. P. R., 28 MILES EAST OF TORONTO.

THEY WANT

Dr. Hess' Stock Food in England

Read what the great English importer, Mr. M. G. Rich, Bath Bridge, Tetsbury, Gloucestershire, Eng., and owner of 1,000 acres of land, writes:

BATH BRIDGE, TETSBURY, GLOUCESTERSHIRE, ENG., Aug. 8th, 1901.

DR. HESS & CLARK, Ashland, O.: GENTLEMEN,—Where can I get Dr. Hess' Stock Food in England? In my travels in America I find it in many stables, and highly recommended by my friends.

P. S.—I farm nearly 1,000 acres. Yours respectfully, M. G. RICH.

DR. HESS' STOCK FOOD IS NOT A STIMULANT,

but a tonic. It expels worms, cleanses the blood and system generally; calls into healthy action very organ of the animal body; allows no food to pass off undigested. It pays to feed it as a health promoter and as a flesh and milk producer.

EVERY PACKAGE GUARANTEED.

Table with 2 columns: Weight and Price. 7-lb. sack \$.65, 12-lb. sack 1.00, 25-lb. sack \$2.00, 50-lb. sack 3.75, 100-lb. sack \$7.00.

If your dealer can't supply you, send your order to

THE GREIG MFG. COMPANY, Canadian Agents, Montréal, Quebec.

FREE.—Dr. Hess' new scientific veterinary work, giving the symptoms and latest treatment, on stock diseases, will be mailed you for the asking. Address—Dr. Hess & Clark, Ashland, Ohio.

Scotch Shorthorns

BREEDING FEMALES ALL IMPORTED.

Imp. Golden Drop Victor our present stock bull. Eleven young bulls and some young cows for sale at reasonable prices.

H. CARGILL & SON,

Cargill Station, G. T. R. CATALOGUE FREE. om Cargill, Ontario.



Small crops, unsalable vegetables, result from want of

Potash.

Vegetables are especially fond of Potash. Write for our free pamphlets.

GERMAN KALI WORKS,
93 Nassau St., New York.

FOR SALE:

Three grandly-bred Ayrshire bull calves, 12 to 15 mos. old. Also young calves, by Napoleon of Auchrain (imp.), whose dam has a record of 72 lbs. of milk per day. A few choice young Berkshire and Yorkshire sows could be served before shipping. Cullie pups, from Perfection Queen. Address—

T. D. McCALLUM,

Nether Lea, -om Danville, Que.

AYRSHIRES AND LEICESTERS

We breed for milk and quality, and employ only the best sires. Are now offering young Ayrshires of both sexes. DONALD CUMMING & SONS, Lancaster, Ont.

AYRSHIRE FEMALES FOR SALE

Carrying the same breeding as our prize-winners, including such offspring as Floss and Tom Brown, the World's Fair winners. We breed for constitution, quality, and production.

DAVID BENNING & SON,
Williamstown, Ont.

DAVID A. McFARLANE,

Breeder of high-class AYRSHIRES. KESLO, P. Q.

Young stock for sale from imported and home-bred foundation. Prices reasonable.

AYRSHIRES FOR SALE.

4 yearling bulls and a number of spring calves of deep-milking strains. Prices reasonable.

F. W. TAYLOR,
Wellman's Corners, Ont.

Maple Cliff Dairy and Stock Farm.

BREDDERS OF

AYRSHIRE CATTLE, IMPROVED BERKSHIRE AND TAMWORTH PIGS.

FOR SALE: 5 bull calves, a few heifers; young pigs, pairs not akin; 2 boars, 4 months old; young pigs. Farm adjoins Central Experimental Farm, Ottawa.

R. REID & CO., Hintonburg, Ont.

TREDINNOCK AYRSHIRES

Imported bulls at head of herd: Glencairn 3rd, Napoleon of Auchrain, and Lord Dudley. Forty imported females, selected from leading Scotch herds, and their produce from above-named bulls. Size combined with quality and style, well-formed udders, good-sized teats, and capacity for large milk production. Bull calves for sale; also a few young cows and heifers. For prices and particulars address

JAMES BODEN, Mgr.,
St. Anne de Bellevue,
Quebec.

Farm close to St. Anne Station,
G.T.R. & C.P.R., 20 miles west of Montreal.

AYRSHIRES.

I offer four choice August (1901) bull calves, two yearling heifers due to calve next August to imported bull, and a pair of March and April heifer calves. All bred from imported stock of choice milking strains.

W. W. BALLANTYNE, Stratford, Ontario.

"Neidpath Farm" adjoins city, main line G.T.R.

THE ONTARIO VETERINARY COLLEGE

(LIMITED),
TEMPERANCE ST., TORONTO, CANADA.

Affiliated with the University of Toronto.

Patrons: Governor General of Canada, and Lieut.-Governor of Ontario. Fee \$65.00 per session. Apply to ANDREW SMITH, F.R.C.V.S., Principal. 18-23-y-om

AYRSHIRES.

Five bulls ranging from 11 to 23 mos., from such noted cows as Jean Armoir, Lady Ottawa, Sprightly and Primrose (imp.), and from the best sires procurable. Also heifers and cows all ages, and poultry.

WM. STEWART & SON, MENIE, ONT.

FOR SALE: IMPORTED AND HOME-BRED AYRSHIRES,

including cows, heifers and young bulls out of our prize and sweepstakes cows. Foundation selected with due regard to quality and productiveness. Come or write.

WM. WYLE, - HOWICK, QUEBEC.

GOSSIP.

E. F. Park, of the firm of Jno. Park & Sons, Burgessville, Ont. writes: "The prizes won by our Cotswolds at Chicago International Show are as follows: First and third on shearing wethers, first, second and third on wether lambs, first for pen of five lambs, and champion prize for best Cotswold wether. In the breeding class, third on aged ram, second on two-shear ewe, second on shearing ewe, third on ewe lamb, second for best flock of Cotswolds and third for best pen of four lambs the get of one ram. At the Winter Fair, Guelph, first, second and third on shearing wethers, third on wether lambs, second and third for pen of three wether lambs. First, second and third for dressed carcass of shearing wether, second and third for dressed carcasses of Cotswold wether lambs, first and second for dressed carcass of Leicester lambs, and first for best carcass in grade class, which was won by a Cotswold."

SMITH & RICHARDSON'S CLYDESDALES.

For the last 25 years the name of Wm. Smith, of Columbus, Ont., has been familiar to Clydesdale men throughout Ontario, on account of the many excellent Clydesdale stallions and mares he has imported from Scotland, the progeny of which has added not a little to the fame of the Province as the continent for the production of the typical Clydesdale in all his majestic glory and perfection. Of late years Mr. Smith has had associated with him in this enterprise Mr. F. Richardson, a gentleman of wide experience in the handling and fitting of this particular breed of horses, for besides being all his life intimately associated with the care of stallions, he has bought and shipped a great many horses to the Old Country. So with the many years of experience with Clydesdales which both these gentlemen have had, coupled with their keen, intelligent judgment and thorough knowledge of the various strains or families and pedigrees of this breed, it goes without saying that this firm will import nothing but the very best, both individually and in breeding. Their latest importation consisted of four stallions: King's Cross 10070, sired by Sir Everard 5353; dam Lady Wales 9226, by the great Prince of Wales 673. This horse is a dark brown, seven years old, weighs 2,150 pounds, and is half-brother to Baron's Pride 9122, whose get won in 1901 the enormous number of 97 prizes. He is a horse of beautiful mould, with a proud, lofty carriage, and lifts every foot clean and square. Last year he stood at £4 a mare and had his book full. Duke of Cornwall, Vol. 24, is a bay with white strip in face, and four white legs, is three years old, stands 17 hands high and is all horse from feet and legs, having the best possible feet and legs, on which is built a model Clydesdale body, and can act like a Hackney. He was sired by Duke of Rothsay 9191; dam Young Fanny 5308, by Young Farmer 1880, and traces directly to McGregor and Darnley. Theakston 10655 is another typically-built horse, 17 hands high, a typical Clydesdale, choke-world of quality; he was sired by that world-famed prizewinner, Hollywood 9546; dam Jip 13162, by Duchal 2737. He is smooth to a turn, and a splendid actor. Sir Arthur 10455 is a prizewinner of no mean repute, having a number of medals and prizes to his credit. He is also a very large, well-balanced horse, six years old, weighs 2,200 pounds, and stands over 17 hands high; he is sired by that great horse, Sirdar 4714; dam Ruby of Saphock 10363, by Corsewell 1420. These horses are all closely related to the noted sires, Darnley and Prince of Wales, are possessed of a wealth of large, clean, flat bone, and are all full of proud, lofty, springy action, and what is of more importance, they have proven their superior worth in the stud, so that purchasers have no risks to run in their regard. This firm is also showing four splendid one-year-old Canadian-bred stallions, sired by the great prizewinners, McQueen and Lawrie's Baron Gordon, and out of winning dams, that are a grand lot, combining size, conformation and quality to a very marked degree, and will make horses that will easily reach the ton mark.

NOTICE.

IMPORTATION OF STALLIONS.

Messrs. Bawden & McDonell, of Exeter, Ont., extensive importers and breeders of Clydesdales, Shires and Hackneys, write that they had landed at Boston, on Jan. 16th, another large shipment of Clydesdale and Shire stallions and three Hackneys, which will have arrived at their barns at Exeter before this time. In this lot are some of the very best that could be bought in Scotland and England, having size, quality and action to suit the most fastidious. They now have over 20 imported stallions to show at their stables, of the very best kind of Clydes, Shires and Hackneys, and those who know the firm need not be assured of this fact, as their good judgment in the selection and care of horses suited to the times is widely and well known. Read their advertisement, note their offering, and write, or call and see them.

STRONGER THAN STEEL

This famous fence is woven of best steel made more durable by heavy galvanizing. Every rod is guaranteed. When it is put up—tight—your fence troubles are ended for all time.

ELLWOOD STEEL FENCE

stands heat and cold, storms, bulls, boys, horses, sheep and cattle. Made in six heights, from 18 inch to 58 inch. Styles for all purposes. Best and cheapest diamond mesh wire fence. Get prices. Sold in every town. If not handled by your dealer, write to

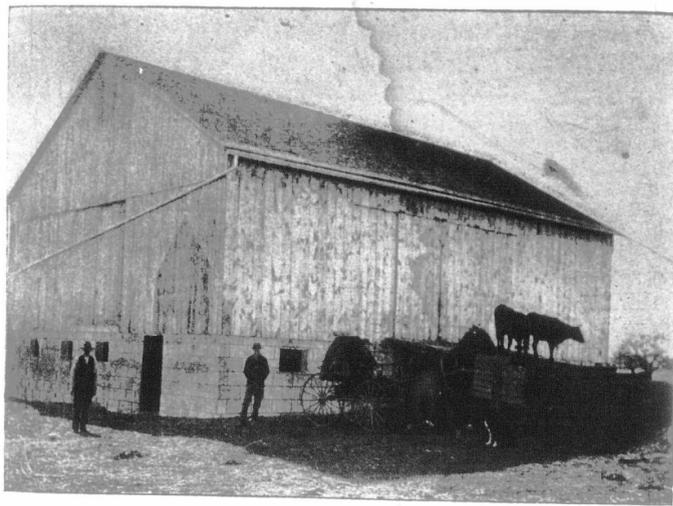
AMERICAN STEEL & WIRE CO., Chicago,
New York, San Francisco, Denver.

AN EVERY-DAY BARN

AT DUTTON, ONT., built with

Battle's Thorold Cement

It is the FARMER'S Favorite Cement.



Barn of Archie Milton, Dutton, Ont. Size, 50 x 56 feet; walls, 9 feet high.

READ WHAT MR. MILTON SAYS:

ESTATE OF JOHN BATTLE, Thorold, Ontario, DUTTON, ONT., November 14, 1899.

Dear Sirs.—Sent photo of barn on Saturday last. Sorry I could not get it sooner. Having used your Cement in barn walls and floors, under the supervision of your travellers, Robert and Ward Hagar, I find it in every way satisfactory, and consider it cheaper and better than brick or stone. Yours truly, ARCHIE MILTON.

Special price and terms for winter shipments. Write for free pamphlet and information. Agents wanted in unrepresented districts.

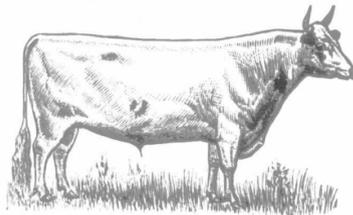
ESTATE OF JOHN BATTLE, THOROLD, ONTARIO.

MANUFACTURERS OF THOROLD CEMENT.

Rapids Farm Ayrshires.

REINFORCED BY RECENT IMPORTATIONS

of 2 bulls and 20 cows, selected from noted Scotch herds, and including the male and female champions at leading Scotch shows last year. Imported Douglasdale of Damm, champion at the Pan-American, heads the herd. Representatives of this herd won the first herd prize at the exhibitions at—



Toronto, London and Ottawa in 1900, and at the Pan-American in 1901.

Come and see or write for prices.

Young Bulls and Heifers for Sale, bred from High-class Imported Stock.

Robert Hunter, Manager

for W. Watson Ogilvie, Lachine Rapids, Quebec.

SPRINGHILL FARM.

Importers and breeders of choice, deep-milking

Ayrshires

Males and females for sale.

ROBERT HUNTER & SONS, Maxville, Ont.

5 AYRSHIRE

bull calves for sale, from 6 to 12 months old. Sired by Klondyke of St. Ann's 8897. Their dams are heavy milkers, with good udders and teats. Inspection invited.

W. F. STEPHEN, Trout River, Quebec. (Carr's Crossing, G. T. Ry.)

HOMECROFT, a farm for dairying

and pure-bred stock.

AYRSHIRES, IMPROVED CHESTER

WHITES, BARRED PLYMOUTH

ROCKS. SOME FINE YOUNG BULLS.

J. F. PARSONS & SONS, Barnston, Quebec.

Ayrshire Bulls

from 1 1/2 years to 6 months, from special milking stock, sired by the sweepstakes

bull, Cock o' the North—9997—, also females all ages.

Shropshire sheep, Berkshire pigs, either sex, and B.P. Rocks. For particulars write

J. YUILL & SONS, Carleton Place, Ontario.

Free for five wrappers: Lee's book, containing 386 pages, 3,000 recipes for home and farm, Prof. A. V. M. Day's English Tonic Powders (5 separate packages) for horses, cattle, hogs, sheep, and poultry. They make health and flesh. Mail us the front part of five wrappers and receive book FREE.

Price: 35c. a package, 5 for \$1.50.

For Dairy Cows
Feed Day's Butter-fat Producer.

It makes more milk and butter-fat; gives the butter color; imparts a flavor to the butter that is not obtained by any other feed. Write us a post card for free sample. Warranted purely vegetable.

The Day's Stock Food Co., Toronto.

Water Basins.



EIGHT REASONS FOR ADOPTING THE Woodward Water Basin.

7th.—Animals cannot drink to excess. This is rendered impossible by the arrangement of the basin. When empty, the water flows in very slowly. Drinking in excess retards milk-making.

8th.—Next issue will have it.

Ont. Wind Engine & Pump Co., Ltd., TORONTO, ONT.

WE OFFER THIS MONTH FOLLOWING CHOICE BULL CALVES:

Ayrshires: OUT OF SIBED BY
Nora of Fin (Imp.) Wee Earl (Imp.)
Gem of Castle Hill (Imp.) Matchless 7560.
Nellie of Barcheskie (Imp.) Matchless.
Lady Bute (Imp.) Napoleon of Auchensbrain (Imp.)

Guernseys: OUT OF SIBED BY
Roseland III. (Imp.) Masher (Imp.)
Princess May (Imp.) Masher (Imp.)

ISALEIGH GRANGE FARM,
J. N. GREENSHIELDS, Prop. o Danville, Que.

EUROPEAN ADVERTISEMENTS.

English Shorthorns.

Booth and Bates Shorthorns, topped with Cruickshank bulls. Young cows, bulls and heifers always on hand for sale. Eligible for the American herdbook. Royal and Highland prizewinners included for the last two years. Close on £400 won in prizes last year and this.

WM. BELL,
Ratcheugh Farm, Alnwick, Northumberland, Eng.

Ayrshire HERD OF 150 cows and heifers, bred from deep milkers, with large tests, of a commercial stamp. Established over half a century. J. & A. Wilson, Boghall Farm, Houston, Renfrewshire, Scotland.

PEDIGREE AYRSHIRES.
Cows and heifers, all bred from prizewinning stock at the leading shows.

Robert Wilson, Mansurrae, Bridge of Weir, Renfrewshire, Scotland.

Shorthorn Cattle
and Lincoln Longwool Sheep.

HENRY DUDDING
Riby Grove, Great Grimsby, Lincolnshire.

Has always for inspection and sale the largest flock of pure Lincoln sheep and Shorthorn herd in the country, and many prizewinners. The sheep are famous for their great size, fine, lustrous wool, and 150 years' good breeding, and at the home sales have made the highest prices on record. The Shorthorns comprise the best prize strains of Duthie, Marr, Willis, and Harrison. During the last year 86 prizes have been taken by the Riby Shorthorns and Lincoln sheep at the leading shows in England.

Cables: Dudding, Keelby, England.

FAMOUS ALL OVER THE WORLD
ALFRED MANSELL & CO.,
LIVE STOCK AGENTS AND EXPORTERS,
SHEWSEBURY.

BRITISH STOCK selected and shipped to all parts of the world. Write for prices to ALFRED MANSELL & CO., Shewsbury, England, or to our American representative, Robert Miller, Stouffville, Ont., Canada.

HAMPSHIRE DOWN SHEEP.

SPLENDID MUTTON, GOOD WOOL, GREAT WEIGHT.

THIS HIGHLY VALUABLE

English Breed of Sheep

Is unrivalled in its rapid and wonderfully early maturity, possessing, too, a hardness of constitution adapted to all climates, whilst in quality of mutton and large proportion of lean meat it is unsurpassed. Full information of

JAMES E. RAWLENCE,
SECRETARY HAMPSHIRE DOWN SHEEP BREEDERS' ASSOCIATION,
SALISBURY, ENGLAND.

HENRY DUDDING, RIBY GROVE, STALLINGBOROUGH, LINCOLN, ENGLAND. Breeder of Lincoln Longwool Sheep and Shorthorn cattle. The Riby Flock of upwards of 1,400 Ewes holds an unequalled record for true type, merit, and quality. Its produce and their descendants have won the highest honors at all the principal exhibitions and shows throughout the world; its wool exhibits being unbeaten. Established upwards of 140 years. Its produce leads the way from the fact that satisfaction is given. The Riby Shorthorn Herd of upwards of 300 selected specimens of Booth, Bates, Cruickshank, and Scotch strains, is one of the largest Herds in Great Britain. Its principal Stud Bulls are: "Pride of Fortune" 73240, s. "Pride of Morning" 145694, d. "Flora 2nd," by "William of Orange" 50694; "Golden Robin" 88718 (rich roan), s. "Roan Robin" 57992, d. "Golden Sunshine," by "Royal James" 54972; "Prompter" (Vol. XLV.), by "Prefect" 69255, d. "Rissington Lass," by "Empire 13th," 1st and champion at Ombersley, 1898; "Rosario" (s. "Wiltshire Count" 69824, out of "Rose Blossom" (G. Harrishore). This bull, his sire and dam, won 84 prizes, including first and champions. Telegrams: "Dudding, Keelby." Rail Stations: Stallingborough, 3 miles; Great Grimsby, 7 miles.

J. E. CASSWELL'S LINCOLNS. Laughton, Folkingham, Lincolnshire, England.

Breeder of Lincoln Longwool sheep. Flock No. 46. At the Palermo Show, 1900, 25 rams bred by J. E. Casswell averaged 254 each; 14 of the best averaged 263 each, this being the highest sale of the season in the Argentine. Ram and ewe hoggs and shearlings for sale; also Shire horses, Shorthorns, and fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingboro, G. N. R.

Lincoln Longwool Sheep Breeders' Association.

Lincoln Ram Sales, 1902.

The 14th and 15th sales of Lincoln Longwool rams by members of the Association will be held in Lincoln as follows:

8th August, 400 rams.
5th Sept., 500 rams.

The sheep will be on view during the afternoon of the Thursday preceding each day of sale.

St. Benedict's Square. **STEPHEN UPTON,** Lincoln, Dec., 1901. Secretary.

WALTON HERD

PEDIGREE PIGS.
The property of Sir Gilbert Greenall, Bart., Walton Hall, Warrington, England.

This herd is unrivalled for its true type, large size and strong constitutional vigor. It is the premier herd in England at the present day. Its show-yard career is unique, the champion prize for the best Large White pig at the R. A. S. E. having been won by pigs bred in the herd in 1896, '97, '99 and 1901, besides leading prizes too numerous to mention at all the principal agricultural shows in England.

A choice selection of boars and sows for sale. Inspection invited. All purchases carefully shipped. For particulars, apply to the Manager, MR. J. HALLAS, Higher Walton, Warrington, England. Railway stations: Warrington (Bank Quay) per L. & N. W. Ry.; (Central) per Midland, G. N. or G. C. Rys. Telegrams, "HALLAS Higher-Walton."

W. W. CHAPMAN,

Secretary of the National Sheep Breeders' Association,
Secretary of the Kent or Romney Marsh Sheep Breeders' Association,
and late Secretary of the Southdown Sheep Society.

Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered.

Address: FITZALAN HOUSE, ARUNDEL ST., STRAND, LONDON W. W.
Cables—Sheepcote, London.

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE.

THE MOST NUTRITIOUS. EPPS'S COCOA

Prepared from the finest selected Cocoa, and distinguished everywhere for Delicacy of flavour, Superior quality, and highly Nutritive properties. Sold in quarter-pound tins, labelled JAMES EPPS & Co., Ltd., Homeopathic Chemists, London, England.

EPPS'S COCOA
BREAKFAST-SUPPER.

Live Stock Labels in large or small lots. Also odd numbers supplied. Send for circular and price list.
R. W. James, Bowmanville, Ont.

SHEEP BREEDERS' ASSOCIATIONS
American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER LEVERING, Secretary, Lafayette, Indiana.

Dorset Horn Sheep

THE largest flock in America. The most celebrated prizewinners at the Columbian Exhibition and Canadian exhibitions. Contains more Royal winners than any other. Awarded 5 out of 8 first prizes at Toronto, London and Ottawa in 1900. Flock of 300. Stock for sale always on hand.

John A. McGillivray, Uxbridge, Ontario.

FARMERS!

Sheep Dip

Contains more value for the money than any other Dip on the market. We will send a tin prepaid to any part of Ontario for ONE DOLLAR. Half gallon, Imperial measure, in each tin. It is the cheapest disinfectant for outbuildings, drains, etc.

W. W. Stephen, MEAFORD, ONTARIO.

LIVE STOCK AUCTIONEER.

The undersigned is prepared to conduct pure-bred auction sales. 20 years' experience. References: John I. Hobson and Alfred Stone, Guelph; Jas. Hunter, Alma, and Mossom Boyd, Bobcaygeon, THOS. INGRAM, care Mercury Office, GUELPH, ONT.

SOUTHDOWN AND COLLIES.

Imported and home-bred prizewinning aged sheep. After the Pan-American a number of particularly good ram and ewe lambs. Collie puppies by imported Holyrood Leek and champion Alton Monty, out of noted prizewinning dams.

ROBT. MOEWEN, BYRON, ONT. ALLOWAY LODGE STOCK FARM. Rail'y Stn., London.

FARNHAM FARM

Can sell 40 superior Oxford Down ewes in lamb to "Bryan 125" and "Hampton Duke." Five ewes of different ages. Also 100 good ram and ewe lambs. Choice Bronze gobblers and Barred Rock cockerels. Prices reasonable.

HENRY ARKELL, Guelph, G. T. R. ARKELL, ONT.

IMPORTED COTSWOLDS

We are now offering some choice shearlings of both sexes; also this season's crop of lambs, sired by Imp. Swanwick.

BROOKS & LANGMAID, COURTYCE P. O. SIX MILES FROM OSHAWA STATION, G. T. R.

COTSWOLD HILL STOCK FARM

Offers imp. and home-bred Cotswolds of both sexes and fall ages, from the champion flock of Canada for the last six years.

JOHN PARK & SONS, Burgessville P.O. and Stn.

Pure-bred Cotswolds—choice quality
om UXBRIDGE P. O. AND STATION.

CHAS. GROAT, BROOKLIN, ONT., OFFERS FOR SALE

Cotswold Ewes and Ewe Lambs of good quality and breeding. Also a registered stallion, 1 year old, and one filly foal, good ones. Write for particulars.

SUMMERHILL OXFORDS.

Present offering: A choice lot of ram lambs and ewe lambs. Also 50 extra nice yearling ewes.
PETER ARKELL & SONS, Teeswater P. O. and Station.

BROAD LEA OXFORDS.

Can sell a few choice ewes of different ages, bred to our imported rams, May King 1st and Earl of Fairford 2nd; also 75 good ewe and ram lambs, and an imported two-shear ram. Come and see our flock, or write us for prices, etc.

HENRY ARKELL & SON, TEESWATER, ONT. MILDMAY, G. T. R.; TEESWATER, C. P. R.

Linden Oxford and Shorthorns

Flock composed of selections from the best English flocks and their progeny. None but the best imp. rams used. Stock for sale.

FAIRVIEW
Has still a few good rams. Also a limited lot of ewes, bred to choice rams.

Barred Plymouth Rock cockerels now for sale, at \$1 for good utility birds, and \$2 each for extra good ones.

JOHN CAMPBELL, Woodville, Ont.

Scotch Collie Pups

FOR SALE. BOTH SEXES.
D. G. GANTON, "Holwell Manor Farm," ELMVALE, ONT.

Shropshires...

At present I offer for sale: Shearling rams, yearling ewes, ram and ewe lambs. Also a few aged ewes. Prices reasonable.

GEORGE HINDMARSH, AILSA CRAIG, ONT.

OXFORD DOWN SHEEP

This season's lambs, both sexes; yearling, both sexes; breeding ewes, imp. and from imported stock. Young Shorthorns of both sexes for sale.

JOHN McFARLANE, Dutton P.O. and Stn.

HIGH-CLASS SHROPSHIRE.

A flock of 75, of good type. Two-shear rams, shearling rams, ram lambs, ewe lambs, fine lustrous fellows. Flock headed by a fine imported ram. Write for prices. **Abram Kudell, Hespeler P.O., Ont.** G. F. R. and G. T. R.

W. S. CARPENTER, "MODEL FARM," SIMCOE, ONT., IMPORTER AND BREEDER OF

Shropshire Sheep.
Ram and ewe lambs for sale. Well covered. Station One-half Mile from Farm, Wabash and G. T. R.

50 REG. SHROPS. 50

FOR SALE!
Shearling and two-shear rams; also stock ram, bred by John Miller & Sons, and this season's crop of lambs ready for the fall trade. Foundation stock bred by Mansell, England. Prices moderate. A card will bring them. **ROWAT BROS.,** Phelepston station, G. T. R., 5 Hillsdale, Ont. miles east. Simcoe County.

Imported Chester Whites

Our present offering is both sexes, all ages, bred from prizewinning and imported stock. We claim to have as good as the country produces, of the true bacon type. We guarantee everything just as represented. Write us, a trial will convince. Pairs not akin.

GEO. BENNETT, CHARING CROSS P. O. AND STATION.

A few **Chester Boars** fit for good. Also some Dorset ewes and ewe lambs. Prices reduced for 30 days. **R. H. HARDING,** Thordale, Ont.

Imported Poland-China Hogs. We are offering choice, of both sexes, any age (pairs not akin), from imported stock, and of the true type. Easy feeders, rapid growers. **ROBT. L. SMYTH & SONS,** Fargo P. O. and Station, M. C. R.

WILLOW LODGE BERKSHIRES FOR SALE

Two boars, 7 months old; several litters, 6 weeks to 3 months. Also a number of young sows ready to breed, sired by Longfellow 10th of H. B. No. 8633, and Gallant Prince No. 7691. Pairs supplied notakin.

WM. WILSON, SNELGROVE, ONTARIO.

LARGE ENGLISH FOR SALE.

YOUNG boars and sows carrying the blood of Baron Lee 4th, Bright Star (imp.), Enterprise and Highclere, on Bow Park, Teasdale and Snell females, with Allendale Boy 5875 and Royal Lad 3rd 4307 heading the herd.

S. DYMENT, BARRIE, ONT.

FOR SALE: Berkshires (both sexes), Shorthorn stock bull, cows, heifers and young bulls. Prices reasonable. Write or come and see us. om

A. J. C. SHAW & SONS, Thamesville, Ont.

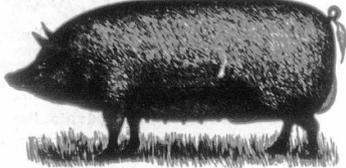
Snelgrove Berkshires.

Our herd is unrivalled for its large size and bacon type. All bred from imported stock. We are offering now sows large enough to be bred, sows in pig, boars fit for service, and young pigs from 2 to 4 months old. Can supply pairs not akin. Write us. o

SNELL & LYONS, Snelgrove, Ont.

IMP. TAMWORTHS. A few sows 6 months old, out of Imp. English Lady and O. A. C., sired by Imp. Starlight, also the first prize boar at Pan-American, for sale, and young stock from 6 to 7 weeks old. om

PETER HORD, Parkhill P. O. and Station.



One hundred Tamworth and Improved Chester White Spring Pigs of a true bacon type, our herd having won the best prizes offered at the leading exhibitions throughout Ontario and Quebec for the past ten years. Stock for exhibition purposes a specialty. We pay express charges between stations, and guarantee safe arrival of all stock shipped. Pairs furnished not akin. Write for prices. o

H. GEORGE & SONS, Crampton P. O., Ont.

NEWCASTLE HERD OF TAMWORTHS

We are now offering several choice boars and sows, 3 and 4 mos. old, and half a dozen choice 2-mos. olds, all from Toronto Industrial Sweepstakes herd. Write us for prices before buying elsewhere. COLWILL BROS., NEWCASTLE, ONT.

Tamworths and Berkshires

A choice litter of young Berkshires, farrowed Jan. 10th, at \$6.00 each, registered (when 6 weeks old); order now. Also collie pups, \$3.00 each.

D. J. GIBSON, BOX 38, BOWMANVILLE, ONT. HAZEL DELL STOCK FARM. o

Improved Yorkshires

FOR SALE, of the most popular families. All ages and both sexes now ready for immediate shipment. Write for what you want. Prices reasonable—consistent with quality. o

E. DOOL, Hartington, Ont.

LARGE WHITE YORKSHIRES.

Am offering this month a superior lot of Yorkshire sows bred to Ruddington Ensign (imported). Young pigs up to three months of age, furnished in pairs not akin. A fine lot to select from. Write: om

H. J. DAVIS, WOODSTOCK, ONT. Importer and breeder of Shorthorns and Yorkshires.

YORKSHIRES FOR SALE.

Boars fit for service, sows in farrow and ready to breed, and young stock on hand. Prices reasonable. om

WM. HOWE, BRUCE CO. NORTH BRUCE, ONT.

Large English Yorkshires

Sows safe in pig, boars and sows ready to breed, boars and sows three to four months old. All lengthy, smooth, deep-sided type. Barred Rock cockerels, Miller strain. Write:

JAS. A. RUSSELL, Precious Corners P. O. Cobourg Station, G. T. R. Ontario. o

PINE GROVE FARM

Large Yorkshire and Essex Swine.

The oldest established herd in America. We bred Hasket 3rd—1937—, sire of Oak Lodge Conqueror—2475—, and also sire of Look Me Over, the sire of Summerhill Victor, the champion boar at the Pan-American and the late Chicago Exposition, and sold there for \$700. Personal inspection and correspondence solicited. Nine imported and twenty home-bred sows breeding.

JOSEPH FEATHERSTON & SON, o STREETSVILLE P. O., ONT. Streetsville stn., C.P.R. Clarkson stn., G. T. R.

BOARS FOR SALE.

We have a few choice Yorkshire boars to sell at \$15 each. Sows and younger pigs always on hand. Herd headed by the second prize boar at Toronto, 1901. We still have a few extra fine Shropshire and Suffolk Down ewes at \$25 per pair. We also have a number of Aberdeen-Angus bulls and heifers to part with.

W. R. BOWMAN, Mt. Forest, Ont.

GOSSIP.

W. S. Carpenter, "Model Farm," Norfolk County, Ont., writes: "Your Christmas number was indeed a work of art, and you are to be congratulated in turning out such a successful issue. Every up-to-date farmer (and those who wish to be) should be a subscriber of the 'Advocate.'"

Creighton & Co., wholesale grocers, of Toronto, in their advertisement in another column, show the farmers how to save the retail grocer's profit, by buying direct from the importer. Their 25c. and 40c. tea is pronounced very pleasant and mild, fully up to what they claim.

Mr. A. W. Smith, Maple Lodge Stock Farm, writes: "Allow me to congratulate you upon your beautiful Christmas number of 'Farmer's Advocate.' It is certainly the best you have issued, and is replete with good things; a 'Holiday Greeting' worthy of your grand all-the-year-round paper."

E. & C. Parkinson, lot 22, 9 con., Collingwood Township, Grey Co., a short distance from Thornbury P. O. and station, are offering for sale in this issue four young Shorthorn bulls—a choice lot. They have thirty other Shorthorns, also of the same families, some of which will be offered for sale in a short time. The present head of the herd is Prince of Thornbury, bred by T. Douglas & Sons, Strathroy, Ont.

A. P. Westervelt, Secretary Ontario Provincial Winter Fair, writes: "I notice in the report of the prizewinners at the Ontario Fair in class 26, section 7, for dressed carcass of yearling grade wether, the awards are published as follows: First, John Brown, Galt; second, R. Gibson; third, W. E. Wright; which is incorrect. Prizes in this section were awarded in the following order: First, John Park & Son, Burgessville; second, T. C. Douglass, Galt; third, R. Gibson, Delaware."

Thos. Mercer, Markdale, Ont., breeder of Shorthorn cattle, writes: "I am well pleased with my experience in advertising in the 'Farmer's Advocate.' My sales have been good this fall, having sold to such men as Mr. Cowan, Seaford; Mr. R. Miller, Stouffville, and other prominent breeders. Mr. Daniel Weir, Halvill P. O., Mountain station, C. P. R., near Montreal, to whom I sent a bull calf nine months old (sold him by letter), writes me, under date of Dec. 19th: 'The bull landed this morning safely. I find him all you represented him to be, and better than I expected. Thanking you for the way you have treated me in this transaction.'"

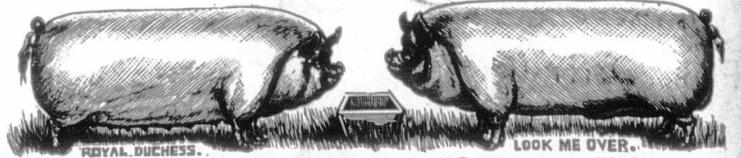
Lake View Stock Farm lies in the County of Durham, about one and a half miles from the town of Cobourg, which is the firm's P. O. and R. R. station. The owners, Messrs. C. & J. Carruthers, are among Canada's oldest Shorthorn breeders, having for a great many years been engaged in the breeding of Shorthorn cattle and Berkshire and Yorkshire pigs. The Shorthorns are principally of the well-known Beauty family, on which have been used such bulls as the following: Bomanton Boy 23514, by Imp. Baron Lenton; Duke of Baltimore 15845, by Baron Baltimore; Indian Wave, by Imp. Indian Chief; and Royal Charlie 30118, by Prince of Wales. The present stock bull is British Hope 30946, by Salisbury 27135; dam Maid of Promise 8th, by Lord Stanley. He is a dark red, one of the modern kind, showing great width and depth, with an abundance of flesh, evenly distributed, and is a grand stock-getter, as the youngsters in the herd show. The females, both old and young, are the kind that are in demand. The three young bulls that are offered for sale are a short-legged, evenly-built lot, and will without doubt develop into big, choice animals. The Yorkshires are descended from that great stock boar, The Squire (imp.), and are of the celebrated Hollywell strain, on which have been used boars from the well-known Featherston and Oak Lodge herds. The Berkshires are of Snell and Green breeding, better than which there is none. There are young stock of both breeds for sale, and parties dealing with the Messrs. Carruthers can rest assured that everything will be exactly as represented.

Satisfied People. That's the kind that run the **MARILLA** Incubators and Brooders. If they are not satisfied we refund their money. Larger hatches, perfect system of regulating temperature, moisture and ventilation. All these points explained in our catalog. Sent for two 2c stamps. **MARILLA INCUBATOR COMPANY, BOX 102, ROSE HILL, N. Y.** Machines may be seen at the store of our agent, C. J. DANIELS, 196 River St., Toronto, Canada.

HATCHING WITH CANADIAN INCUBATORS PAYS. Write for prices. **CANADIAN INCUBATOR & BROODER CO., TORONTO, CAN.**

SUMMERHILL HERD OF Large English Yorkshires.

HEADQUARTERS FOR THE IDEAL BACON HOG.



Our winnings at the large shows, for 1901, are as follows: At Toronto every possible first prize and five seconds, two silver medals, and first for pen of pure-bred bacon hogs, also sweepstakes on bacon hogs over all breeds; at London every possible first but two; while at the Pan-American, where our herd was divided, half going to Toronto, we won six out of ten possible firsts, also sweepstakes on boar any age. At the Pan-American (Buffalo), Toronto and London there were thirty-six first premiums and medals given: all the medals and every first prize but six won by the Summer Hill Yorkshires. When in need of the best write **D. C. FLATT & SON, MILLGROVE, ONT.** Telephone: Millgrove, Ont.

Maplewood Herd

7 IMPROV'D LARGE YORKSHIRES PRIZEWINNERS AT Pan-American Exposition, Buffalo.

21 HEAD PRIZEWINNERS 21 AND PRIZEWINNING BLOOD. IMPORTED AND CANADIAN-BRED.

BABY FEEDERS. BACON TYPE. STOCK FOR SALE. WRITE US WHAT YOU ARE WANTING. **IRA JOHNSON, BALMORAL, ONTARIO.** Nelles' Corners Station and Telegraph. om

Large English Berkshires.

My herd consists of sows imported from England; three of them (including a show sow) were selected from the herd of Geo. Green and were bred to his show boars. Young stock for sale (not akin). **JNO. LAHMER, VINE, ONT.**

DO IT NOW If you really want to add to your income by starting a business that your wife will take pleasure in helping you with, write and find out about the **PRAIRIE STATE INCUBATOR.** The new catalogue No. 34, with 700 half-tone illustrations, 4 three-color reproductions from original paintings, and 50 full page tinted plates is sent free. Write now. **PRAIRIE STATE INCUBATOR COMPANY, HOMER CITY, PA.** Or Toronto, Ont., Can., 190 Yonge St.

FOR SALE: Yorkshires and Holsteins Best type and quality. Young stock constantly on hand. Prices right. **R. HONEY, om** Brickley P. O., instead of Warkworth.

YORKSHIRES and POULTRY 30 STRICTLY FIRST-CLASS young pigs, 5 to 13 weeks old, bred from imported prize-winning stock, smooth and easy feeders. A few choice cockerels in B. P. Rocks, White Wyandottes, White and Brown Leghorns, at \$1.00 each. **A. B. ARMSTRONG, Codrington, Ontario.**

YORKSHIRES Headed by Oak Lodge Prince 5071. Litters 15 weeks, either sex; 2 sows to farrow. **WM. TEASDALE, Dollar, Ont.** Northern branch G.T.R., 15 miles from Toronto. om

BOYS FOR FARM HELP. The Managers of Dr. Barnardo's Homes invite applications from farmers, or others, for the boys who are arriving periodically from England to be placed in this country. The young immigrants are mostly between 11 and 13 years of age; all will have passed through a period of training in Dr. Barnardo's English Institutions, and will have been carefully selected with a view to their moral and physical suitability for Canadian life. Full particulars as to the terms and conditions upon which the boys are placed may be obtained upon application to Mr. Alfred B. Owen, Agent Dr. Barnardo's Homes, 214 Farley Ave., Toronto. o

All Prizewinning Strains: 60 Oxford Tamworth swine, Collie dogs, 100 Bronze and Narragansett Turkeys. **A. ELLIOT, POND MILLS P. O., ONT.** EXPRESS OFFICE: LONDON.

INCUBATORS AND BROODERS. Guaranteed to give satisfaction. Built to last a lifetime. Absolutely self-regulating, self-ventilating, and perfectly reliable in every way. om For circular giving prices, etc., write the manufacturer: **J. E. MEYER, Kossuth, Ont.** Shipping station: Guelph.

Turkeys! Turkeys!! Grand Mammoth Bronze turkeys, heavyweights—nothing but the best toms used. o **E. S. BENNETT, Glanworth, Ont.**

FOR SALE: A few pairs of choice TOULOUSE GEESSE. Order at once, as we have only a few pairs left. A few B. P. R. COCKERELS. **W. W. EVERITT, Chatham, Ontario.** Box 552. om

PLEASE MENTION FARMER'S ADVOCATE.

BARRED ROCKS. A number of choice cockerels: large, strong-boned, robust, healthy birds, bred from my famous National strain, noted for large eggs and persistent layers. For prices write o

W. C. SHEARER, BRIGHT, ONTARIO.

R. G. ROSE, GLANWORTH, ONT. offers for sale a choice lot of M. B. turkeys from his 40-pound imported yearling tom. Also Black Minorcas, W. Wyandottes, Barred, Buff and White Rocks. Pairs and trios mated not akin. o

Mammoth Bronze Turkeys

Sired by 42-lb. tom. Cayuga ducks, Chester White swine (both sexes) from two to six months old; bacon type. Write for prices. o

W. E. WRIGHT, GLANWORTH, ONT. **BARRED ROCKS (EXCLUSIVELY).**—We have a large number of large, strong, vigorous cockerels, bred for utility, from \$1 to \$5 each. Also a number of pullets and good breeding hens. **A. E. SHERRINGTON, Box 100. o** Walkerton, Ont.

Mammoth Bronze Turkeys. S. G. and colored Dorkings, S. G. Br. Leghorns, Barred Rocks, Toulouse geese—over 500 grand young birds from winning strains. Pairs and trios mated not akin. om **ALFRED E. SHORE, White Oak, Ont.**

BUILT FOR BUSINESS! THAT'S THE IDEA. **The Cyphers Incubators** are positively warranted to last TEN YEARS, without repairs, and are guaranteed to **OUT-HATCH**, during three trials, any other make of incubator on the market **—bar none. THIS, OR YOUR MONEY BACK.** Used exclusively at Experimental Farms, Guelph and N.-W.T., and Ottawa; Dominion Government Poultry Stations, Whitby, Truro (N. S.), and Quebec; also six American Experimental Stations. Daniels, the universal provider in Poultry Supply business, has the sole agency for the Cyphers Incubators and Brooders for Canada. Our list of Poultry Supplies are too numerous to mention here, but just drop us a line and state what you require. We handle nothing but the best. Satisfaction every time, or money refunded. o Mention "Advocate."

C. J. DANIELS, 196 to 200 River St., TORONTO, ONT.

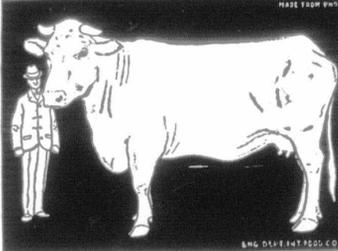
CRAMMING MACHINES, FATTENING COOPS, Incubators and Brooders POULTRY SUPPLIES. **A. J. MORGAN, MFR., LONDON.** Catalogue free. om

L. Bed Time
Cordova
CANDLES

They give a light that's rich and brilliant. No odor. Many styles. Sold everywhere.

IMPERIAL OIL CO.

LARGEST COW IN THE WORLD



WEIGHT 4970 LBS., AGE 8 YEARS, SHORTHORN. She eats "INTERNATIONAL STOCK FOOD" every day and is owned by International Food Co., Minneapolis, Minn. "INTERNATIONAL STOCK FOOD" causes Cattle, Horses, Hogs and Sheep to grow very rapidly and makes them Big, Fat and Healthy. Is used and strongly endorsed by over 500,000 Farmers. It is sold on a Spot Cash Guarantee to Refund Your Money in any case of failure by over 30,000 Dealers. It will make you extra money in Growing, Fattening or Milking. Owing to its blood purifying and stimulating tonic effects it Cures or Prevents Disease. It is a safe vegetable medicinal preparation to be fed in small sized feeds in connection with the regular grain. It fattens Stock in 20 to 30 Days less time, because it aids Digestion and Assimilation. In this way it saves a large amount of Grain. The use of "INTERNATIONAL STOCK FOOD" only costs 3 FEEDS for ONE CENT. Ask your dealer for it and refuse any of the many substitutes or imitations. It always pays to feed the best. "INTERNATIONAL STOCK FOOD" is endorsed by over 100 leading Farm Papers.

A \$3000.00 STOCK BOOK FREE
MAILED TO EVERY READER OF THIS PAPER.

This Book Contains 183 Large Colored Engravings of Horses, Cattle, Sheep, Hogs, Poultry, etc., and of this Cow. It cost us \$3000 to have our Artists and Engravers make them. It contains a finely illustrated Veterinary Department that will save you Hundreds of Dollars. Gives description and history of the Breeds of Horses, Cattle, Sheep, Hogs and Poultry.

THIS BOOK FREE, Postage Prepaid, If You Write Us a Postal Card and Answer 3 Questions: 1st—Name this Paper. 2nd—How much stock have you? 3rd—Did you ever use "INTERNATIONAL STOCK FOOD" for Horses, Cattle, Sheep, Hogs, Colts, Calves, Lambs or Pigs. The Editor of this Paper will tell you that you ought to have a copy of our finely illustrated Book for reference. The information is practical and the book is absolutely free. We won the Highest Medal at Paris in 1900.

We will give you \$14.00 worth of "INTERNATIONAL STOCK FOOD" if Book is not exactly as represented.

Write Us At Once for Book

INTERNATIONAL STOCK FOOD CO.,
MINNEAPOLIS, MINN., U. S. A.

3 FEEDS FOR ONE CENT

DEALERS SELL THESE ON A "SPOT CASH" GUARANTEE

INTERNATIONAL STOCK FOOD.
INTERNATIONAL POULTRY FOOD.
INTERNATIONAL LOUSE KILLER.

INTERNATIONAL WORM POWDER.
INTERNATIONAL COLIC CURE.
INTERNATIONAL HADNESS SOAP.

INTERNATIONAL GALL CURE.
INTERNATIONAL HEAVE CURE.
SILVER PINE HEALING OIL, ETC.

DO YOU KNOW

THAT WORN-OUT LANDS MAY BE MADE PRODUCTIVE AND PROFITABLE BY THE JUDICIOUS USE OF THE RIGHT KIND OF FERTILIZER?

NOW IF YOU HAVE A PIECE OF LAND THAT WONT GROW ANYTHING BUT WEEDS, TALK WITH US ABOUT IT AND LET US SUGGEST THE RIGHT FERTILIZER

WE FEEL VERY SURE THAT WE CAN SHOW YOU HOW TO USE FERTILIZERS WITHOUT GREAT EXPENSE SO YOUR LAND WILL PAY CONSULT US FREELY IT IS OUR BUSINESS TO KNOW ENQUIRIES FREELY ANSWERED AGENTS WANTED FOR TERRITORY NOT TAKEN UP

THE W.A. FREEMAN CO. LIMITED
HAMILTON ONTARIO

GOSSIP.

At the annual meeting of the American Cotswold Association, held at Chicago, Dec. 3rd, 1901, the Secretary-Treasurer's report showed receipts for the year amounting to \$1,498, payments \$1,417.68, a balance for the year of \$80.32, and a balance brought forward from 1900 of \$661.74, making a total balance on Nov. 23rd, 1901, of \$742.06. Officers elected were as follows: President, D. McCrae, Guelph, Ont.; Vice-President, D. B. Watt, Xenia, Ohio; Secretary-Treasurer, Geo. Harding & Son, Waukesha, Wis.

J. & W. B. Watt, breeders of Shorthorn cattle, Clydesdale horses, and Leicester sheep, Salem, Ont., write: "Business is brisk, plenty of sales, and the stock doing well. Among other recent sales was the two-year-old bull, Brilliant Star, to Mr. John Donely, Grafton, North Dakota. Brilliant Star is a heavy, well-bred bull, sired by Charles Dickens =23418=, first-prize aged bull at Toronto and London in 1900. His dam, Morning Star =20170=, is a large, thick-fleshed cow that should raise the best of bulls to breed from. To Mr. David Harrell, Austin, Texas, five heifers; and later, at Chicago, the young English Lady bull, Royal Hope, and Matchless 30th, both got by Royal George =28553=. To Mr. Robert Batty, Meaford, the bull calf out of Village Gem. To W. C. Edwards & Co., Rockland, Ont., the yearling Missie heifer, Lady Aberdeen 2nd. The other day we sold to Mr. John Leppington, Bredenburg, Assiniboia, the cow, Palmerston Daisy, and calf; two young heifers, a Matchless and a Stamford; two Leicester ram lambs, eighteen ewes, one young Clydesdale stallion colt, and two yearling fillies, all three registered. One of the fillies, Roseola Montrave [3045], was the first-prize Canadian draft filly at Toronto Industrial and several other fairs, never being beaten as a yearling. To Mr. J. E. Meyer, Kossuth, the Matchless bull, Matchless Duke. These are some of the sales we have made this winter, and we have still on hand and for sale several registered ewes and lambs, a Mildred, an English Lady, a Missie and a Matchless bull, and a few females; also a registered brood mare."

Mr. A. C. Hallman, the well-known breeder of Holstein cattle and Tamworth swine, at New Dundee, Ont., writes that he has had the good fortune to sell his Spring Brook farm at that place and to find a good farm of 160 acres of choice land with buildings well suited to his business in a convenient location, being only one mile from Breslau station on the main line of the G. T. R., ten miles west of the City of Guelph and five from the thriving town of Berlin, in the County of Waterloo. To this new home Mr. Hallman expects to move his stock about the end of March, and the new farm will take the name of the old Spring Brook, which will still be appropriate, owing to the existence on the farm of a fine spring creek running through rich pasture land. Mr. Hallman, in ordering a change in his advertisement, sends the following notes regarding his stock at the beginning of the new year: "The young stock sired by my prizewinning (imported) bull, Judge Akkrum De Kol 3rd, are the best I ever had. This valuable De Kol blood crossed with my richly-bred Aaggies, Netherlands, Acmas, Artis and other valuable strains, makes a combination which for quality, style and breeding is hard to excel. I have a strong lot of heifers in calf, also some very fine bull calves and heifer calves. I have only one bull left that will be ready for service this spring. My Tamworths are coming along fine, and I have a grand lot, of all ages and sexes, to select from. My sales are also encouraging. Among the most recent in Holsteins are: A very fine cow, Lily Acma, a very promising three-year-old, dam of the first-prize heifer calf at Toronto, 1901, sold to G. H. Monhard, Fairfield East, Ont. She is again bred to Judge Akkrum DeKol 3rd, which makes this a valuable purchase. The bull, Acma's Jewel Prince, first-prize calf at Toronto, 1901, went to W. J. Bailey, Nover, Ont. This is a promising bull, and one that we may expect to hear from. The third-prize bull calf went to Richard Honey, Brickley, Ont. This is also a grand young bull. Mr. Honey reports him doing finely, and that he has won many prizes on him last fall. Sales in Tamworths are also good. I have only a few boars left ready for service, but a fine lot of young pigs."

HAWKEYE GRUB AND STUMP MACHINE

Works on either Standing Timber or Stumps. Pulls an Ordinary Grub in 1 1/2 Minutes.

Makes a Clean Sweep of Two Acres at a Sitting. A man, boy and a horse can operate it. No heavy chains or rods to handle. You can't longer afford to pay taxes on unproductive timber land. Illustrated catalogue Free, giving prices, terms



MILNE MFG. CO., 886 8th St., Monmouth, Ill. Address Milne Bros. for SHELTON PONY Catalogue.

Page Woven Wire Fence

Owing to the variations of the Canadian climate, considerable allowance must be made in all fences for contraction and expansion, which makes an ordinary wire fence unserviceable, as when it expands it becomes so loose as to prove of little value. Note this makes it elastic and self-regulating. The Page Wire Fence is made of "Page" wire, which is twice as strong as ordinary wire. Prices are particularly low this season. 50,000 miles of Page fences now in use. We also make Gates, Ornamental Fences and Poultry Netting. The Page Wire Fence Co., Limited, Walkerville, Ont.



Fleming's 3 are free if they fail.

Lump Jaw Cured With Ease.

FLEMING'S LUMP JAW CURE has been on the market for years. It has been used by nearly every prominent stockman on the continent. A careful record shows that it does not fail once in a hundred times in the severest cases.

We Have a Thousand Such Reports:

Kinsley, Neb., May 24, 1901.—We sent to you some time ago for your Lump Jaw Cure. One application made a complete cure. The lump had been on over a year.
G. W. SMITH.

Don't risk loss or endanger your herds or pasture. Let us Send You our Valuable Book.

FISTULA
and **POLL EVIL**
CURED
In 15 to 30 Days



SPAVINS
Cured Quickly
Or There's
NO COST

Continuous tests for two years prove that Fleming's Fistula and Poll Evil Cure cannot fail. Easy to use, prompt in results; cures in half the ordinary time. Simple, humane, scientific guaranteed. Write for circular today.

One 45-minute application of Fleming's Spavin Cure will remove any ordinary spavin, curb, ringbone, etc.

Corro Gordo, Ill., Feb. 15, 1901.—I applied the liquid as directed, and one application has removed the spavin. It is wonderful how it takes hold so soon.
L. Mellinger.

We have some important information for you—FREE.

It is worth while to write us today for circulars describing the above remedies. Mention this paper.

FLEMING BROS., Chemists, 38 Front St., West, Toronto, Ont.

WOODSTOCK STEEL WINDMILLS

Galvanized or Painted. For Power or Pumping. The **DANDY Windmill** with Graphite Bearings, runs easy and controls itself in the storm.

GRINDERS, PUMPS, WATER TANKS, DRINKING BASINS AND SAW BENCHES.

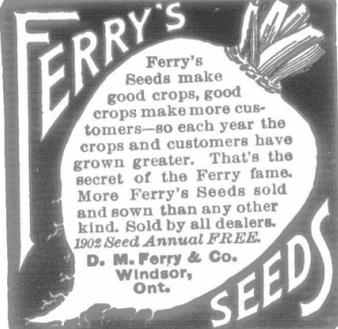
WOODSTOCK WIND-MOTOR CO., WOODSTOCK, ONT. (Ltd.)



FERRY'S SEEDS

Ferry's Seeds make good crops, good crops make more customers—so each year the crops and customers have grown greater. That's the secret of the Ferry fame. More Ferry's Seeds sold and sown than any other kind. Sold by all dealers. 1902 Seed Annual FREE.

D. M. Ferry & Co. Windsor, Ont.



CHAMPION EVAPORATOR.

It requires more than double the amount of material to construct a Champion than an ordinary evaporator. The first Champion Evaporators, constructed twenty years ago, are in use at the present time. Thousands of Champion Evaporators are made and sold annually. We have three factories. Our entire attention is devoted to best methods of handling the maple product.



Send for Catalogue.

THE GRIMM MANFG. COMPANY, 84 Wellington Street, Montreal, Quebec.

PLEASE MENTION FARMER'S ADVOCATE.

TORONTO ENGRAVING CO.

92 BAY ST
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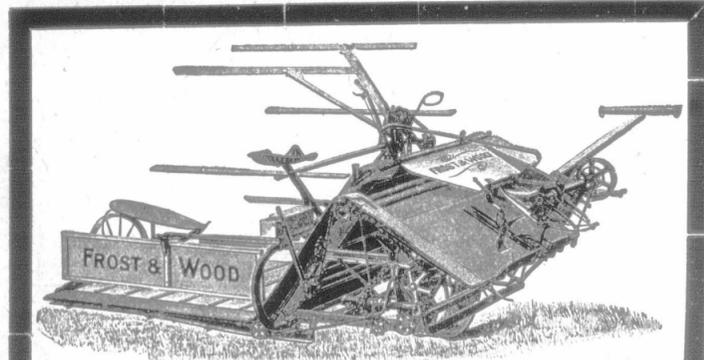
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The Razor Steel, Secret Temper, Cross-cut Saw.



WE take pleasure in offering to the public a saw manufactured of the finest quality of steel, and a temper which toughens and refines the steel, gives a keener cutting edge and holds it longer than by any process known. A saw to cut fast "must hold a keen cutting edge."
 This secret process of temper is known and used only by ourselves.
 These Saws are elliptic ground thin back, requiring less set than Saws now made perfect taper from tooth to back.
 Now, we ask you, when you go to buy a Saw, to ask for the Maple Leaf, Razor Steel, Secret Temper Saw, and if you are told that some other Saw is as good, ask your merchant to let you take them both home, and try them, and keep the one you like best.
 Silver steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand.
 It does not pay to buy a saw for one dollar less, and lose 25 cents per day in labor. Your saw must hold a keen edge to do a large day's work.
 Thousands of these saws are shipped to the United States and sold at a higher price than the best American Saws.

MANUFACTURED ONLY BY
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