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THE FARMER'S ADVOCATE & HOME MAGAZINE

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

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

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Address—THE FARMER'S ADVOCATE, OF
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Editorial.

Boycotting Canadian Records.

The following letter was received by Mr. Henry Wade, Secretary of the Agriculture and Arts Association of the Province of Ontario: Department of Agriculture, Office of the Secretary, Washington, D. C.

SIR.—Referring to your letter of the 24th inst. re the subject of recognizing the Canadian Record Books in the regulations for the importation of animals duty free, I would say that these books were intentionally omitted. A great majority of the breeding associations of the United States have expressed a desire that no books of record should be recognized except those maintained by our own associations. On account of the delay which would be caused by securing a record of animals imported from Europe in the books of the American Association, the European record books have been recognized, but this reason does not apply in regard to Canada, for it will only require a day or two to send to any of the American Associations and have the animals recorded and receive certificates of record in return. This could readily be done before the animals, which it was designed to import into the United States, were shipped from the breeding point in Canada, consequently there would be no delay at the port of entry. The decision is not intended to reflect in any way on the Canadian record books, but it is simply an effort to comply with the almost unanimous sentiment of American breeders. J. N. RUSK, Secretary.

This letter fully explains itself. It is evident that the American Government has determined to foster and support the American Record Association according to the strictest protectionists' principles. What effect will this have on Canada? How will it affect her live stock interests?

We in Canada have well-established records for all the various breeds. The rules governing entries in these books are in almost every case higher than those governing entries in the corresponding American records, and in no case lower. They are also more reliable; because in every case the Canadian records are controlled and virtually edited by the breeders, the strictest supervision being exercised over the pedigrees, a reward of from \$50 to \$100 being offered by some societies for evidence which will lead to the detection of parties who have by any means entered animals contrary to the rules governing such records—heavy fines await transgressors in every case. The directors of these associations are in all cases not only practical men, but are those whose experience, knowledge and reputation are beyond question.

The owner of an animal to be entered must prove beyond doubt the purity of the blood of the animal so offered: not so with many of the American Record Associations. Many of the finest breeding animals now in the United States, or their ancestors, were bred by Canadians. We all know to what a large extent importations have been made from Ontario. American buyers come to this Province and buy animals often regardless of their breeding; these they take to the United States and record, often furnishing to the recording secretary pedigrees which would not be considered for a moment by a Canadian editing committee. There are hundreds of sheep recorded in the American record whose breeding would not entitle them to enter Canadian records. Often an American secretary is not to be blamed for admitting spurious pedigrees, because he has not the means of knowing that he is being imposed upon, as he is so distant from the parties who bred the animals or who are supposed to have bred them. For the same reason their editing board cannot detect the dishonesty of the applicants. The rank and file of the American breeders are thus deceived.

Another phase of the American record business is this. Some of these records are conducted simply as an industry, without regard to the breeding of the animals, so long as they "look all right." There are scores of animals entered in certain American records which have been received by the secretaries while visiting Canada. The simplest enquiry would have revealed the fact that the animals were not eligible for entry in any record. They were simply received in order to cross the lines free of duty, or sell well after they crossed. Knowing these facts so well, Canadians cannot gracefully accept the last ruling of the American Treasury.

We have no doubt Secretary Rusk is advised by a few extreme protectionists who are managers of some stock associations in the United States, notably Mr. Clarke and Mr. Mills, who are respectively President and Secretary of the Clydesdale Association. Their object is to force all our people to register in their record. The authorities are induced to believe that this is a very simple matter, and that it would not occasion any delay—that the pedigrees could be sent for and returned within a few days. It can be easily foreseen, however, that it is very easy for a secretary to find a little fault or make some objection to a pedigree which will entail a delay of two or three weeks. Before this time shall

elapse the man who purchased the animal becomes disgusted, and leaves the country. This is exactly what American breeders desire. They wish that a man in the United States intending to purchase should deal either with those living in the United States, or, if he must come to Canada, with those only who are members of their Association. The order as issued results in one of two things,—in compelling all our people to register in the United States records, or in preventing the American purchaser from coming to Canada at all to buy his stock. That we think is the aim of the order, and it will certainly accomplish one or the other point. By destroying our records, buyers even from our own country, especially those from Manitoba and the West, will be drawn towards the United States breeders, for they will control the records.

Nobody can deny that Mr. Mortimer Levering has done more to advance the interests of the Shropshire breeder than any other man in America, or, perhaps, more than any other ten men. How much better would it have been for Canadians had Mr. Levering been a resident of Toronto.

The establishment of a well-conducted record in a province is a powerful incentive to the farmers in that province, and will greatly assist the breeders and advance their interests. Canadians cannot afford to close up their records and hand them over bodily to American associations.

Especially is this the case in view of the fact that the time may come, and most probably will come, when Canadian bred animals shall be excluded from the United States altogether. We have been repeatedly told by prominent Americans that our live stock "is admitted only by sufferance." If we are excluded from their markets, of what benefit will their records be to us?

Canadian breeders, with a few exceptions, sell more animals to Canadian farmers than they do to Americans; because of this, Canadian records are a necessity. Why send thousands of dollars out of Canada each year in the form of registration fees that would be better retained if used to build up what will be in a few years a most important industry? Why should we hand our records over to Americans, and allow them to manipulate them to the injury of the Canadian breeder? The proposition is a most absurd one, and can never be entertained by Canadians, except by those few who are in sentiment more American than Canadian, and who desire to build up American interests to the detriment of Canada.

Again, in Canada there are hundreds of purely bred animals which are registered here, but to register them in American records would cost more than the profits to be got from the sale of them; it would be more profitable to sell them to the butcher. This is well known to American breeders, who know full well that the recent order is virtually prohibitive. The officials of our Government at Ottawa were written to some time ago concerning this subject. Up to date they have not favored the writer with a reply.

This is a matter seriously affecting the farmers, not the manufacturers. We trust that the Dominion Government will take the matter in hand, and do what they can to obtain simple justice, if the Americans are willing to extend it.

Ottawa Central Fair.

The first prize list to come to hand is that of the Central Canada Fair, to be held in Ottawa September 22nd to October 1st. The enterprise and energy of the directorate have made this Fair one of the best in Canada. An agricultural exhibition nowadays will not live long on past reputation. Nothing but a live management will succeed when competition is as rife as it is to-day. This applies to fairs particularly. This fact is well known to the directors of this exhibition, and most practically have they met the difficulty, by giving a particularly attractive prize list, which should, and doubtless will, draw exhibitors from long distances. Without a good exhibit there must be a small crowd; without a crowd receipts diminish until the exhibition is held at a loss.

Among the special prizes are no less than fourteen gold medals, besides others equally valuable given by gentlemen in and about Ottawa. Thoroughbred or blood horses are catalogued first on the list, as is usual at all our shows. A full class is given. The prizes are liberal. Standard-bred horses have a class to themselves, and non-standard mares and fillies have a class given them also, so that virtually there are two classes for horses of trotting families, with another (numbered fifth) class for roadsters, which include either of the foregoing. Only two sections are given for Hackneys, with three prizes each for stallions and mares. Saddle horses and hunters are both included in the next class. Clydesdales and Shires are also placed together, and good prizes offered in both stallion and mare sections. In cattle the usual classification for the beef and dairy breeds is observed. In sheep the more recently known Dorset Horns, as well as the older breeds, are recognized. The prizes offered are reasonably liberal. In swine five classes are given, including Berkshire, Suffolk, Chester Whites, Improved Yorkshires and Poland Chinas.

Judging from the prizes offered this year, together with the courteous treatment received by exhibitors last season, the coming exhibition will be the best yet held at the Capital City.

A Prominent English Show.

The Bath and West of England Show is considered in England second in importance to that held by the Royal Agricultural Society. For many years Canadian breeders have been in the habit of attending, in order to select specimens of sheep and pigs that may be heard from later on at our fall shows.

The recent show was held at Swansea, Wales, and more than held its own in point of numbers as regards the display of sheep, 246 being the number catalogued.

In Cotswolds, R. Swanwick, G. Bagnall & Son, W. Thomas and T. R. Hulbert were all successful exhibitors.

Southdown prizes were won by specimens from the flocks of A. de Murréta, E. Ellis, J. Blythe and C. Y. Lucas.

Shropshires were an exceedingly good show, and in numbers constituted one-third of the whole. T. & S. Bradburn, Astwood Hill, Redditch, England, carried off prizes in shearing rams, ram lambs and shearlings, their sheep being exceedingly stylish, and of extra good quality. Mr. G. Thompson, Wroxall, Warwick, was also a successful competitor. He had a lot of neat, compact sheep of capital character. Messrs. G. Graham, G. Jervis, H. P. Hyland, A. E. Marshall, J. Bowen-Jones and J. Howell all had good specimens that were more or less noticed by the judges.

Oxford-downs were a very small class, in which A. Brassey, G. Adams, R. W. Hobbs were the principal exhibitors.

In Somerset or Dorset Horns, Culverwell Bros., Bridgewater, Somerset, won all the principal prizes, winning first in every class.

The Western Fair of 1892, Sept. 15th to 24th.

The interest displayed throughout Canada in the Western Fair of London increases year by year. The directors have, by their untiring energy and careful attention to its many arrangements, placed it in the foremost rank as a live stock and agricultural exhibition. The enviable record gained by this exhibition is known far and wide, and it has become a matter of the greatest concern to the directors and citizens of London that being a meritorious undertaking it should receive the support from all that it so richly deserves.

We have received the prize list of the nineteenth annual exhibition, to be held by this Association on the above dates, and find several important changes have been made for the improvement of the live stock departments. Perhaps the most noticeable are the excellent purses offered in the speeding classes, which fact will be well received by the importers and breeders of fleet-footed animals, and at the same time please the majority of the patrons of the Fair. The prizes are nearly double those of last year, and range from one hundred to three hundred dollars for each event, comprising a well arranged programme of races, viz.:—For trotters there are two three-minute classes, 2.50 class for stallions, 2.50 class open, two-year-olds, four-year-olds, farmers' and open trots. For trotters and pacers there is an open and 2.35 class, and an open for pacers only. For runners there are one mile heats open, and three-quarter mile heats open. Trial stakes any age, trial stakes for three and four-year-olds, farmers' butcher boys' and carters' flat races, also a two-mile steeplechase. Entries have been made in some of these classes already, and the prospects are most promising. The additions to the prizes offered in the exhibition sections of horses and cattle, and the introduction of a complete class for the Dorset Horned sheep and another for Tamworth pigs have improved the appearance of the list very much. No doubt the number of entries will be larger than heretofore. The special prize given by Mr. Adam Beck for the stallion best calculated to produce saddle horses and hunters from Canadian mares, is a good idea. The judges should weigh carefully all the points before giving their decision on such an important matter, owing to the ever increasing demand for these classes of horses. The English Shropshire and the American Berkshire Associations' prizes should call out a large exhibit of the Shropshire sheep and Berkshire pigs. Some of the very latest special attractions have been secured, and more are now being engaged.

Should any of our readers wish a prize list address Mr. Thos. A. Browne, who assures us he will be pleased to forward the same.

Live Stock Entries Received by Ontario's Commissioner to the World's Columbian Exposition.

The Ontario breeders have made the following entries of live stock:—

HORSES.
Thoroughbred, 7; Standard-bred, 20; Coach, or Carriage, 17; Clydesdales, 68; Shires, 4; Hackneys, 12; Suffolk Punch, 6; Saddle horses, 1.

CATTLE.
Shorthorns, 58; Herefords, none; Aberdeen-Angus, 14; Galloways, 26; Downs, none; Jerseys, 9; Holsteins, 11; Ayrshires, 56; Guernseys, 3.

SHEEP.
Cotswolds, none; Leicesters, 10; Lincolns, 30; Southdowns, 94; Shropshires, 59; Oxfords, 6; Hampshires, none; Merinos, 12; Dorset Horns, 41; Southdowns, 5.

SWINE.
Berkshires, 26; Poland-Chinas, 10; Chester Whites, 10; Yorkshires, 9; Suffolks, 8; Tamworths, 16.

The entries of poultry are very numerous.

The Mercer Company (Limited).

The farmers will be pleased to see the advertisement of the fine line of implements manufactured by the Mercer Company (Limited), of Alliston, Ont., which will be found on another page of this number.

The saying that nothing succeeds like success is fully exemplified in the case of this Company, whose works are running night and day, to supply the demand for their implements. Three years ago, when the firm of Mercer Bros. & Co. commenced the building of the Mercer Binder without canvas, of which they are the sole inventors, manufacturers and patentees, there were not prophets wanting who predicted as speedy a downfall to the Mercer binder as all other firms who endeavored to build a binder which would work satisfactorily without canvas. In this case, however, their prediction was far from being fulfilled, for, as an instance of Canadian inventive genius and energy, the firm have gained for themselves during the short time mentioned above a world-wide reputation for their Mercer binder, which is to-day a household word in the principal grain-growing countries of the world, having branches in the following places: London, England; Padstow, Cornwall, England; Glasgow, Scotland; Kelso, Scotland; Ballarat, Australia; Dunedin, New Zealand; Cape Town, South Africa; Winnipeg, Manitoba, and local branches throughout Ontario.

Owing to a great demand for these goods during the season of 1891, and to compete with the larger firms, it was deemed advisable to enlarge the Company, and accordingly a charter was applied for and granted on the second day of April last, under the name of Mercer Company (Limited), instead of as heretofore, Mercer Bros. & Co. Their friends will kindly notice the above change in the name of the Company. It is worthy of note that the Mercer Company (Limited) are the second largest builders of binders in Canada this year, which must speak for itself as to what their machine has done in the past. The most flattering testimonials have been received by the firm from farmers in all parts of the world, and in trials with the leading canvas binders of the world the "Mercer" has held its own in the severest competitions.

It is a noteworthy fact that at Smeaton, Victoria, Australia, December 18th, 1891, the "Mercer", both in the experts' and farmers' classes were the only machines which cut their plot from start to finish without a stop. So pleased were the Australian farmers with the magnificent performance of these binders, that orders were taken for forty-five before leaving the trial ground, and it must be borne in mind that the crop on which the trial was made was so badly tangled that several canvas machines threw up the sponge disgusted, acknowledging their inability to cope successfully with the crop. We must also call attention to the Mercer Knottor, which is said to be the simplest and most complete in the market, consisting of only four working parts, thereby doing away with disk wheel, plunger bolt and knife arm. The makers claim that the machine saves fully an inch of twine on every knot tied, over the majority of other knottors, thus saving, much as every twelve sheaves means one band.

Five Months' Immigration.

Mr. Alex. Smith, of the Manitoba Government Immigration Office, Winnipeg, furnishes the following statement of the arrival of settlers for Manitoba and the Northwest during the first five months of this year, together with the number of cars of stock and effects, by C. P. R. via Ft. William and Gretna:—

1892.	Via Ft. William.		Via Gretna.	
	Number settlers.	Cars effects.	Number settlers.	
January.....	307	25	January.....	30
February.....	379	53	February.....	26
March.....	4,480	599	March.....	59
April.....	4,157	221	April.....	187
May.....	2,652	31	May.....	40
	11,975	929		342

Total number of settlers... 12,317

It must be there is no with perfect production of operations while no one requirements of safely be left of the land should else were done would not pro that good se alone will am a good soil, a culture of the with the use o to be secured. For some re the

as one of the of large and the attention matters seem most of the special study ing to discover methods of f new systems practical farm old way of u without mak which was t There have b this rule, but a great lack part of the which have b have been r have led to v who have be fully recogni avail themse been placed

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This quali certain fav thus comm result in th kind. As power lies change in t seed is mar quires that those speci of future c their natu until, the soil; for th for other before the tion. Con farmer to possible fr wheat, wh

Good Seed.

It must be evident to every thinking man that there is no one thing which the farmer can do, with perfect confidence that it will insure the production of a good crop. There are many operations which are essential to success, and while no one of them alone can meet all the requirements of the case, no one of them can safely be left out. It is absolutely necessary that the land should be well prepared; but if nothing else were done, the best preparation in the world would not produce a crop. It is also necessary that good seed should be used; but even this alone will amount to nothing. There must be a good soil, a suitable preparation, and proper culture of the growing plants, in connection with the use of good seed, if the best results are to be secured.

For some reason, which is not plain to be seen, the

SELECTION OF THE SEED,

as one of the leading elements in the production of large and profitable crops, has never received the attention which it has deserved. Other matters seem to have engrossed the attention of most of the men who have made agriculture a special study. They have been engaged in trying to discover new varieties, to learn the best methods of fitting the soil, and in developing new systems of cultivation. Meanwhile the practical farmers have gone right along in the old way of using seed from their own crops, and without making a careful effort to select that which was the best fitted for their purpose. There have been some individual exceptions to this rule, but the general practice has indicated a great lack of interest in this very important part of their work. The study and thought which have been given, and the experiments which have been made in these and other directions, have led to valuable results. The labors of men who have been engaged therein should be gratefully recognized, and farmers should cheerfully avail themselves of the benefits which have thus been placed within their reach.

But in addition to all the light which has been obtained, and all the advantages which have been secured in these directions, there is need of a clearer realization of the fact that the seed exerts a controlling influence upon the quantity and quality of the crop. It is for want of attention to this fact that so many efforts to obtain large yields have failed of success. In some of these cases all of the conditions except this one seem to have been complied with; but the seed which was used was not the best, and the best results were not obtained. Just as long as effect follows cause, just so long will it be impossible to secure first-class crops from second-class seed. We know that in the animal world the character of the offspring is determined by that of its parents. We have the same assurance concerning the individuals of the vegetable kingdom. The seed as surely determines the character and appearance of the crop which it produces, as parents impress their characteristics upon their children.

Let us consider some of the powers and qualities which are, or should be, possessed by the seed of our ordinary farm crops. In some inexplicable manner there is hidden in every well developed seed a mysterious quality called

VITALITY.

This quality enables the seed, when placed under certain favorable conditions, to germinate, and thus commence the series of changes which will result in the production of other specimens of its kind. As long as the seed is kept intact, this power lies dormant. When it becomes active, a change in the character and appearance of the seed is manifest. The interest of the farmer requires that this change shall take place only in those specimens which he uses for the production of future crops, and that they shall remain in their natural condition until, or very nearly until, the time when they are cast into the soil; for the process of growth injures the seed for other purposes, and if it takes place long before the seed is planted, spoils it for reproduction. Consequently, it is for the interest of the farmer to keep his ripened grain as much as possible from all untoward influences. If his wheat, which is in the stack, is for several suc-

cessive days exposed to warm and wet weather, much of it will sprout. In other words, the vital principle becomes active, chemical changes are effected, and growth is the result. In such circumstances growth inevitably means injury, and this injury is very closely in proportion to the extent to which the changes are effected. If the rain is of short duration, and the kernel merely absorbs a little moisture which is soon evaporated, no great harm is done. But if the rain continues and the kernel keeps on absorbing moisture, in a short time the starch which it contained, and which is absolutely necessary to the production of nice flour, is converted into sugar, which is considerably diluted with water. As the process continues, the sugar which has been formed is changed to cellulose, and the kernel is wholly ruined for flouring purposes. The conversion of the starch into sugar before the kernel is planted also injures it for seed, because the plant cannot live for any length of time away from the soil, and, unless the seed is at once put into the ground, all the growth which has been made will be wholly lost. The young shoot will very soon wither and die.

This is not all the injury that has been done, as we shall see at once when we reflect that the starch which was stored in the kernel was just the kind of food which the plant requires for its nourishment until its roots become strong enough to obtain from the soil, and its leaves are developed enough to secure the materials for growth which are furnished to all plants by the atmosphere. But the process of sprouting through which the kernel has passed has changed the materials of the seed and partially used them as food for the plant which had become partly developed. When such a seed is planted it will absorb moisture, but there will be no starch and but little sugar upon which the plantlet can feed. Some seeds will only sprout once, and if the process of germination is checked it cannot be renewed. Other seeds will endure some interruption, though they are greatly injured thereby. From this it will be evident that the selection of seed is a matter of importance to the farmer, and that in making the selection he should be careful to obtain only that in which the quality described as vitality is unimpaired.

Another quality which some seeds possess, and which should always be sought when a selection is made, may be described as

VIGOR.

This can never be present without vitality, but there can be vitality without vigor. There are men in the world who are alive but who possess but very little vital force. It requires about all their strength to maintain their feeble hold upon life. The same principle applies in all its fullness to the case of plants. In a great many fields of grain, plants can be found which, while living, are but little better than dead. They will grow for a while, and the fields may look a little better for their presence, but the difference which they will make in the yield of the crops will be very small. From these extremely weak specimens there are various grades of improvement until we reach the plants which are full of life and strength. Each and every stalk of these several grades has power to produce seed after its own kind. If the seed from the strongest plants is saved to furnish the germs for a future crop, the plants which will be secured will, if circumstances are favorable for their development, be almost sure to be strong and vigorous. But if seed is saved from the weak stalks, the product of that seed will be very likely to be still weaker than the parent stalks. The grade of plants can be lowered much more easily than it can be raised. The natural tendencies seem to be downward, rather than toward a higher type. Still, this tendency can be counteracted, and the various kinds of plants can be greatly improved by careful selection, combined with good cultivation.

The facts that the seed has a strong power of

IMPRESSING

its own characteristics upon its product, and that this power is somewhat modified by a natural proneness to seek a lower level, should induce farmers to make a very careful selection of the seed which they design to use for planting. They also show very plainly why some farmers

who have good land and give good culture do not obtain paying crops. These men are not careful in making a selection of seed, but take about an average lot for this purpose. In this there is the product of some stalks of each of the several grades of vigor. While part of the seed was produced by the best stalks, much of it came from the weakest plants. The grains from the best stalks will probably yield a good crop, but those which came from the lower grades will be very sure to have all the undesirable qualities of their parent plants. If we sow seeds from weak plants we must expect to have weak plants for our product, and if our crops are largely composed of weak plants, they will be both small and unprofitable.

Another quality which seed should possess is

PERMANENCE OF CHARACTERISTICS.

This is an important quality and one which a great deal of seed does not possess. It can be secured by careful selection of the seed which is used in a series of years. Without it there is a great deal of risk that the crops will be poor. In their efforts for the improvement of seeds, horticulturists often have a great deal of trouble to fix the characteristics of certain specimens which they wish to preserve, and it often requires many years to enable them to secure the desired result. But when permanence has once been established it can be retained by carefully selecting the seed which is to be sown. If this selection is neglected, the variety will show a strong tendency to run back to its original condition. The common carrot furnishes an illustration of this. As long as the seed is carefully saved from good specimens, and proper cultivation is given, the crops which are obtained will be like the ones which produced the seed. But if there is carelessness in producing the seed, or culture is neglected, it will be but a short time before the useful carrot is changed into a worse than useless weed. Many crops retain their distinguishing characteristics much better than the carrot, but with all plants there seems to be a strong tendency to revert to some former style of growth and appearance. It requires a vast amount of patient effort to firmly "fix" the characteristics of new kinds of grain. In selecting seed the farmer should keep this fact in mind, and not only secure seed which is good in itself, but also that which will, under good cultivation, produce its like. And when this characteristic has been secured it can, and should, be maintained by means of careful selections of seed for future crops.

EARLY MATURITY

is another quality which the seed of farm crops should possess. In the minds of many farmers this quality is generally associated with a dwarfish habit of growth and a light yield of grain. But these things do not always connect themselves with an early ripening of the seed. Still it is quite natural that the longer the time which a crop requires in which to mature, the larger it should grow, and we find that many of the very large varieties of grain are late in ripening their seed. Perhaps if plants were left wholly to themselves this would be a universal rule, but under the present methods of culture there are many exceptions. With some varieties man has long been experimenting, in order to change the time of ripening, and his efforts have been very successful. Some medium-sized varieties of corn have been made to ripen some weeks earlier than their original time, and this has been accomplished without diminishing the size of either stalks or ears, and without decreasing the yield per acre.

PURITY.

This is another quality which the seed of farm crops ought always to possess. By this term we mean not merely the quality of producing its kind, which has already been considered, but perfect uniformity of appearance. In this respect an immense amount of seed which farmers use is deficient. Instead of taking pains to have their barley or wheat all of one variety, or if different kinds are cultivated to plant them in fields distant from each other, too many growers allow several different kinds to mix and make no effort to secure purity of the seed. In a few cases this may be due to the impression, which some farmers have, that grain will "do better"

if several sorts are mixed than it will if only one variety is planted. This idea is wholly without a reasonable foundation, and the more farmers read and study, the less it will prevail. In most cases the use of mixed seed is due to a want of thought and care, rather than to any belief that it is superior to that which is pure. Instead of being better, the impure seed is far inferior to that which is unmixed. To any one who will think carefully upon the subject this will be evident.

But the principal reason why strict purity of seed should be secured and preserved may be found in the fact that this would enable the grower to obtain quite an increase of the price which his mixed grain now commands.

PRODUCTIVENESS.

This is another quality which should be sought in selecting seed. There can be no doubt that some seed possesses this quality in a high degree, while other specimens, which to all appearance are just as good, are very deficient in this respect.

This point has not received the attention it deserves, and many farmers are slow to believe that there is any particular difference in seed as far as its productive powers are concerned. They know that certain trees are more fruitful than other specimens which are as favorably situated, and they cannot escape the conviction that there is a quality of productiveness which is inherited by different trees in different degrees of intensity. But when they are told that plants also possess this quality, and that the yield of a crop will be largely determined by the degree in which it has been inherited from the seed, they are incredulous. But sometimes when in adjoining fields, in which the soil is nearly alike as soils can be, the same varieties are planted, and there is no difference either in the cultivation or the manuring, but a great difference in the quantity of grain which is harvested, they are almost compelled to acknowledge that there is a difference in the productive powers of seed which belongs to the same variety, but is produced by different specimens of plants.

Careful experiment has proved to the satisfaction of all unprejudiced parties who have studied the results, that the quality of productiveness is strongly developed in some plants, and possessed in only a slight degree by others, and that the plants communicate these characteristics to the seed which they produce.

THE SELECTION OF SEED.

It is only by a patient, careful, and wise selection of the plants, or roots, or bulbs, that the finest seed can be secured. The careless, haphazard way in which many farmers and gardeners save the seed which they plant, accounts, in a great measure, for the poor quality of the seed itself and the light yield of the crops which they obtain therefrom.

Good seed is not produced by every plant, and if no care is taken in selecting the plants for seed, the choice of many inferior ones will be inevitable. The average product of an ordinary field is very far below what should be taken as a standard by which to measure plants for seed. The very best plants which can be obtained are none too good for the production of seed. The man who saves the poorest part of every crop for seed will soon have very small crops. When the average product of the field is saved, the yield does no more than hold its own and keep up the average. It is only when the finer plants are saved for seed that the yield increases and a manifest improvement of the quality is secured. Even then, if there has been no careful guarding of the plants during the period of their growth against the various adverse influences which inevitably surround them, and no thorough culture has been given, the quality of the seed secured will fall far below the grade which might have been obtained.

During the next two months farmers should carefully watch their growing fields. Before the grain is cut is the proper time to select the seed to be used next spring. Seed grain should be chosen from the best grown in a rich and fertile field. Spots will be seen here and there in such fields where both grain and straw are superior to that found in other parts of the field. From these selections should the seed be chosen, allowing it to

become quite ripe, and when cut put by itself. It is wise even to make a careful selection from this already select grain before threshing. All should be severely screened and fanned. If this course was intelligently followed by all Canadian farmers the average yield of our cereals would soon materially increase. When it is desirable to shorten the period of growth of any sort, that is to render it more early, the portions of the crop which ripen first should be cut and kept for seed, but should be subjected to careful cleaning. In saving seed do not on any account select for crops that of a mixed character. It is very important that seed grain be pure. Much valuable work can be done towards accomplishing this end while the grain is yet growing. At intervals before harvest farmers should go carefully through their field, removing all foreign sorts. This course must be followed to maintain the purity of any sort. Especially would we direct the attention of our readers to their two-rowed barley. Now is the time to remove the six-rowed which is growing among it. This must be done in the case of seed grain, and should be also done in the case of that intended for shipment to European markets.

The Walmsley Mill.

There is no machinery on the farm that has served a better purpose than the wind-mill pump. The binder and mower fulfil their part for a short season, and are then idle for the rest of the year, but the wind-mill is required each day in the year. The work of pumping by hand is not only irksome, but by this plan of watering stock there is a lack of quantity and regularity. Many improvements in this class of machinery have been effected in late years. Among those that are giving satisfaction to stockmen are the wind engine built by J. F. Walmsley, Woodstock, Ontario, which is of the Halladay pattern, the chief characteristic being that it is a self-regulator, and in gales or storms works quietly without danger to itself, while, when the sails are furled, it presents the least possible surface to the wind. Judging by the testimonials received from men with whom we are acquainted, this machine has given perfect satisfaction. All users speak in the highest terms of it. The Halladay mill as built by Mr. Walmsley is of different sizes, so that those who wish a mill of sufficient capacity to drive a grind or cutting box can obtain it, while those who only need pumping done can choose a smaller or less expensive machine. The Halladay is very powerful and easily driven. By means of a regulator the operator can gauge it so as to command any speed or power required. If the wind increases, less surface and a more acute angle is presented, which gives less power. Again, as the wind decreases, and a flatter surface is presented, the power increases correspondingly. Thus the machine has a perfectly balanced governor that adjusts itself to the currents of wind, be they heavy or light. Self-oiling boxes are another desirable feature, so that when the mill is once regulated it is self-governing, self-oiling, and cannot freeze up in the worst weather. The prices asked for these mills complete are very reasonable.

Seventh Volume of the Dominion Shorthorn Record.

The seventh volume of the Dominion Shorthorn Herd Book has reached our office, for which we are indebted to Mr. Henry Wade. Three thousand pedigrees of bulls and 1,956 of cows are recorded in this volume. Bulls number from 11,101 to 14,100 inclusive; cows from 16,401 to 18,356,—in all 4,956 pedigrees. The book is in advance of the former volumes, in that the pedigrees are given complete in this book. When abbreviated, the remainder of the crosses and foundation are referred to another page. The history of Shorthorns (imported) is continued. Rules of office, rules of entry, lists of members, breeders, owners, directors and officers, and indices of the bulls and cows imported and bred in Canada, are all given.

What Constitutes Judgment in the Show Ring.

The show season again approaches us, and it would be well if he who has accepted, or is about accepting a position as judge, would consider that through acting in this capacity a man is looked upon as the schoolmaster of the hour. In the majority of cases the fair boards have this season appointed the judges on stock from the list of names suggested by the different breeders' associations, therefore the onus will now rest on the breeders themselves as to the capability or incapacity of those acting in the ring. It is to be hoped that the gentlemen who have thus had the work placed in their hands, will endeavor to do justice in the departments they have been selected to pass their opinions upon. Not a few men go into the show ring without any defined idea of what they intend to do. Then, should they prove inconsistent in placing the awards, which too often is the case, they are unable to speak in their own defence, or yet in favor of the animals they may have wrongly placed. What pleases the eye appears all right to many an onlooker, but if men are really to do justice to the animals brought before them, they should make a study of the characteristics which they intend to place most value on, and base their awards accordingly. There can be little doubt that the wants of the general public are now more studied by the expert judges of the day. Take, for instance, beef cattle. Great attention is now rightly paid to the quality and thickness of flesh on the loins, back, crops, and rumps. A really good judge does not wish to give a prize to an animal which shows excess of beef in the boiling and inferior parts of the carcass. Breeders should also be alive to their interests in keeping the wants of consumers in view. This, together with the criticisms of the agricultural press, will do much to bring about a practical state of affairs. But the useful qualities might still be pushed more to the front. At any ordinary exhibit of the beef breeds, why should not the udder of a cow or heifer receive more attention at the hands of the judges? We have not yet arrived at the stage of calf rearing when milk is superfluous. The milk producing powers of a cow of any breed add very largely to her value. Beef, all beef, nothing but beef, sounds all very well in the ring, yet the calf nursed by a heavy milking dam will hold its own against all that scientific feeding can do.

Again, in the milking breeds pure and simple, be the cow Ayrshire, Jersey or Holstein, how often are the prizes awarded because of other qualities. It is common enough to see just a fairly good milker win over an exceptionally good one, the structural points being only slightly in favor of the former, with probably the addition of high show condition. Bodily structural points should not be neglected, but milk production should be the chief consideration in a competition of this kind.

Scotchmen are considered the most practical people in the world, yet the Clydesdale breeders of that country have paid such attention to legs and feet, or rather quality of bone and pasterns, that they have often lost sight of some of the most essential points in draught horses—size and weight—qualities which are particularly required in the geldings purchased for heavy work in the streets of American and British cities.

The breeders of the Shire horse have all along paid due regard to the body of the horse, though they have been accused by Scotchmen of passing as correct round-boned legs, upright pasterns and indifferently shaped feet.

The weight-giving width and depth of the Shire horse has already made him many friends among the breeders of the West, who claim that he transmits this quality more certainly than any other breed.

Practical utility should be the first aim of every breeder of improved stock, always paying due regard to appearance. Unless a judge enters the ring with some defined idea of the requirements of the times, he will surely blunder when placing the awards.

Reports

We respect reports of any in their fall vations they L sious to recei commercial fe more kinds of the comparati different secti no pains to o lish full and hearty co-ope Write us so later than th how the differ

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On page ADVOCATE w Sylvestris. I and sowed a we have rec farmers, aski planting, cu answered as f of London, K for the seed:

DEAR SIR, mailed you to registered, the improved cult uan-grown L seed, as a con to fill to that from Canada July, which late to sow, p been plowed weeks previo for receiving Canadian fa this Wagner's so much as re such land ge Farmers who autumn next, October, or winter wheat to be sown w the sooner th deeper by pro upper layer o appreciates a more liberal given to such everywhere; preparatory

The farmer enough imp and timely Wagner's L all the diffic complete suc fective resu or three inst cause than r developed s wonder whe grower ever vine or a fine piece of vine tree, in hard if he gets m country Ont do it, and I hood, on the

I send yo from the H State Agric igan State written on "The ten seed procur though slow come up. T well and are ly had four all affected their condu the severe c sandy land lbs. of Wag please state

Writing Hon. O. C "I was al culture a n growth of and am au quantity of ances of la results nex tered here soon as the have had a they have

This is April 25th

Reports on Fall Wheat Desired.

We respectfully request our readers to send us reports of any experiments they have conducted in their fall wheat fields, or any valuable observations they have made. We are especially desirous to receive reports from any who have used commercial fertilizers, or who are growing two or more kinds of wheat. We are desirous to learn the comparative yields of the various sorts in the different sections of the province, and will spare no pains to obtain the desired data and to publish full and valuable reports. We invite the hearty co-operation of the farming community. Write us so that your letters will reach us not later than the 18th of July, and let us know how the different sorts have done with you.

Lathyrus Sylvestris.

On page 174 of the May number of the ADVOCATE were given particulars of the Lathyrus Sylvestris. In order to test the plant, we bought and sowed a quantity of the seed. Since then we have received a number of letters from farmers, asking for fuller particulars regarding planting, culture, etc. These questions are answered as follows by Mr. Francis E. Clotten, of London, England, who is the general agent for the seed:—

DEAR SIRS.—Your favor of recent date to hand. I mailed you to-day in six strong, linen paper bags, registered, three pounds net of Professor Wagner's improved cultivated, constant, best strain Hungarian-grown Lathyrus Sylvestris, a forest flat pea seed, as a consignment, and in order to enable you to fill to that extent any seed orders you may get from Canadian farmers during June and early July, which is, in your country, by no means too late to sow, provided the land to be sown then has been plowed up and harrowed some four to six weeks previously, and is fairly aerated and mellow for receiving the seed.

Canadian farmers should take particular note that this Wagner's Lathyrus detests and rejects nothing so much as raw, fresh plowed up sandy soil, and on such land germination is almost always very bad. Farmers who wish to go in for Lathyrus sowing in autumn next, from last week of August till early October, or let me say, at the same time when winter wheats are sown there, should get any land to be sown with this Lathyrus plowed up at once—the sooner the better—at least twelve inches deep; deeper by preference, so to stir and unloose the upper layer of the subsoil. This Wagner's Lathyrus appreciates a seed bed of fine tilth, and answers the more liberally the more preparatory care has been given to such seed bed. This is a uniform experience everywhere; moreover, it pays well to bestow such preparatory care to the land to be sown.

The farmers there cannot be sufficiently and often enough impressed with the fact that thorough and timely preparation of the soil in which this Wagner's Lathyrus is to grow is seven-eighths of all the difficulties and dangers brushed aside, and complete success assured. Many failures and defective results have been due here, and also in two or three instances in North America, to no other cause than raw, hard, not sufficiently aerated and developed soil in which the seed was sown. I wonder whether an Ontario vine grower or fruit grower ever expected to get a good crop from a vine or a fine strain fruit tree by simply sticking a piece of vine or a seed, or rather a cutting of a fruit tree, in hard land on a poor sandy soil? If so, and if he gets any results, a happy man is he,—a glorious country Ontario, and to be envied. I would never do it, and I have been a vine grower from childhood, on the Rhine, in South Africa and here.

I send you copies of letters which I received from the Hon. O. Clute, President of Michigan State Agricultural College and Director of Michigan State Agricultural Experiment Station, written on Oct. 12th, 1891, as follows:—

"The ten pounds of Wagner's Lathyrus Sylvestris seed procured of you last Spring germinated well, though slowly, as it took them four or five weeks to come up. The young plants have however grown well and are now in fine condition. We have recently had four severe frosts, but the plants are not at all affected. I shall watch with greatest interest their conduct during the next twelve months under the severe conditions they will be exposed to on the sandy land here. I would like to secure 50 to 100 lbs. of Wagner's Lathyrus seed, for which quantity please state lowest rate."

Writing again on February 25th, 1892, the Hon. O. Clute says:—

"I was able to make to our State Board of Agriculture a most encouraging report concerning the growth of Wagner's Lathyrus Sylvestris last year, and am authorized to procure from you a further quantity of seed as offered by you. Present appearances of last year's Lathyrus plants indicate good results next season. The thermometer has registered here 23 degrees below zero this winter, and as soon as the frost is out of the ground and the plants have had a chance to start, I shall report to you how they have wintered."

This is what the Hon. O. Clute writes on April 25th, 1892:—

"The Wagner's Lathyrus plants have wintered well. Every plant is starting vigorously, and that means much, considering the thermometer had been several times as low as 23 degrees below zero last winter. I have just commenced digging out and transplanting a number. Truly, these plants have the most wonderful development of roots and nodules I ever saw. The roots seem to go down—to China."

The following was received by me from Messrs. W. Drummond & Sons, Stirling, N. B., the well-known seedsmen:—

"The Wagner's Improved Lathyrus Sylvestris plants we had from you in Autumn, 1889, gave a much more abundant crop the second year than they did the first. We exhibited a bunch of it at the Highland Society Show this year, alongside a bunch of ordinary tares reaped from a corresponding area, the weight of the tares being much inferior to that of the Lathyrus crop. We made no experiments in feeding stock."

The following report was published by the Rev. J. B. McClellan, M. A., Principal Royal Agricultural College, Cirencester, England, in the Agricultural Students' Gazette:—

"In the summer of last year (1890) an old student (T. Huband, Esq., Cheltenham), presented us with a small packet of the much belauded Wagner's Lathyrus Sylvestris, procured from Mr. F. E. Clotten, London, and we set aside one of the large botanic garden plots for an experiment on its growth and suitability to our soil and climate. The seeds were divided into two portions, one of which was sown in a hot-bed, and the resulting seedlings were transferred to pots, finally hardened off, and planted out in one portion of the bed. The remaining seeds were sown direct in rows in the bed, and came up very strong and vigorous, forming a close, compact sward."

"When the bedded plants were put out side by side with the free sown, the former were of much greater length, but looked naturally more feeble in growth, and as a matter of fact they never acquired such a healthy strong appearance as the rest. Some died off, first presenting a yellow, sickly lower leaf and stem. Examination of the roots showed no trace of eel-worm or other cause sufficient to explain this dying off. A little nitrate of soda was given, and the diminution was stayed after its application, but up to the present that portion of the bed is marked by less successful than the rest. In September no flowers had been formed; we had sown too late to expect it, so it was decided to allow the plant to remain uncut for that year. The exceptionally hard winter did not appear to damage the plant in any way, and by the end of May there was a strong healthy growth of a very rich sap, the green color on the free sown part of the bed. The bedded out plants were good in color, but loose and straggling, owing to blanks by death. On the 22nd June we cut and weighed the green crop from the free-sown bed. It gave on the most careful estimate eleven and a-half tons per acre. From a small plot it is unsafe to give figures calculated to acres, as the plant has a habit of spreading freely over the edge of the bed; but, on the other hand, if the rows were numerous and no free edge to spread over, the plant would raise itself higher by means of the support afforded by its neighbors, and the result would probably not be found so far out if compared with larger plots. The green crop was carefully sun dried without exposure to any rain, and lost eighty-four per cent. of its green weight. In cutting, the gardener mowed it off rather close, but in ten days, thanks to abundant rain, a very fine after-math was already showing, of rich deep color."

The hay is being subjected to analysis in the Chemical Laboratory.

In the December number, 1891, of the Agricultural Students' Gazette, Professor Edward Kinch, F. I. C., F. C. S., etc., publishes the results of analysis as follows:—

WAGNER'S LATHYRUS SYLVESTRIS OR WOOD PEA.

Analysis of the hay of Lathyrus Sylvestris (Wagner's) grown in the Botanic Garden, and made into hay July, 1891:—

Table with 2 columns: Component and Percentage. Components include Water, Ash, Fat, Fibre, Nitrogenous matter, Soluble carbohydrates, True albuminoids, and Total nitrogenous matter.

*True albuminoids. 18.25 " Total nitrogenous matter in dry matter. 28.67 " True albuminoids in dry matter. 21.14 "

Of total nitrogen 26.2 per cent. in non-albuminoid. This hay is remarkably rich in nitrogenous matter; in composition it agrees with that grown in other places, though when grown in rich soil it is said to be even richer in nitrogenous matter.

As above stated, Mr. Clotten has sent a quantity of seed to us, which he instructs us to sell at \$10 per pound, which seems to us a high price; but from experience we know that new and improved plants cannot be put on the market as cheaply as the originators desire. Prof. Wagner is said to have spent thirty years in perfecting this plant.

The Farmers' Grist Mill.

In our February number "Thorah Farmer" made enquiries concerning grist mills owned and operated or the benefit of farmers by joint stock companies. At that time we were not aware of any such existing corporations, but immediately set about making enquiries. By the kindness of Mr. J. Taylor, of Nottawa, we succeeded in learning the address of several parties, who willingly gave us much valuable information. We find there are many mills in Canada owned and operated by joint stock companies which were founded by farmers, and all the stock owned by agriculturists. We have made many enquiries regarding these companies, and find that in every instance that came to our notice the results are satisfactory. The following articles have been received from farmers who have had experience with mills owned and operated by farmers' companies. To these gentlemen we extend our sincere thanks, and we are quite sure many thousands of our readers will feel very grateful for the information so kindly sent. To Mr. Taylor and Mr. McKee we are especially indebted. We wish there were thousands of such men throughout Canada, and that each was as ready to come to the help of his brethren. We invite farmers everywhere to write us full particulars of their successes and failures. Your experience may be useful to others, or perhaps others of our readers will come to your aid, as these gentlemen have come to the aid of "Thorah Farmer":—

To the Editor of the FARMER'S ADVOCATE:

DEAR SIR,—In reply to your letter I will try and give a condensed outline of the history of our company. The farmers of this section, like "Thorah Farmer," were dissatisfied with the manner in which they were used by the millers, and in April, 1890, a public meeting was held to discuss the propriety of forming a joint stock company and building a mill.

At that meeting it was resolved that an effort be put forth to form a company, to be known and incorporated as the Nottawasaga Farmers' Milling Company, Limited, with a capital stock of \$10,000, to be divided into 400 shares of \$25 each. A committee was appointed to carry out this object, and about the end of June this committee succeeded in getting sufficient subscribers to warrant them in organizing a company. Consequently, a general meeting of stockholders was held, when three provisional directors were elected, who were instructed to apply for incorporation under "The Ontario Joint Stock Companies' Letters Patent Act." Meantime the directors purchased a site and let contract for building a mill, and also for putting in machinery. In September we received our charter of incorporation, and on the first of January had our mill ready for operation. The mill is run by steam; its capacity is 50 to 60 barrels per day. We have also a "chop stone," that grinds from 10 to 14 bags per hour. The plant, when completed, including cost of incorporating and mill site, cost about \$9,000; and I might say here, for the information of "Thorah Farmer," that the stockholders are principally farmers, and the affairs of the company are managed by a Board of Directors, who are exclusively farmers. The company have been fairly successful in their operations. We do custom work on the exchange plan. Our exchange tariff is:—

- For wheat testing 62 lbs. or over, we give 40 lbs. flour, 10 lbs. bran, and 3 lbs. shorts.
For wheat testing 60 and 61 lbs., we give 39 lbs. flour, 10 lbs. bran, and 3 lbs. shorts.
For wheat testing 59 lbs., we give 37 lbs. flour, 11 lbs. bran, and 3 lbs. shorts.
For wheat testing 58 lbs., we give 35 lbs. flour, 12 lbs. bran, and 3 lbs. shorts.
For wheat testing 57 lbs., we give 31 lbs. flour, 13 lbs. bran, and 3 lbs. shorts.
We charge 7c. per bag for chopping, or take 8 lbs. for toll.

We ground in grist during the year 25,000 bushels of wheat and chopped 6,430 bags of grain. The earnings of the mill, over and above expenses, amounted to about \$650. But we give in exchange three pounds of flour more to each bushel of wheat than the millers in this section gave before we started operations. You can readily see that this during the year would amount to a saving of about 32 barrels flour. The average price of flour during the year was about \$1.50, so that the amount of saving to the patrons of the mill would amount to \$1,719. This is the financial results of the year's operations. To us, at least, they are very gratifying, but we leave it to your readers to form their own conclusions. As to the manner in which we do business, I might say that we give a receipt to each

customer for the quantity of grain received and what it tests, and the quantity of flour, bran and shorts given in exchange. Each receipt has a stub, and is filled out the same as the receipt, so that reference can be made to this at any time. We take stock at the first of each month, so that we always have a fair idea of the business we are doing. Although we have done fairly well during the past year, we think that we can still do better, as we find less difficulty in disposing of our surplus stock of flour, etc. We have a set of by-laws for the government of our company, and at your request I send you a copy:—

BY-LAWS.

Whereas the Directors of the Nottawasaga Farmers' Milling Company, Limited, deem it expedient that certain By-laws for regulating the affairs of the Company should be made. Now, therefore, be it enacted and it is hereby enacted:—

1st. That the annual meeting of the Shareholders shall be held in the village of Duntroon on the second Monday in January, at 1 o'clock p.m., in each year, to receive the report of the Directors for the past year, to elect Directors for the ensuing year, and for all general purposes relating to the management of the Company's affairs.

2nd. That a general meeting of the Shareholders may be called at any time by the Directors whenever they may deem it necessary or advisable, for any purpose not contrary to law, or the Letters Patent of the Company, or the Statute. And it is incumbent on the Directors to call a special meeting of the Shareholders whenever required so to do by giving timely notice.

3rd. That meetings of Directors shall be held as often as the business of the Company may require, and shall be called by the President.

4th. That at general meetings of the Company every Shareholder shall be entitled to as many votes as he owns shares in the Company.

5th. That no Shareholder be allowed to own more than one share in the Company.

6th. That no Shareholder be allowed to transfer his share, unless by bequest, without consent of the Board, and such transfer be recorded in a book provided for the purpose.

7th. That questions at meetings shall be decided by a majority of Shareholders present, and in case the number of votes are equal the President or Chairman shall have a deciding or casting vote.

8th. That the affairs of the Company shall be managed by a Board of Nine Directors, five of whom shall form a quorum.

9th. That the President and Vice-President shall be chosen by the Directors from amongst themselves at the first Board meeting after the annual meeting.

10th. That the President shall, if present, preside at all meetings of the Company; he shall call meetings of the Board of Directors. In his absence the Vice-President shall exercise the rights and powers of the President. A Director may at any time summon a meeting of directors.

11th. That questions arising at any meeting of Directors shall be decided by a majority of votes; in case of an equality of votes the chairman shall have a casting vote.

12th. That the Secretary shall keep a record of the proceedings at all meetings of the Board and of the Shareholders of the Company, and shall be the custodian of the seal of the Company, and of all books, papers, records, etc., belonging to the Company, which he shall deliver, when authorized so to do by a resolution of the Board, to such person or persons as shall be named in the resolution.

13th. That any Shareholder, not in arrears for payments for calls upon his stock, may be elected a Director.

14th. That the Directors shall hold office for one year, and until their successors shall be elected.

15th. That in case of death of a Director, or his being unable to act as such, or his ceasing to be a Shareholder, the vacancy thereby created may be filled for the unexpired portion of the term by the Board from among the qualified Shareholders of the Company.

16th. That the Company shall have a corporate seal of such design as the Board may determine, which seal shall, whenever used, be authenticated by the signature of the President and Secretary.

17th. That the Board shall, from time to time, fix the salary or wages to be paid to officers of the Company.

18th. That the Board shall have power to collect through the courts any unpaid shares duly subscribed for on the Stock Lists, and to forfeit any instalment paid on shares upon which any call has remained unpaid for one year after it shall be due and payable, and such forfeit stock shall thereupon become the property of the Company.

19th. That certificates shall be issued when shares are fully paid up, and such certificates be authenticated by the signature of the President and Secretary and sealed with the Company's seal.

20th. That the Directors shall cause true accounts to be kept of the stock-in-trade of the Company, of the sums of money received and expended by the Company, and of the matter in respect of which such receipts and expenditure takes place, and of the credits and liabilities of the company.

21st. That once at least in every year the Directors shall lay before the Company in general meeting a statement of the income and expenditure for the past year.

22nd. That two auditors shall be appointed annually by the Shareholders at the annual general meeting, whose duty it shall be to examine all instalment books, vouchers and accounts of the Company, and all documents having reference to the business thereof, and to prepare a balance sheet and abstract of the affairs of the Company, and to submit the

same to the Board as soon after the close of the financial year as possible, together with such suggestions or recommendations as they may think fit.

These By-Laws were submitted to the stockholders of the Company, clause by clause, and approved of at their first general meeting after incorporation, and I think that both the principle and the plan on which we work can be readily seen.

JOHN MCKEE,
President N. F. M. C. (Lim.)

SIR.—I saw in a late number of the FARMER'S ADVOCATE an enquiry from "Thorah Farmer," who wished information regarding farmers' mills. We have one in the Township of Nottawasaga. In the year 1890 a few farmers thought it better to own a mill of their own. To accomplish the desired end, public meetings were held in each division of the Township. The promoters desired to sell 400 shares at \$25 per share. Though the desired number of shares were not at first sold, the undertaking was proceeded with, a general meeting was held, directors elected, a charter procured, and a steam roller mill was erected and equipped with a capacity of 40 barrels per day. The machinery cost \$4,000, and the building \$3,000. The engine is a very strong one, so that chopping can be done at any time. Our mill has been running seventeen months. The customers are all well satisfied. The shareholders can grind all their wheat if they choose, and keep the bran and shorts for feed.

The first twelve months \$400 was cleared over all expenses. Next year the directors expect to do better, as they have gained much valuable experience. Some extra machinery was also put in the mill, which was paid for out of the first year's profit.

There is a water-power mill in the Township of Osprey, which was formerly a "stone mill;" farmers bought it and put in the roller process. It is also run by a joint stock company. The shares are \$25 each, payable in five annual payments of \$5 each. This company expect to clear \$1,500 per year. The cost of operating a water-power mill is about \$1,000 less per year than a steam mill. A great deal depends on the price of fuel.

J. TAYLOR, Nottawa, Ont.

DEAR SIR.—In answer to your enquiries regarding farmers' mills, there is one at each of the following places in Ontario:—Stevensville, Bridgen, Hagersville, Leamington and Tupperville. They are all owned by joint stock companies composed of farmers. I will be glad to give full details to any one who may apply by letter or otherwise. The mill at Tupperville is 36x40, which contains the boiler and engine rooms and the office. The whole is well fitted up with suitable machinery, supplied by Ennis & Son, Toronto, Ont., who furnish to customers, free of charge, plans for mill buildings. The machinery for this mill, set up ready for use, cost \$5,949.50; building, fences and lot, \$3,300.00; total, \$9,249.50. The shares were sold at \$10.00 each, no person being allowed to buy more than twenty shares.

For each bushel of wheat weighing 60 lbs., 30 lbs of flour, 10 lbs. of bran and 3 lbs. of shorts is allowed, or if the customer wishes to pay cash ten cents per bushel is charged, three pounds being deducted from each bushel for screenage.

Seven cents per bushel is charged for chopping. A corn sheller, with a capacity of sixty bushels per hour, forms part of the machinery. The founder and manager of this mill is Benjamin Heshsey, Tupperville, Ont.

My advice to farmers is, put up your own mills and operate them. At Tupperville the mill is well patronized, being run to its full capacity, which is fifty barrels per day.

The building of a large mill at Thamesville is under consideration now. If built it is to cost from \$15,000 to \$20,000. It is said the C.P.R. has offered to subscribe \$1,000 toward the venture. Several thousand dollars has already been subscribed. I believe it will pay farmers to have their wheat ground at farmers' mills. By so doing they will save 1.10 lbs. of bran and 350 lbs of shorts on each hundred bushels ground. The flour can be sold for more than the wheat. It is well known that nearly all millers make three grades of flour, and it is claimed that many of the millers who belong to the Miller's Association receive from farmers No. 1 wheat and give in return No. 2 or 3 flour, and sell the No. 1 flour made from the farmers' mill for 50 to 75 cents per hundredweight more than they ask for the No. 2 or 3 flour supplied the farmers. If this is a fact, it is as bad as highway robbery.

ALONZO WILCOX,
Thamesville, Ont.

Editor FARMER'S ADVOCATE.—Your letter of enquiry about farmers' mills to hand. Ours is a farmers' mill, managed by farmers, and built expressly to do farmers' work and no other. Since starting, the employees have been kept on the jump. We have been running all winter, as we are at present, day and night, which is sufficient recommendation as to quantity and quality of the flour that our customers receive. The reason for building this mill was that farmers in and round this locality felt that they were not getting justice at the hands of the Millers' Combine, but since starting this mill farmers can go to any of those other mills and get just as good if not a better return from them as we at their own mill can give them, which means from 10 to 15 lbs. more per bushel than they formerly received. Would you believe it, that the majority of our farmers do not seem to understand the cause of the change? Now that they are getting ample and full justice, they would like to get a little more.

The capacity of our mill is 50 barrels per day. It has four sets of double rollers, 6x20, and all necessary machinery, also one run of 4-foot stones for chopping, of which we do a large amount at 6 cents per 100 pounds. We exchange flour with our customers at the following rates, according to the weight of the wheat:—

For wheat testing 64 lbs., we give 40 lbs. flour, 10 lbs. bran, 3 lbs. shorts.
For wheat testing 62 lbs., we give 39 lbs. flour, 10 lbs. bran, 3 lbs. shorts.
For wheat testing 60 lbs., we give 38 lbs. flour, 10 lbs. bran, 2 lbs. shorts.
For wheat testing 58 lbs., we give 36 lbs. flour, 11 lbs. bran, 4 lbs. shorts.
For wheat testing 57 lbs., we give 34 lbs. flour, 13 lbs. bran, 4 lbs. shorts.
For wheat testing 56 lbs., we give 32 lbs. flour, 13 lbs. bran, 6 lbs. shorts.

In all cases we give back 51 lbs. cut of each 60 lbs. Any steam mill doing this will do all that can be done and make a fair profit. We paid about \$6,000 for this mill, and have about \$500 yet to pay, which does not at all trouble us.

We are an incorporated body, chartered. The business is managed by a manager under the control of a board of directors. Our officers are a president, secretary and treasurer. Our capital stock is \$10,000, of which \$5,889 is subscribed. The plan we adopted to meet our obligations was by dividing the capital stock into one thousand shares of \$10 each. Each farmer could buy one or more shares. We have shareholders holding one share, others one hundred shares. Each shareholder is responsible only for as much as he subscribes. All interested in this mill have gained considerable information, which had we known at the start, would have put many dollars in our pockets; but if "Thorah Farmer" or other of your readers wish any further information on this subject, they may write to me and I will give them all in my possession.
Manager Hemlock City Milling Co.,
Lochaleh, Ont.

DEAR SIR.—There is a farmers' grist mill in the township of Ashfield, county of Huron. It was built by the farmers of the section, and would not have been built but for the abuse they received from the surrounding millers. It cost \$5,680, exclusive of the steam-power; it was built by a Joint Stock Company, Limited. Three hundred shareholders (\$10.00 per share) built the mill and paid for it in two years. Two millers are kept all paid for in two years. The only fault it has is that it is too small—40 barrels per day being its capacity; it should be 75. One straight grade of flour is made—no low grade. Chopping is done at 5 cents per cwt. Outsiders and shareholders pay the same rates. At the time this mill was talked of the millers of the county hooted it down, and said it could not stand, as the farmers would quarrel among themselves. It has been a success, and has brought the millers' ring to its knees. The farmers have stuck together for once, and are likely to. I venture to say, there is not a farmer sorry that he invested his money in the mill. The mill is situated eight miles from Lucknow, G. T. R., seven miles from Ripley, G. W. R., sixteen miles from Kincardine, twenty miles from Goderich. The machinery, which is first-class in every respect, was put in by Mr. Gray of Toronto. The flour produced is as good as any made in Canada.

JOHN MCINTYRE, Huron, Ont.

Healthy Homes.

BY W. A. HALE, SHERBROOKE, QUE.

(Continued from Page 126.)

In my last letter I concluded with a description of a four-inch galvanized iron pipe to lead from the ceiling of the cellar up through the house, and to enter the kitchen chimney near the ceiling of the first or second story, as the case may be. The importance of the healthy ventilation thus insured for the cellar cannot be over-estimated, preventing, as it does, not only the possible bad odors from ascending into the house, but also carrying off the damp air, which is more or less present in all cellars, and which is often the direct cause of so much trouble, particularly in throat and lungs. If a dry-earth closet is to be used, it can be most effectually ventilated from beneath the seat by a two-inch tin pipe connecting with the larger one, and by this means not only will any possibility of escaping odors be avoided, but a certain amount of constant ventilation be secured for the upstairs rooms as well. There are many patterns of good earth closets advertised (ready-made) which answer well, their weak points being, perhaps, insufficient storage room for dry earth, and the pails with which they are usually supplied being made of unsuitable material (tin), though light and clean, soon rust through. Zinc and galvanized iron corrode, making them rough inside and difficult to keep clean. Pails made of the so-called granite ware, though a little expensive at first, are in the long run the most satisfactory. When the closet is made at home, or made to order, it can be so constructed as to hold sufficient absorbents for two weeks or a month, and the best materials for

this purpose seem to be sifted coal ashes, dried swamp muck, or dried pulverized clay. Soils containing sand are of less value as absorbents in proportion to the amount of sand which is present in them. The two most dangerous conveniences about our homes are the privy vault and kitchen drain, not only as regards the possibility of poisoning the water we drink, but of contaminating the air we breathe as well. Where it is felt that a water closet cannot be afforded or a dry-earth closet attended to, and that a privy vault is necessary, it should be entirely cut off from the chance of any of its odors finding their way into the cellar, by having it built outside the foundation wall, and the wall so protected by cement mortar that rats cannot in any way make their burrows through from the cellar to the vault. In this vault should be a tight, movable box, well saturated when new with crude petroleum or coated inside and out with pitch, and large enough to last an ordinary family for three months. When full it can be drawn out with a horse, and by upsetting it on the manure pile the contents are easily and usefully disposed of. In this box, except in severe freezing weather in winter, dry earth should every day be thrown down, thereby carrying out the dry-earth closet system in a different way, and if properly attended to is very satisfactory and prevents any chance of soakage from this source into the spring or well. In constructing the kitchen sink and slop sink drain, glazed earthenware pipes are no doubt the most suitable, all things considered, and where no water closet is in use those of four-inch, inside diameter, are as large as need be. The outlet to this drain should, if possible, be into some running stream of sufficient volume at all times of the year, to prevent any large accumulation of sewage. Cesspools are expensive to build, difficult to keep properly clean, and apt not only to contaminate any springs that may be near them, but the air of the house as well. Failing a running stream, rather than resort to a cesspool, I should prefer bringing the mouth of the drain out upon the surface at a distance of 300 feet or more from the house, and there providing an open, shallow pit, into which from time to time earth and other absorbents should be placed, and the contents frequently removed and used as an enricher to the compost heap. When glazed earthenware pipes are difficult to procure, I should recommend the following, which I have had in constant use, without repairs, for over twenty years: Two-inch hemlock planks, twelve feet long, cut into three widths for each length. One plank eight inches wide is nailed to one six inches wide in such a way as to form an ordinary V shaped trough to be laid corner downwards in the trench, and covered with a ten-inch plank of the same material. If the soil is dry and sandy it would be best, if possible, to bed and cover this drain with clay, thereby preventing decay and doubling the period of its usefulness. The object in laying this form of drain is that no matter how small a stream may be running through it it is never so scattered as to leave any sediment or other accumulation behind it, and the dimensions given would provide a space inside of four inches in depth, which is really more than is ever likely to be required. A well painted wooden slop sink, under cover, and as convenient to the kitchen door as possible, should be so constructed as to empty through a two-inch lead pipe with a straight-down flow and a bend underground sufficient to make a water trap before entering the top of the drain. If at any time sand or sediment should here collect, by running down a pliable birch rod, and at the same time flushing the sink, it will all be carried away. The kitchen sink can be arranged in the same manner, and the convenience attending these two arrangements will far more than compensate for the time and trouble of putting them in. If at any time grease should accumulate in the waste lead pipes (it does not adhere to the wooden drain in the same way), by pouring down hot lye it will all dissolve and disappear. Into this drain also the waste water from the horse trough should run, and if from this trough the waste pipe runs straight into the top of the drain, it will provide sufficient ventilation for the drain, and so prevent any possibility of odors finding their way from it into the house. The best possible outlet to this house drain will be into the main land drain, if

such there be. In my own case there was at one time a small stream, always dry in warm weather when it was most needed, and causing many a swampy and waste piece of ground along its course. Taking this as the main outflow for all the system of land drains, I sank it from three to four feet deep in a hemlock plank box drain eight inches square inside; this main drain I carried below the bed of the old water course as far as it was necessary, to receive all the land drains, and where this large main drain ended, and in a ravine a small dry dam was built in order to catch any surface water which in heavy storms might now make head enough to cause washouts. A few feet above this dam two four-inch glazed clay pipes three feet long were set into the cover of the main drain, and extending six inches above the ground, but a foot below the top of the dam. When more rain falls than the small underdrains are able to take care of this dam fills rapidly, till the water rises to the top of the two drain pipes, down which it pours, and helps most effectually to flush the drain and carry off any sediment that may have collected. In conclusion, I would say to those who think that this matter of detail in looking after the sanitary conditions of their dwellings is beneath their notice, that a careful consideration of the following taken from one of the works of probably the best engineer of sanitary works of the present time, may convince them of the responsibility for the lives of their families which is laid upon them. Speaking of the kitchen drain, he says:—"When we consider its immediate proximity to the windows of the room in which the family of the average farmer pass most of their time, the kitchen drain probably heads the list of all the agents by which our ingenious people violate the universal sanitary law; and it doubtless carries more victims to the grave than do all other sources of defilement combined, for with an enormous majority of our population this one pipe still represents the whole drainage of the house."

Freeman's Fertilizers.

Mr. W. A. Freeman, Hamilton, Ont., four years ago became interested in the manufacture of bone fertilizers. His attention was drawn to this industry by the large export business which has been carried on by several firms in Canada and the United States, which are now, and have been for many years, buying up and shipping to the United States all the bones and blood and animal matter they could induce Canadians to sell. So strong is the American demand for these commodities that money invested in bones or animal matter in Ontario is as safe and more remunerative than if invested in the best commercial stocks obtainable. Mr. Freeman reasoned that if these substances were profitable when used by American farmers, they were likewise useful and profitable to Canadians. He, therefore, determined to make a study of the subject. The more he investigated the more pronounced was his faith. Eventually he erected in Hamilton a splendid building which he equipped with the best machinery obtainable. The cost of the building and machinery when ready for work was \$30,000. The fertilizers manufactured by him are all of the higher grade, and are made entirely from the blood, bones and flesh of animals, in the conversion of which the greatest care is exercised so that there be no loss of the most valuable, because most soluble, constituents, but all is so treated that the largest possible amount of fertilizing material becomes at once available for plant food.

A few days ago one of our staff went carefully over Mr. Freeman's factory, and found it a most complete and well managed institution. Mr. Freeman is a man of very good business ability, and strictly honorable. Heretofore in

Canada the fertilizer business has been injured by the careless business habits, or the downright dishonesty of the salesmen. Mr. Freeman is nothing of the fakir, nor is he over enthusiastic, but a careful, honorable man, and is entitled to the respect and confidence of the public. Even his letter files, his desks, the fittings of his office and factory proclaim on every hand progressiveness, exactness, and a determination to be content with nothing but the best results. The different brands manufactured here are Sure Growth (for fall wheat and grain), Bone and Potash (for fruits), Pure Bone Meal, Dissolved Bone, Farmer's Pride, Flower, Lawn and Park Dressing; also Granulated Bone, Ground Oyster Shells and Animal Meal for poultry; and for cattle and swine pure, clean Bone Meal, finely ground. In writing of his fertilizers, Mr. Freeman says:—"The majority of users of commercial fertilizers in Canada have but little knowledge of the state of solubility the materials they purchase are in when placed in their hands by some manufacturers, also the source from which the plant food is derived, viz., ammonia, phosphoric acid and potash.

Some would-be fertilizer manufacturers tell customers they use no acid or minerals; others say nothing about the above materials not being used, but in both instances will endeavor to show by analysis that they are selling a large percentage of ingredients that go to form plant food, yet omit very valuable and important information to the user:

- 1st. That no part of the phosphoric acid in their goods is soluble in water.
- 2nd. That they are not thoroughly and evenly mixed.
- 3rd. That they are not finely ground, which is discerned when they are applied.

The very important points to be observed in choosing a fertilizer are:

- 1st. The source from which the plant food is derived. Bone, blood and potash, having stood the test for years, are the very best materials that can be employed.
- 2nd. The solubility of the phosphoric acid. The phosphoric acid in fertilizers and stable manures must be soluble in water before the plant can derive any benefit from it, and can only become so by being dissolved before leaving the factory, or by decomposing the ground, which will need from one to six months (depending on fineness), and this is too late to be of benefit to the growing crops.
- 3rd. The fineness to which they are reduced, and to thoroughness of mixture, which can only be done with special and expensive machinery. So-called fertilizers, such as are offered by some makers, stand in the same relation to a complete fertilizer as wheat does to a loaf of bread, needing the addition of other ingredients, also grinding, screening, mixing and dissolving, so as to be soluble in water, in which form it will give available food to your plants at the start when it is most needed. Buyers cannot afford to run the risk of losing the beneficial results by using fertilizers that will not supply the food for the plant until it is done growing. His works are the only works in Canada for the manufacture of bone and animal fertilizers, being stocked with the latest improved and best machinery that can be procured. Farmers should recognize the importance of buying only the best fertilizers made from the best materials, and manufactured in the best possible manner."

In the past when buying and applying commercial fertilizers Canadian farmers in very many cases have not obtained satisfactory results. When in Hamilton we were shown a large number of letters from farmers, fruit growers, etc., which seem to be encouraging. That our readers may be better able to judge of the value of these goods, we decided to publish the following which were selected from among many others:—

THE DOMINION FERTILIZER AND CASING WORKS,
Hamilton, Ont.

This is to certify that I used one ton of your "Sure Growth" Fertilizer on barley, spring wheat, oats and corn, and must say am well pleased with it. Am satisfied that the yield was better, and also obtained a good stand of clover. The season being very bad, owing to the excessive rains in the spring, followed by extreme drouth, we did not get as good results as had there been a favorable season. I also bought another ton in the fall to put on my wheat, and must say that there is a marked difference where I used it and where I did not apply it. Can recommend it to all my brother farmers.

W. A. N. WEST, St. Catharines, Ont.
W. A. FREEMAN, Esq.:
Dear Sir,—I have used the "Grape Food" manufactured by you for two years. The result has been entirely satisfactory. I consider it an excellent fertilizer, and fully equal to what was represented.

A. S. DOWNEY, St. Catharines, Ont.
DOMINION FERTILIZER AND CASING WORKS:
Gentlemen,—I have used your Fertilizer on different crops, and am more than satisfied with the results. The peach trees where I used it have grown almost as much again as those I did not use it on, the fruit being a much larger and heavier crop. I used one teaspoonful to a hill of corn, and had a most abundant crop,—nearly double to that on which it was not used. There was a marked difference in the potatoes, those on which I used the fertilizer being much earlier, cleaner, and larger in size. Raspberries, very large berries. I think it is the best I have ever used, and intend giving you a large order for this year.

HUGH WATT, Niagara, Ont.
GENTLEMEN,—We have pleasure in saying we have used your Fertilizer with satisfactory results. For onions and garden crops generally, we think it cannot be beaten.

EFFRICK & STREITON, Niagara Falls.
GENTLEMEN,—Having used a ton of your "Grape Food" on my orchard of peach trees, I have much pleasure in recommending it to others, as, in my opinion, it is a grand food for peach trees, both for the growth of the tree and for insuring an abundance of fruit. In fact, I have so much faith in its virtues that I have ordered two tons more for the same orchard and another one.

JOHN CARNOCHAN, Niagara, Ont.
GENTLEMEN,—Used your "Sure Growth" brand fertilizer on tomatoes with good results, taking first prize at fall fair. Barley good crop with fine catch grass seed. Also used it on corn, mangels and sugar beets, and took prize on sugar beets at fall fair. I believe it to be a good fertilizer.

J. M. FIELD & SONS, Niagara, Ont.
DEAR SIR,—It is a pleasure to me to recommend your fertilizer. I have now used it for three years with the best results. For a cabbage crop it far exceeds manure. I grew the largest crop of carrots I ever harvested. They grew till they lay like eggs in a nest, and yielded at the rate of about seven hundred bushels per acre.

JOSEPH RUDD, Niagara Falls, Ont.
DEAR SIR,—I have much pleasure in recommending your fertilizer. I used it on potatoes last season without manure. The potatoes were as fine as any I ever raised, yielding about 375 bushels per acre. I used it on onions, carrots, etc., with great success. I tried a few rows without fertilizer; the contrast was seen through the season, and in the fall at least one-third less in yield. I have been using fertilizers for the last eight or ten years, Buffalo and other brands, but have found nothing equal to yours. I have also found in dealing with your firm we have been treated in a straightforward gentlemanly manner.

WALTER KER, Niagara Falls South, Ont.
DEAR SIR,—Used your fertilizer last season on potatoes, tomatoes and other garden crops, securing good results. My potatoes were the best I ever grew, the tubers being of immense size. Also used it on wheat last fall and the grain is pronounced the best in the section. Can recommend it as the best fertilizer used, and where properly applied will pay well for the investment. Will be pleased to use more.

A. BONAR BALFOUR, Burlington, Ont.
DEAR SIR,—Used your Flower Fertilizer on window plants and never used anything to equal it for all kinds of house plants, it giving darker foliage and more and brighter bloom, and can recommend it to anyone having the care of house plants. I would not do without it.

A. COLLINSON, Burlington, Ont.
DEAR SIR,—I used some of your fertilizer last season on a lawn and various vegetables in the garden, and am highly pleased with the result. I think every farmer would further his own interests by a free use of the fertilizer.

INWOOD & TURVILL, St. Thomas, Ont.
SIR,—We have used your Fertilizer on oats, wheat and potatoes, with the most pleasing results. For top dressing on fall wheat the result was very appreciable. We also used it on cucumbers, beets, radishes, onions, and other vegetables, and find it unsurpassable. We can highly recommend this fertilizer, and think it would be impossible to farm profitably without it.

CHAS. TOMPSON,
Manager of S. & W. H. Collinson's Farm,
St. David's, Ont.
DEAR SIR,—Having used your Fertilizer, "Farmer's Pride," for two years, I find it the cheapest manure I can get for roots of all kinds, and excellent for corn. Could not raise anything without it, as the neighbors around here know.

J. E. BELL, Cooksville, Ont.

DEAR SIR,—I cannot say too much in favor of your Fertilizer, as I have taken more prizes at our Acton Union Exhibition than any other one exhibitor,—that is, in roots and vegetables. On three entries of potatoes, first on collection and first on any other variety; first and second on onions; first on white, and second on red carrots; first on red cabbage—three red cabbages weighing 42 pounds. I used your fertilizer and land plaster. We have old farmers here who never saw any other fertilizer than barnyard manure. Parties at our show doubted if the red cabbage I showed were grown at Acton or in Halton, until I invited them to my place and they saw over two hundred heads just as large as I had on exhibition. I am perfectly satisfied it is the cheapest manure I can buy. Out of three rows of corn, 120 feet long, one of my boys made \$7.50 in cash; nothing on but "Sure Growth" and plaster. This can be testified to by my neighbors. Out of 150 bags of potatoes I did not have 24 rotten ones, where my neighbors only across the street had rotten potatoes in pallfuls. If you want anyone to testify to the amount of stuff of one kind or another I grew here on a few village lots, I can send you evidence. H. S. McDONALD, Box 78, Acton, Ont.

GENTLEMEN,—Having used four tons of your fertilizer last season with satisfactory results, I shall want more this season. My neighbor just opposite my land was sowing as much barnyard manure as he could plough in for early potatoes. I gave him fifty pounds of Sure Growth to give it a practical test. He drew a row next to manure and used no fertilizer of any kind, say like this:—1st. No manure, no crop; 2nd. Sure Growth, best in the field; 3rd. No manure, no crop. The row with the fertilizer was a wonder to all who looked at it during the season. Again, a similar test on my own land, which has had no manure for fifteen years. I planted my late potatoes at the same date that my neighbor above referred to. He filled his land with barnyard manure and I applied your phosphate to mine, and to my great surprise I produced the best crop. Am highly pleased with the effects on all crops. I used it on everything I produced. Fruit and vegetables are my hobby. For celery it is indispensable; effects are wonderful.

P. S. WRIGHT, Southend, Stamford Township.
Though these letters seem to be encouraging, we would still suggest caution. We would advise our readers who have not tested these goods to do so at first in a small though thorough way. If any of our readers have already made tests and noted the results, we would be glad to receive an account of their experiments.

In our next issue we will refer more particularly to each of the various brands manufactured at this establishment.
Mr. Freeman is also a manufacturer and importer of

READY ROOFING,
which was first introduced in 1864. The building public received it with favor, and for twenty-six years it has been a standard article with the trade, supplying the demand for a cheap, durable, easy-applied roofing of a reliable quality. Numerous imitations of these goods under different brands have been put upon the market, all of them claiming to be as good as the ready roofing, but results have failed to show this to be the case. The ready roofing can always be distinguished from other roofing by the weight of the goods and the superior quality of the felt. The sales of these goods have in the past amounted to millions of dollars, and the demand for them is rapidly increasing.

If a roof is properly covered with this material it is practically indestructible, manufacturers guaranteeing it for fifty years. The cost of this material is \$3.50 a square, it being used on all sorts of roofs—steep, flat, etc.—covering as it does many of the most expensive structures in the province. The cost of laying it is much less than shingles.

The Tiago Brand Sheathing paper is also being introduced by this gentleman. This article is described as follows: It is three feet wide, containing nine hundred square feet in a roll, is clean to handle, waterproof, and proof against mice and vermin of every description, and will cover more space for the same money than any other waterproof sheathing.

Owing to the remarkable elasticity and durability of this lining, as well as its waterproof qualities, the leading packing houses and refrigerator car manufacturers of the country give it the preference over anything else for lining all cold storage work and silos. It is also especially valuable under metal roofing, being anticorrosive, also gas and acid proof.

This paper is an exceedingly valuable article for putting between floors to increase the warmth of the rooms. It effectually stops all currents of air, excludes moisture, and, being perfectly waterproof, protects ceilings from leaks.

Stock.

Ensilage a Cheap Cattle Ration.

At a meeting of the Brandon Farmers' Institute during the past season, a statement was made by a gentleman who had visited Ontario, indicating that by the use of ensilage a well-known cattle breeder in that province had been able to reduce the cost of feeding yearlings and two-year-olds, if we remember aright, to a very low figure; in fact, it was disputed by one member of the Institute as being hardly credible, and we may state that he had himself used ensilage extensively in the east. The editor of the FARMER'S ADVOCATE, who was present on that occasion, at once wrote to the breeder in question, Mr. D. E. Smith, of Churchillville, Ont., asking for a statement of the facts of the case. Mr. Smith in reply writes that at the Ontario Institute meeting where his statements were made, opportunity was always given for anyone to challenge them or to ask an explanation, but no one contradicted them or disbelieved his remarks. With regard to the result of his experience in growing corn and making ensilage, he gives the following:—

COST OF ENSILAGE (ONE ACRE.)

Plowing.....	\$ 1 50
Harrowing and rolling.....	1 50
Seeding and planting.....	1 50
Cultivating four times.....	2 00
Hoeing and weeding.....	2 00
Putting into silo.....	8 50
Total.....	\$17 00

"Per acre the corn yielded from 15 to 20 tons, so that the cost would be from \$1 to \$1.25 per ton. I stated that I did not take into consideration the rent of the land, the manure put on, and the manure obtained from the food from that acre, as farmers usually reckoned the cost when they had the land and the manure, and I followed their plan. That explanation was frequently given. I also took into consideration the manure and land cost, but did not find such a difference. The cost per ton was thus \$1, and our young cattle ate forty pounds per day, which would be two and one-quarter cents per day each. The other ration consisted of hay, bran and turnip, and cost us, according to market prices of these, eight cents each per day. There are farmers who are losing money every year in feeding, and no doubt intend to do so, for it would require an earthquake to convince them that ensilage was a good and cheap food. Such men had better follow the old way, they will be happier; but if we are to keep up with the procession, we must feed cheaply. Not only was there this great difference in cost in favor of good corn ensilage for food, but the young cattle fed at two and one-quarter cents per day came through the test in just as good condition as those fed at a cost of eight cents per day."

With regard to ensilage in Manitoba, the experience at the Brandon Experimental Farm last winter demonstrated its usefulness in the production of beef and milk. The management of silos, and the securing of suitable corn for the making of ensilage in Manitoba, is not so easy as in the province of Ontario. Mr. Bedford is greatly pleased with the early maturing qualities of North Dakota corn, and it will be thoroughly tested on a large scale this season. Immature, watery corn will produce low grade ensilage. There is another difficulty to be overcome in the construction of silos, and that is to prevent their contents from freezing during the severe winter weather, as ensilage will inevitably spoil if frozen. So, partly with this object in view, the FARMER'S ADVOCATE offered a prize of \$5 for the best plan of cattle barn with silo inside. Undoubtedly, to get the best results, either in beef or milk, from a ration of grain, hay, straw, etc., it is necessary to combine with it some such succulent food as ensilage. As far as the feeding tests at Brandon Experimental Farm last winter were concerned, roots did not appear to "fill the bill" as well. Though otherwise fed the same, when ensilage was removed from the ration the daily gain in beef and the milk yield of dairy cattle both fell off seriously, and when ensilage was restored the rate of gain was resumed in both cases.

Picolo.

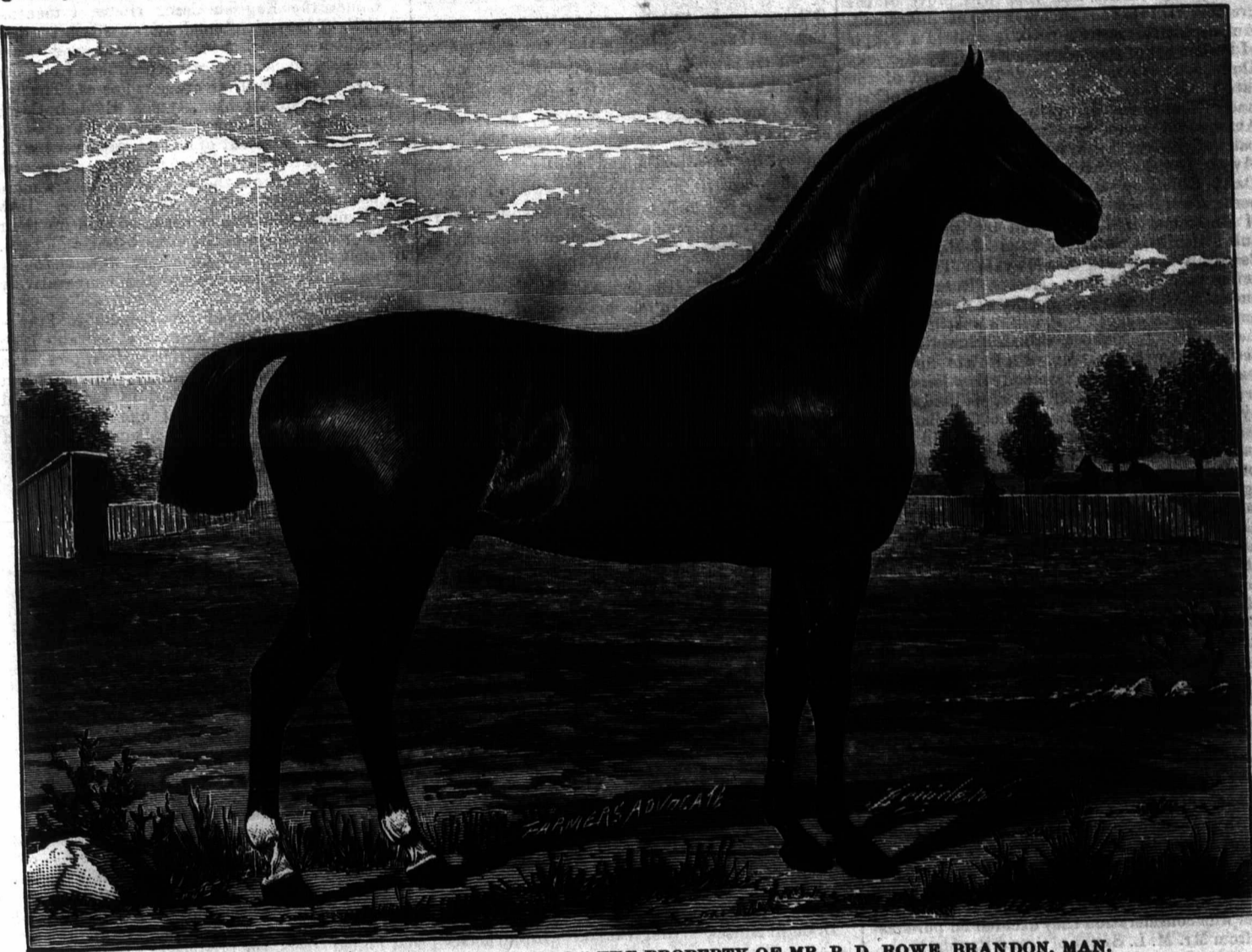
The accompanying illustration represents the celebrated thoroughbred race-horse Picolo, owned by Mr. P. D. Rowe, Brandon, one of the best race-horses on the continent of America. Picolo is just a trifle under size, but in quality is equal to the best. His breeding is excellent, being of the best blood lines in England. He is by Petrarch, out of Lady Grace, by The Duke, out of Melbourne.

Hillsburg Stockmen.

Among the pioneer stockmen of this vicinity we find few better known than Mr. Wm. Mullen, whose farm is situated a few miles out of the village of Hillsburg. Mr. Mullen's fancy having always leaned towards draught horses, he

a deal of shire character, having a lot of bone and substance, and a profusion of hair. Besides his shires, Mr. Mullen has a few very useful high grade Clydes, from such horses as Gladstone, Tam O'Shanter, etc., while he also finds room for a small flock of Shropshires and a few Improved Yorkshires. At the time of our visit the stock of Yorkshires had been somewhat reduced, owing to recent sales, but we noticed a few very useful sows, six months old, by Ivanhoe (60), an imported boar, bred by S. Spencer, of Holywell Manor, Eng., and out of a sow also of Spencer's blood, among the recent additions to the herd being a grand young boar recently purchased to take the place of Ivanhoe (60). In poultry Mr. Mullen has for some years been a breeder of American Bronze turkeys, his original stock having been purchased from the well-known flock of W. J. Bell, Banda, Ont., and he has now added to these a trio of White Hollands from prize-winning stock at Chicago. Mr.

chased him to head their herd of show cattle, which they intend exhibiting very largely this fall in six different states. Although we were unable to see Famous Chief himself, we were able to form an estimate of what his value was as a stock bull by the young things he has left behind him, and among them we especially noticed a pair of young bulls just old enough for service, and a pair of bull calves, both dark reds, one out of Jewess 3rd, a daughter of the imported Earl of Mar, and the other out of a very nice, stylish cow bred by Mr. McGill, from the imported Campbell bull Baron, and out of Willow Bride, by the O. A. C. bull Rob Roy. Another very handsome cow is Fashion's Fancy, of the Fashion tribe, got by imported Premier Earl. This cow is now in calf to Famous Chief, her last calf, a heifer, being by the imported Campbell bull Warfare. Besides his Shorthorns, Mr. McGill has for a number of years been a breeder of Berkshire and Yorkshire hogs. At the time



THE CELEBRATED RACE-HORSE, "PICOLO," THE PROPERTY OF MR. P. D. ROWE, BRANDON, MAN.

made his first purchase of an imported mare from Messrs. Ormsby & Chapman in the spring of 1890, the mare in question being a dark bay filly, by Monster (2846), and out of a daughter of the famous old Don Carlos (2416), a short-legged, thick mare, with clean, flat bone and plenty of nice feathering. Leake Polly has proved herself a good investment for her owner, who has for two years carried off the premier honors with her colts at the local shows. Her first colt, Cock Robin, a chestnut, by the London prize-winner Gamecock (7252), is now a two-year-old, and promises to make a very useful horse, having any amount of quality, with fine silky hair, and grand flat, clean shanks, combining, as he does, some of the best blood in England in his breeding. Cock Robin should leave his mark in the future as a stock horse. Another promising youngster is the yearling filly Erin Queen, also out of Leake Polly, and sired by Packington II., a son of the famous Nailstone stock horse, Big Ben. This filly shows

Mullen expects to have a choice lot of young birds for sale this fall, and parties needing breeding stock cannot do better than send in their orders, as we can confidently recommend Mr. Mullen as a thoroughly reliable man.

A. F. M'GILL.

This gentleman, whose farm is situated about three miles out of Hillsburg, has for the last five or six years been well to the front among the advocates of well-bred stock in Erin township. Mr. McGill some years ago laid the foundation of a herd of Shorthorns, and by careful breeding, aided by a few judicious purchases, he has now a herd of some twenty head of well-bred Scotch topped cattle, all of the short-legged, beefy type. The bull last in use was Famous Chief, bred by Mr. A. Johnston, and out of his imported stock bull Indian Chief. Famous Chief had just left the farm a few weeks previous to our visit, having been sold to Messrs. T. A. Alban & Son, Venedoria, Ohio, who pur-

of our visit his stock of Berkshires was somewhat reduced, his stock boar being Prince Regent, by Rare Sovereign, bred by Snell Bros. The imported Yorkshires, however, were there in greater force, and a very well-bred lot they were, no expense having been spared in obtaining the best blood possible, one of the first purchases having been the imported sow Kirton Lady, a grand, big, lengthy, deep-sided sow, for which Mr. McGill gave a large price. This sow, as her name shows, is of Duckering breeding, while the boar in use, Joe, bred by Messrs. Fields & Son, Ancaster, is of Spencer blood, as is the sow Janet, by the famous champion boar Pat, and out of Grange Sally, a very nice sow, while the yearling sow, May 4th, bred by Green Bros., combines both Spencer and Walker-Jones blood, being by Holywell Emigrant (imp.) and out of imported Madame. Mr. McGill's sales have extended very much lately, amongst them being that of a Yorkshire sow to a party in Nebraska. He has now, he tells us, a choice

lot of pigs, including boars ready for service and sows lately bred, well worth the attention of buyers, as well as four young bulls, two being by Famous Chief, and one by the imported bull Goldfinder's Hair.

CAMDEN VIEW FARM.

The property of Mr. A. J. Carson Shaw, is situated about three miles from the flourishing village of Thamesville, in the county of Kent. Its proprietor has for many years been known throughout Western Ontario as a warm friend of the red, white, and roans, and at the time of our visit we found that he had lately added several new purchases to his herd, among them being the bull Daisy Chief, from the Greenwood herd, a son of Mr. Johnston's Indian Chief, a rich roan in color. Daisy Chief is a good pattern of the short-legged, thick-fleshed Scotch cattle, that have won so much favor among Canadian breeders, and crossed on to such cows as we were shown at Camden View, he will undoubtedly leave stock behind him that will prove of the greatest value to the farmers in the neighborhood. Among his calves we especially noticed a couple of heifers out of Bates-bred cows, one by Mazurka Duke, who at one time headed the herd of the late R. B. Ireland, of Nelson, but the other, Lady Ramsden, being by Ramsden's Earl. Among the other breeding cows we noticed a pair of heifers by Widder Hero, and one by Myrtle Duke, all three of which were in calf to Daisy Chief, as was the latest addition to the herd, a very massive roan bred by Jas. Russell, of Richmond Hill, and sired by the Campbell bull Tofthills, now at the head of Messrs. S. J. Pearson's herd at Meadowvale. This cow's heifer calf by Windsor, Messrs. Russell's well-known bull, is also well worthy of notice; a very smooth, short-legged calf, with a wealth of flesh; she promises to make a valuable breeding cow. Besides Shorthorns, Mr. Shaw has for many years been breeding Cleveland Bay horses and Berkshire pigs, the latter being, we need hardly say, all registered. Among the Cleavelands we were shown stock from such sires as Old Dalesman, Dirsaeli and Volunteer, all imported horses, etc., and we could not help thinking as we looked at a couple of brood mares, one from each of these horses, what a pity it was that farmers throughout the country do not follow Mr. Shaw's example more in breeding with a definite object in view, instead of using one stamp of horse this year and a totally different one next. Mr. Shaw, by breeding each year to the best imported Coach stallions he could get, has built up a stud of very valuable mares, and anyone who intends breeding carriage horses and wants a good mare to start with, will not need to go any further than Camden View to get her.

HOLSTEINS AT THE GORE FARM.

This herd of these famous dairy cattle was founded in 1887, by the purchase from Messrs. Bollet of a bull and two heifers, all of the Barrington strain. After a trial of these, extending over nearly four years, Messrs. Mott were so well satisfied that the Holstein is the dairy cow *par excellence* of the future, that they determined on making a large importation. After due consideration they decided on purchasing from Mr. M. L. Sweet, of Grand Rapids, Mich., whose herd numbers some 150 head. At the time of our visit this last importation had just arrived from quarantine. It consists of some eighteen head in all, two bulls and sixteen heifers. The bulls Tritornia Royal and Doctor Blodgett are respectively two years and 18 months old; they are both by Geske's Tritornia Prince, a bull purchased by Mr. Sweet from T. B. Wales, and out of a son of Mercedes Prince (2150). The heifers are principally of the Aaggie tribe, and among them we particularly noticed a grand two-year-old heifer now carrying her second calf. This heifer took first at the Michigan State Fair last year in the yearling class; she is a grade type of a dairy cow, with a beautifully shaped milk vessel, and big knotted milk veins. Another very pretty heifer is Desdemona 4th, now rising two years old, by the Aaggie bull, Lady Mary's Carre. Of the Barringtons we fancied the cow Heimke's 2nd Maud, out of Heimke's 2nd herself, a very large cow, but perhaps a little coarse, a fault which certainly

cannot be found with her daughter. Among the calves we were greatly taken with a heifer calf, out of Heimke 2nd, who by the way is a daughter of the famous Barrington. This calf is an inbred Barrington, being sired by a grandson of the old bull, and she certainly does credit to her ancestry. The Gore Farm herd now numbers some twenty-five head, and as the proprietors have paid special attention in making their selections to obtaining animals of a strictly dairy type, we can recommend purchasers to pay a visit to this herd, which will be found advertised in another column.

Horses, Galloways and Fertilizers.

BY J. WALTER WRIGHT, BEDEQUE, P. E. I.

At this time, when nearly all farmers are interested more or less in the fertilizer question, I thought it might not be amiss to give our experience in that line. Last spring we had some fertilizer books sent us, and testimonials recommended the stuff so highly that we thought we would try some. We purchased about 2 tons of "Clark's Bay State," "Imperial Superphosphate" and "Mapes' Potato Manure," all so-called complete fertilizers. The two former brands we applied to wheat, oats and fodder corn, about 250 lbs (cost \$5.00) to the acre; we had to sow it by hand just before the last harrowing. It was a very dirty job, but we comforted ourselves with the thoughts of the great improvement there would be in the crops, but we were doomed to disappointment. In one piece of oats the crop was just as good where there was no fertilizer as where there was. In another field we thought we could detect a slight improvement in the crop where the fertilizer was sown, but could not tell by the crop where the fertilizer ended. In the corn it was impossible to tell to which rows the fertilizer had been applied.

The "Mapes" we applied to potato ground, 400 lbs. (cost \$12.00) on $\frac{1}{2}$ an acre, in connection with barnyard manure, and here we obtained the best results, but even then it is a question if the increase in crop paid for the increased cost. We consider these tests fair, as the land, though good, is not very rich. We have come to the conclusion that unless there is barnyard manure or humus in the soil in considerable quantities, the application of commercial fertilizers will result in a loss, and even when applied with barnyard manure the cost is so great that it swallows up all the profit.

I was much interested in the article in March number of *ADVOCATE* on Horse Improvement, which shows the writer to be well posted on the subject, but there is a point or two I do not understand. For instance, Mr. Wilson says, under "Draught Horses," "the great fault with our horses is the want of type and quality;" then, under English Coach horse, "light-legged horses are much easier bred than draught horses, because in the former it is type, quality and action, while in the latter it is size and weight." But to go back to the first of the article, Mr. Wilson says, in the large cities of the States "good-looking working horses, all in fine condition, weighing from ten to sixteen hundred pounds, are selling daily at prices from \$50 to \$100. Now, I would like to know what was the matter with those horses, or was there anything the matter, or is that all we can expect to get for draught horses? Surely they had size and weight enough.

In the same number, "Scotland Yet" has a long letter on Polled cattle. I have always heard they take so long to mature, and, not being so large, that there is more money in the Shorthorns. Is there more money in the cross between the Shorthorn and Poll than in the pure-bred Shorthorn? If not, what is the good of breeding Polled cattle at all? For money is the thing that must rule every time.

MR. WILSON'S REPLY.

In my article in the March number, there are several points Mr. J. Walter Wright does not understand. I will explain these as they appear in the article.

The cause of the low price paid for working horses in the United State is the over-production of those of medium and poor quality. Such a condition is not surprising to those who know the number of draught stallions that have been imported into the United States during the last fifteen years. Americans seem to have a craze for everything new. The draught horse craze has subsided, and at present the Hackneys are booming. This undesirable condition of things will exist until farmers are educated to know the different classes of horses used for hauling the various kinds of vehicles, and mate their mares so as to produce just the sort of animal required. There is no country in the world where there are so many nondescript horses reared as in America.

Under the English Coach Horse, I mention that light horses are much more easily bred than draught horses. I should have said good Coach Horses are much more easily produced from our light-legged mares than draught horses. The first cross from a highly-bred, typical English Coach horse, and a light-legged Canadian mare would be in ninety cases out of one hundred very satisfactory, but it would take four or five successive draught crosses on the produce of such a mare to produce a satisfactory draught horse. How few farmers have been continuously mating their mares with a horse of the same breed and type. Because they have not done this, we have to-day a vast number of nondescript and comparatively worthless horses.

Of the horses shipped from Canada to France last summer, the few that were of suitable type gave satisfaction, the fault being want of type and quality. They lacked this because they had not been continuously crossed in one line, and their sires had not been of one type. It is gratifying to know there is a strong demand in France and Great Britain for Canadian horses.

A. WILSON, Paris, Ont.

Galloway Cattle.

BY WM. KOUGH, OWEN SOUND, ONT.

In answer to Mr. J. Walter Wright's remark on the letter of "Scotland Yet" he states that "I have always heard that Polled cattle take so long to mature, and not being so large, that there is more money in Shorthorns," and then asks the question, "Is there more money in the cross between the Shorthorn and the Poll than in the pure-bred Shorthorn? If not, what is the good of breeding Polled cattle at all, for money is the thing that rules every time?" Now, sir, these are pertinent, the remark and the question, and in my reply to them I shall confine myself to my own experience in my own experiments in my own herd.

I have in my own herd of pure-bred pedigreed Polls (Galloways) heifers of 30 months old weighing over 1,450 pounds—last fall I showed the cow, Countess of Galloway 2nd (imp.) 4618 (10089), 5 years old, weighing 1,810 pounds—and bulls 3 years old, 2,400 pounds weight. I have sold Polled steers, the produce of a Galloway bull on small Shorthorn cows, grade cows and scrub cows, at 30 months old, from 1,600 to 1,720 pounds weight, so the fact is shown that pure-bred Galloway Polls and Grade Galloway Polls mature as early and are as heavy as Shorthorns; and that there is more money in the Polls is shown by the fact that the Polls consume by preference a rougher and cheaper grade of food, I have seen them in a bullrush swamp eating the bullrushes and the coarse saw grass that no other cattle would touch although starving, and also that when killed they dress from 7 to 15 per cent. more than the Shorthorns; also, that the fat Polled beef is of a finer kind, bringing in the market from 1 to 2 cents more a pound live weight, not so coarse, and is well marked, the fat not being laid on in large uneatable masses that go to the grease tub, as in the Shorthorn. The taste of to-day has changed from what it was 20 years ago, and the excessive fat meat will neither sell nor be eaten.

In the question, "Is there more money in the cross between the Shorthorn and the Poll than

in the pure-bred Shorthorns? If not, what is the good of breeding Polled cattle at all, for money is the thing that rules every time? I answer this question, "Yes, certainly; but there is more money for Mr. Wright in the Poll produce by the Galloway bull crossed on any cow he can get, for he can obtain for far less money a Galloway bull and a lot of horned cows, than a Shorthorn bull and a lot of Polled cows, for he will find the Polled cattle scarce and dear, and my experience tells me that I can produce the very best polled cattle by the use of a good Galloway bull and any kind of horned cows that can be picked up in any neighborhood in Canada. In using the pure Galloway bull I have used the best I could get of the improved heavyweight Galloway; not the hill Galloway, which is smaller and undomesticated."

The question of breeding for a certain purpose is surrounded by many clouds; the old breeders and improvers, such as Colling, Booth, Bate, Watson and McCombie, were thinkers, workers and experimenters, and have not left on record all their inmost thoughts or experiences on the subject. At least one of the above-named Shorthorn improvers used Galloway blood, to give his cattle constitution, and perhaps other qualities, and then bred the color out, after which his cattle brought large prices, and were known as the alloy.

For our cold winter, I am satisfied there are no beef cattle equal to the cross of the good Galloway bull on the common cows of the neighborhood, be they pedigreed Shorthorn, grade Shorthorn, or scrub cows. They will stand hardships, and if fed generously will make a better return in money than any other. I have experimented with cattle for twenty-five years; for 10 years with Galloways, and my farmer neighbors within twenty miles are at last coming to my way of thinking, and I have sold them some dozen or more bulls, and the fashion is spreading. The late bulletin on feeding steers at the Guelph college bears me out, as the following results show, on the losses and profits on eight steers, all sired by a pure-bred sire from a common cow, except the scrub, which was pure-bred.

On the Shorthorn fed on whole milk there was a loss of 21 cents.

On the Aberdeen Poll fed on whole milk there was a loss of \$5.06.

On the Holstein fed on whole milk there was a loss of \$8.22.

On the Scrub or Native fed on whole milk there was a loss of \$13.11.

On the Galloway fed on whole milk there was a profit of \$15.15.

On the Hereford fed on whole milk there was a profit of \$1.40.

On the Devon fed on whole milk there was a profit of 92 cents.

On the Shorthorn fed on skim-milk a profit of \$9.06.

The Galloway was bred at my farm from a scrub cow and a pure-bred Galloway bull, Royal of Brooke 3970, bred by me, and I believe the steer was entitled to a further sum of at least ten dollars as being superior in dressing per cent., as well as superior in quality of beef to all others.

Our Scottish Letter.

The month of May is one of the busiest in the whole year in respect of agricultural shows, and a detailed list of all of them would occupy much more space than the editor will be disposed to place at our disposal. Perhaps a general review of the whole situation may be of more interest to Canadian readers than a detailed account; and first in regard to the classes of Clydesdales, which were disappointing. To this category belongs the class of two-year-old colts at all the shows. Whatever be the cause, there is a distinct lowering of the average quality with which we have been familiar in recent years in this class. However it may arise, that which in 1891 was the strongest class, has so far in 1892 been the weakest. It is much more easy to state this fact than it is to account for it, and the difficulty is increased when the fact is stated that the class of two-year-old fillies is, without doubt, one of the best classes of the season. One

suggestion that occurs is that the horses which have proved so successful in breeding first-class fillies are not making the same reputation for themselves with colts, and I confess that for myself that is a view which gives rise to a good deal of reflection. Has there not been too much a tendency to favor qualities in male Clydesdales which are more peculiarly feminine? We have seen many colts which are not forward in the showyard, not because of any lack of merit, but because there is in them a lack of size and weight; and this leads us to conclude that the rage for beauty apart from weight and substance in males has spent itself. The two-year-old colts that are forward this season are, as a rule, big enough and of considerable weight, although there is a notable exception; and seeing that the home trade must be more and more dependent on the demand for work horses, this is a fact on which we may congratulate ourselves.

Yield mares are numerically a weak class, but the weakness does not extend beyond the matter of numbers. In every other respect the class is a peculiarly strong one. The champion mare at Glasgow, Mr. George Alston's Vanora, has been leading in this class, and is a really splendid animal. She is heavy, massive, well-colored, sound in foot and limb, and altogether a magnificent example of a Darnley mare. Taken all in all, I would be disposed to regard her as the best daughter of Darnley that has ever been shown. Her son Vanora's Prince, a gay horse, by Prince of Kyle, has been first at all the principal shows except Glasgow, where he was second.

A most gratifying feature has been the quality of the brood-mares at all of the shows. The class has been numerically strong, and it has been even stronger in quality. Indeed, it is long since so many really high class mares have been shown as matrons in one season. Unfortunately there has been considerable difference of opinion amongst judges as to the relative positions which these mares should occupy, but possibly the very fact that the quality has been so uniformly high is largely accountable for this. Sunray's appearance at Kilmarnock was a revelation, Scottish Marchioness at Ayr was in capital bloom, Topsman's Princess at Maryhill looked a formidable opponent for one and all of her competitors, and the grey mare Rose of Banknock at Glasgow certainly left nothing to be desired in respect of weight and power.

Three-year-old fillies form what is generally regarded as the best class of the season. Mr. Robert Murdoch's black mare Duchess II. by Prince Lawrence, has held her own against all comers, and been first wherever shown up to this time. She is a mare of excellent quality, a good mover at all paces, with a first-rate top, and altogether a mare not easily beaten. There may, probably, be new opponents for her at Inverness, but in the meantime she is *facile princeps* in her class. The cup-winner at Maryhill, Lady Lothian, owned by Mr. William Park, Brunstone, Portobello, was second at Glasgow. She was bred in Cumberland, and is an upstanding, gay and stylish mare of plenty of size and weight. Her sire, Lord Lothian 5998, is, I think, not unknown in Canada, whither a number of his stock has gone. He is a son of Top Gallant, of grand size and weight, and he has left first-class stock in Cumberland. Still another first-rate mare of this age is the third prize mare at Glasgow, Bridesmaid, owned by Mr. John Douglas, Braes o' Yett, Kirkintilloch. She was champion mare at Dumbarton, and was got by Druid Chief. This is a mare which is a great favorite with many, and high prices have been offered for her. The fourth prize mare of the same class at Glasgow was the well-known Mary Anderson, a daughter of Flashwood, and one of the first of three sisters that have done extra well in the show ring. These are four choice mares, and it is notable that the first three have been champion females at three very important shows this season—Duchess II. at Hamilton, Lady Lothian at Maryhill and Bridesmaid at Dumbarton.

Two-year-old fillies, as I have already hinted, are a first-class lot of young Clydesdales. The

successful exhibits at Glasgow were all owned by gentlemen who have done much to enhance the value of the breed by their vigorous patronage. Mr. Lumsden, of Balmedie, was first with his splendid young mare Enchantress, winner of a similar honor last year. She was bred by himself, and was got by his own horse Royalist. There are not many mares of her class in the country. Mr. David Mitchell, of Millfield, was second with the superb mare Lillie Langtry, own sister to Mary Anderson referred to in the preceding class. This is a mare of much substance and beautiful quality. Her sire, Flashwood, is making a reputation for himself as a sire of a superior class of fillies. Mr. Mitchell was also third with his fine mare Maritana, by Excelsior, and Mr. R. Sinclair Scott was fourth with Scottish Ruby, by Prince Lawrence, the first prize-winner at Kilmarnock. Mr. Watson, of Earnock, was fifth with the Sirdar filly, Bell of Earnock. It is noteworthy that of these five fillies, four are got by sons of Darnley, and the fifth, Scottish Ruby, is out of a Darnley mare.

Yearling fillies are a capital lot of animals. Ellen Terry, owned by Mr. David Mitchell, and own sister to Mary Anderson and Lillie Langtry, was first. She is a filly of fine quality and power. The dam of these three fillies is Maritana 8406, a very useful, old-fashioned Clydesdale mare, by Premier Lyon 2828, out of a mare by Drumflower Farmer 236. An own brother to Maritana has been exhibited this season at all the leading shows in the aged gelding class. He is one of the grandest horses seen for many a day, and has never been beaten, so far as I know. This shows that the family is an uncommonly good one, and certainly Maritana and her daughters have done enough to make the reputation of any family. The remaining prize-winners amongst the yearling fillies were got by Gallant Prince, Prince Fortunatus, Royalist, Flashwood and Sir Everard. These sires are a guarantee that the youngsters were of considerable merit.

The show of three-year-old stallions was a very grand one. Mr. W. S. Park's Gallant Potteath, the Glasgow premium horse, was first. He keeps his form well, and is a popular horse. Mr. Riddell's horse Sir James, the Leamnahagow horse, was second. He was bred by Sir James Duke, Bart., and is a useful, well-colored horse. Crusader of Orchardmains was third. This is a capital horse. In Canada he would be invincible. He was bred by the Lords Cecil, and is now owned by Messrs. P. & W. Crawford, Eastfield House, Dumfries. Got by the fine horse Claymore, out of the celebrated Edith Plantagenet, and possessing many of the best qualities of his dam, Crusader is a horse not easily beaten. Mr. Johnston's William the Conqueror was fourth, Mr. Alex. Scott's Prince Wyben fifth, and the Balbirmie Prince of Scotland sixth. These three are sons of Prince of Wales.

The best two-year-old was Darnley Again 9182, a grand big horse owned by Mr. William Clark, and got by Darnley's Hero. He was also first at Maryhill, and is a horse of much grandeur and style.

The prize-winners in the class of yearling colts were got in order by Goldfinder, Prince Fortunatus, Earl of Glasnick, Prince of Kyle, Gallant Prince and Flashwood.

A very important sale of Clydesdales, Ayrshires and Border Leicester sheep was held at Tinwald House, Dumfries, on 17th May. Good prices were realized for the Clydesdales, the brood mare Tinwald Forest Flower 9527 realizing 400 gu. or £420. She was got by Macgregor, and was thus another example of the high value of his mares. It may safely be affirmed that no female Clydesdales sell to greater advantage than the daughters of Darnley and Macgregor. SCOTLAND YET.

A writer in Clark's Horse Review says:—"Three stallions have trotted in 2:10 or better. They are Nelson, 2:10, Allerton, 2:09½, and Palo Alto, 2:08½. Only one of them, Allerton, is bred according to the popular theories of the day, or in what would be called ultra-fashionable lines. Indeed, it is within a twelve-month a prominent breeder asserted he would not breed to Allerton, because he was not richly bred according to his ideas."

Annual Meeting of the American Oxford-down Sheep Record Association.

PRESIDENT GOLDSBOROUGH'S ADDRESS.

GENTLEMEN.—It gives me great pleasure to greet you at this annual meeting, after such notable successes have been won in the show rings in 1891 by Oxford-downs. It is not necessary to note their victories at even the larger or principal fairs where the different breeds have met in competition. But when the Oxford-down has won the highest honors at the Fat Stock Show at Chicago, and the "championship of the short wool classes" at the great Fat Stock Show at Smithfield, England, winning both victories in the same year; and when it is remembered "highest honors" at these fat stock shows attract more attention, and are of more value to breeders and breeders than prizes won at any other shows in the world—we have reason to be proud of our Oxford-downs. And what is of greater interest and value, is the assurance that, having won in competition with all the world, we have the best mutton and wool breed of sheep yet produced.

The London Live Stock Journal of Dec. 11th, '91, states:—"The Oxford-downs, though not numerous, made, in point of quality and character, one of the best displays which the breed has ever made at Islington. There was scarcely an indifferent sheep among them, and the general matchiness and trueness of type of the collection has seldom if ever been surpassed. The breed achieved the distinction of winning the championship of the short wool division, thus defeating Southdowns, Hampshires, Shropshires, and Suffolks, and probably the award has seldom met with more general approval. Mr. Brassey's pen of wether lambs which took the breed cup and the championship, were generally admitted to be one of the best pens of lambs ever sent to Smithfield. They had beautiful form and symmetry, nice coats, capital color, and plenty of character, and were altogether a great credit both to the breed and the breeder. The reserve number for the breed cup went to Mr. J. G. Williams for pen of wethers, which in the absence of Mr. Brassey's exceptional pen would worthily have occupied the chief place of honor."

Thus there were two pens of Oxfords produced by different breeders good enough to carry off this great prize at Smithfield. Let us see to it that the standard of excellence be improved, and let us see to it that the system of judging and the selection of judges shall be fair enough to award our breed the merit it deserves, lest others surpass us in the future. If I may judge from my own experience, all our Oxford breeders must have an increasing demand. Correspondents in England state the demand for Oxfords last year was greater than ever before. How promising is our future, since our victory at the great fat stock shows. However, it must be remembered, that all breeders who expect to make a success, must attend fairs and must show their stock. Oxfords will push themselves to the front if breeders will give them a chance to be seen. In this connection it is important for our Association to go to the utmost limit within its financial means, to bring out a grand display of Oxfords at the Columbian Exposition, by offering liberal prizes. The total amount to be offered by the Exposition is \$1,175. I am informed by the secretary that our Association will be able to duplicate this amount, to be distributed in such prizes as our meeting may direct. As the competition for Exposition prizes will be open to the world, it would seem proper for our Association prizes to be offered for home-bred stock. The resolution directing the increase of capital stock, and admitting to membership on payment of ten per cent. for one share of stock—that is, by paying one dollar for one share of stock, one could obtain membership and have sent to him all volumes already published, costing \$12.65 the set—has so increased the demand for membership, as to endanger drainage to the treasury, and would require an assessment to keep our Association on an equal footing with others in offering premiums at the Columbian Exposition. Hence the Association has thought best to rescind the resolution and charge full par value for shares. Surely, all who wish to become members should be willing to pay \$10 for one share of stock, after the

standard of the Association has been brought to its present excellence and has furnished all our valuable records published and to be published.

BUSINESS TRANSACTIONS.

The minutes of the meeting of 1891 were read and approved. The treasurer's report showed a balance on hand of \$1,685.69, with all debts paid. There are now 2,907 pedigrees in for volume 5, which closed for entries February 1st, and will be published as soon as possible; \$1,175 was voted in cash prizes at the Columbian Exposition, Chicago, 1893. New members were admitted from Canada, Wisconsin, Michigan, Ohio, Indiana, Illinois, Iowa, Kentucky, Tennessee, Pennsylvania, and West Virginia.

The election of officers resulted as follows:—President, F. C. Goldsborough, Easton, Md.; Directors, T. W. W. Sunman, Spades, Ind.; R. J. Stone, Stonington, Ill.; E. J. Thuing, Chardon, O.; R. M. Jacoby, Hamilton, O. One vice-president from each state represented in capital stock is annually elected. Peter Arkell, Teeswater, Ont., was elected vice-president for Canada.

W. A. SHAFER, Middletown, Ohio.
Secretary and Treasurer.

The American Southdown Association.

At the Annual Meeting of the American Southdown Association, held recently in Springfield, Ohio, President J. H. Potts presided.

The following synopsis of the Secretary's report and proceedings of the meeting shows the Association to be in excellent condition, and the outlook for Southdown breeders very promising:—

Volume IV. is closed; it contains 2,000 pedigrees, instead of 1,000 pedigrees as in each of the preceding volumes, and will be ready for distribution at an early date.

Entries for Volume V. are being received. Under the rule heretofore adopted, entries for this volume require that for the registry of animals from unrecorded ancestors, the sires and dams, and grandsires and grandams, must also be recorded.

Since our last meeting, twenty-three additions have been made to our membership, so that we now have ninety-eight of the leading breeders of the country as members of the Association.

These additions to our membership, and an increase in registration during the past year, indicate that on account of their superiority for mutton, excellence of wool, and for successful crossing on the native sheep of the country, as an unrivaled improver for mutton and for wool, the Southdown sustains its high standard, has its share in the increased interest in sheep husbandry, and that the two thousand pedigrees for Volume V. will be recorded during the year.

An analysis of the receipts of the Association during the past year shows the following percentage by states: Ohio, 17½; Pennsylvania, 11½; New York, 9½; Illinois, 9½; Canada, 9½; Nebraska, 8½; West Virginia, 6; Massachusetts, 5½; Wisconsin, 4½; Kentucky, 4½; Indiana, 2; Iowa, 2; Vermont, 2; Maine, 1½; Virginia, 1½; Missouri, 1½; New Jersey, 1½; Michigan, ½; Tennessee, ½.

Breeders of Southdowns in England having during the past year established a flock book for the registry of this breed of sheep in England, which has the recognition of our Government in its late rules on the importation of animals for breeding purposes, our importers may hereafter expect fuller and more accurate pedigrees than have heretofore been furnished, and with very much less trouble in securing them. The matter of keeping a record of ewes in Great Britain is being adopted by some of their enterprising breeders, and a general advancement in this regard may be looked for.

In addition to the \$1,000 already appropriated for Southdowns in special premiums at the World's Columbian Exposition, the Association provided for an additional \$250 for premiums to be offered for the Fat Stock Show to be held in connection with that Exposition; and also \$115 to be offered as special premiums at the New York State Fair or the Exposition at Detroit, Michigan, in 1892.

The prosperity of the Association and the many applications for membership have made it

necessary to enlarge the number of shares of its capital stock. To this end, another meeting will be held on June 29, to vote on the proposition for an increase in the number of shares of its stock from one hundred to five hundred.

Officers elected for the ensuing year were:—President, J. H. Potts, Jacksonville, Ill.; Secretary, S. E. Prather, Springfield, Ill.; Treasurer, D. W. Smith, Springfield, Ill. Board of Directors for three years:—C. M. Clay, White Hall, Ky.; John Jackson, Abingdon, Ont., Can.; John Hobart Warren, Hoosick Falls, N. Y.

Among Scottish Horsemen.

PARK MAINS.

A short distance out of the thriving little town of Paisley is situated the farm of Park Mains, and here is the stud of Clydesdales so well known on this side the Atlantic as the property of Mr. Wm. Taylor. We were fortunate in finding Mr. Taylor at home, and in a few minutes we were introduced to the lord of the harem, the famous Sir Everard, whose name is graven on the Clydesdale roll of fame as a winner no less than three times at Glasgow. Sir Everard, by Top Gallant, is a grand, big horse, weighing over 2,100 pounds, and yet as smooth as they make them, with a beautiful set of legs, hard, flat bone, and very pretty feathering. He has been a very successful sire in Scotland, his colts selling for high figures. In the lane outside the buildings, being exercised by a groom, we found Rosedale, by Newtonairs, a grandson of Macgregor. This was the third prize horse in the open class at Glasgow this year, the umpire having to be called in to decide between him and Mr. Riddell's Gallant Prince. Rosedale is a very neat, compact horse, short legged, and making up in style or finish what he may lack in size and weight. He has been let this year to the Duke of Hamilton's tenantry on these terms: 100 guineas premium, and £2 down and £3 when the mare proves in foal. Another capital good pattern is the three-year-old horse Albion's Hero, a son of the Prince of Albion, whose sale for 3,000 guineas electrified the whole Clydesdale world, and out of a mare by Lorne. Albion's Hero is a nice bay, with two white hind feet. He shows a great deal of quality, having nice, clean bone, together with good feet and pasterns—a thick, sweet horse all over, he should leave his mark in the Isle of Arran, where he goes this season. Mr. Taylor keeps some thirteen or fourteen mares breeding, among them being the get of such horses as Ivanhoe, St. Lawrence, Lord Beresford, —this last, a horse of unusual quality, having been purchased from Mr. Taylor by Mr. Thomas Knaggs, Vandecar, Ont. Besides his Clydesdales, Mr. Taylor keeps on hand a choice selection of Hackneys, of which breed he has sent more than one good one across the Atlantic, notably the horse Norfolk Swell, winner of first place at Toronto in 1890, and now owned by Mr. Asa Choate, of Port Hope; also Sunlight and Dereham Goldfinder, both sold to Messrs. Prouse & Williamson, Ingersoll, Ont. At the time of our visit Mr. Taylor's stock of Hackneys was very much reduced by recent sales, but he informed us he expected to have a few good ones on hand this summer for his American and Canadian customers.

HATTON BISHOPTON.

Few horses are better known in Clydesdale history as successful sires than Lord Erskine, whose sire, Boydston Boy, is now owned in Canada by Messrs. Sorby Bros., and the fact that Lord Erskine was bred at Hatton by Mr. Park, who still owns his dam, the famous old mare Hatton Bella, by Tim o' Day, is sufficient to make a visit to Hatton a *sine qua non* to Clydesdale fanciers when in Scotland. Mr. Park, who kindly met us at the station and drove us over to Hatton, has, to use his own words, "been breeding Clydesdales twenty years, and his father before him." The farm of Hatton consists of some 450 acres, and the stock kept are principally Clydesdales and Ayrshires. Of the former the mares in foal this year are ten in number, the get of such sires as Lord Erskine, Darnley, Top Gallant and Belted Knight, while the stallions used have been Prince Alexander and Prince of Albion, Gallant Poteath, Royal Signet, and Blythe Prince. Of these, it is needless to say anything about the first two, as their history is

known to every Clydesdale man in Canada, except to point out that the Cawdor Cup fell this year to Prince Alexander, while of the other three Royal Signet and Blythe Prince are both by the old Prince of Wales, the latter's dam being Sunbeam, by Lord Lyon, also dam of that well-bred horse Royal Salute, now owned by Mr. T. W. Evans, Yelverton, Ontario. Gallant Poteath, winner of the three-year-old Glasgow Premium, is by Top Gallant, out of Tanny by Paisley Jock, and is consequently own brother to the celebrated prize mare Montrave Lady. He is a very promising colt, with grand legs and a good set of feet. Among the other young things we noticed a very useful light bay colt, Merlin, by Top Gallant, out of Hatton Beauty, by Darnley, g. dam Hatton Bella, by Tim 'o Day; and a yearling colt out of the same mare by Prince of Albion. This last colt took our fancy very much, combining as he did size with quality, and having a beautiful set of feet and ankles.

Besides his Clydesdales, Mr. Park pays considerable attention to dairying, milking sixty cows, nearly all pedigreed Ayrshires. To describe them in detail would take too long here. Suffice, therefore, to say that a grander lot of dairy cows it would be hard to put together, among them being a number of winners at the Highland Society and other shows, more especially the two cows Knockdown 2nd and Annie, the latter from the Duke of Buccleugh herd being winner of first at the H. S. Show at Melrose. The bull in use, Baron 3rd, of the light color now so much fancied among Scotch breeders, was a winner at Ayr; and Mr. Park has a choice lot of young things of both sexes for sale.

Among Mr. Park's sales last year we might mention that of the yearling colt Lord Coleman, by Prince Gallant, out of the dam of Lord Erskine, to Mrs. Simpson, St. Colman, Rothsay, for £1,300, and the filly by Prince Lawrence, out of Hatton Beauty, by Darnley, to Sinclair Scott, Greenock, for £300.

Chatty Letter from the States.

June prices in the Chicago live stock market ranged as follows:—

Poor to prime steers, 1000@1600 lbs., \$3.50@ \$3.75, with export cattle, 1250@1500 lb., largely at \$4.10@4.35. Fat heifers and yearling steers, 600@1000 lbs., \$3.25@4.00. Cows, \$1.25@ \$3.50. Stockers and feeders, 600@1200 lbs., \$2.35@3.60. Texas fed steers, \$3.50@4.05. Grassers, \$2.15@3.25. Distillery steers, 1050@ 1300 lbs., \$3.90@4.30, largely at \$4.10@4.20. Milk cows, \$15@35 per head. Heavy hogs, \$4.50@5.15; light hogs, \$4.40@5.05. Native sheep sold at \$4.50@6.10. Westerns, averaging 90@110 lbs., sold at \$4.80@5.75, and Texas, averaging 70@86 lbs., at \$3.85@5.40. Native lambs, \$5.50@7.50 per cwt.

Cattle sold \$1@1.35 lower than a year ago; hogs 25c.@50c. higher, and sheep and lambs the same as the corresponding time last year.

Calves are being slaughtered in large numbers. Good 100@140 lb. "veals" are in good demand at \$4.00@5.90 per cwt., but many of the calves are almost worthless, and can only be sold at a great sacrifice. The best veal calves reaching Chicago come from the Wisconsin dairy districts.

The store cattle and "feeder" market is dull. There were some limited orders here for choice selected 800@1000-lb. cattle at \$2.50@3, but such orders could not be filled, though rough, mixed lots of heavier weights sold at a lower range.

There will not be much demand from the east for about 60 days, as the farmers have to turn off their fat cattle before they are ready for feeders. The calf crop in Montana is reported good, and grass is fine. Texas and New Mexico have suffered from drouth.

The movement of live stock at the western live stock markets shows an increase in cattle, and a decrease in hogs, compared with the corresponding time last year.

The permanent home of the American Fat Stock Show at the Union Stock Yards is nearing completion.

The Chicago live stock dealers have decided to closely observe five national holidays each year—New Years', Washington's Birthday, July 4th, Thanksgiving and Christmas. No stock will be sold on those days.

An English Stud of Hackneys and Shires.

In the pretty village of Needingworth, about three miles from the old town of St. Ives, in Huntingdonshire, right in the heart of a real agricultural country, is the Chestnuts, where is located the stud of Hackneys and Shires owned by Mr. W. G. Butcher, whose card will be found in another column. Mr. Butcher has been known for many years as not only an extensive breeder, but also as an exporter of both these classes of horses, representatives of his stud having found their way into some of the largest studs in America. At the head of this stud of Hackneys stands Needingworth Connaught, alias Melton (1519), a full brother to Connaught, the Islington champion of 1891, sire the famous Denmark, dam by Fireaway, g. dam by Bay Phenomenon, g. g. dam by Prickwillow; a chestnut with both hind and the nigh front pasterns white. Needingworth Connaught stands 15.3 hands high, and shows any quantity of bone and substance, while his action is all that could be desired—a long sweeping stride that covers the ground rapidly without punishing the horse. His breeding a glance will show to be superb, his sire having sired the champion mares at Islington four years running.

A very pretty mare, smooth and well finished, if a trifle small, is the bay Needingworth Lass, by Confidence, dam by Lord of the Manor, breeding that can hold its own in almost any company; while among the colts we especially noticed a pair of bay half-brothers, Needingworth Rifleman and Needingworth Tip Top, both two-year-olds, and both by Rifleman 2nd, who was afterwards sold for 500 guineas to go abroad, the first being out of a mare by Lord of the Manor, g. dam by Norfolk Swell, a sire well known through the Peterboro' neighborhood, while his companion is out of Flying Nell, by Hawkestone Shales, her dam by Quicksilver. Besides his Hackneys, which number some sixteen head, Mr. Butcher keeps on an average some twenty registered Shire mares for breeding, most of them the get of British Wonder (4908), Esquire (2774), a son of William the Conqueror, King Charles and other noted sires. At the head of the stud stands Ambition III. (6634), a thick, heavy horse with good feet and big flat joints, sired by Ambassador (3428), and out of a prize winning mare by Wonder (6433). The young horses were a thick, short-legged lot, showing plenty of shire character. Among them we noticed a two-year-old, Needingworth Heart of Oak (vol. xiv.), by Oak Post, dam by Esquire, grandam by Clark's Thumper, that promises to make a big horse—of the wide-as-a-waggon-kind, while Needingworth Charming (vol. xiv.), by My Charming 3rd, a year older, though not so big and massive a colt, shows a good deal of quality, with good bone and feet.

A horse that struck us as being just the kind for the American trade is Blagdon Fashion (vol. xiii.), by Warrior (2630), a son of old Lincolnshire Lad II. (1365), dam by Matchless (1528); this is a big, muscular, active looking horse, that if he breeds true to himself will prove a valuable sire. Besides those mentioned, Mr. Butcher has for sale a number of Hackney colts and fillies, including some very fine, promising ones by Lord of the Isles, and a few very good Shire colts by Thorney Tom, winner of 3rd place at Islington. Mr. Butcher is always glad to show his stock, and a visit to the Chestnuts will well repay a lover of horseflesh.

The Comparative Value of Turnips and Grain for Fattening Sheep.

This experiment was continued for sixty-three days, and its purpose was to test the comparative feeding value of turnips and grain. Many believe that a green food has a value not shown by the amount of dry matter it contains, and that such food is especially efficient in a ration for sheep. The mixed grain fed consisted of three parts gluten meal, two parts corn meal, and one part wheat bran. The grain contained 75 pounds of digestible dry matter per hundred, and the rutabagas 12.8 pounds, or the grain 6.9 times as much as the roots.

In the first period 5 pounds of grain were fed against 30 pounds of roots, and in the second period 4 pounds of grain against 30 pounds of roots.

FOOD AND GAIN OF SHEEP IN PERIOD 1.

	Lot 1. More Grain.	Lot 2. More Turnips.
No. of days fed.....	31	31
Weight of hay fed.....	630 lbs.	630 lbs.
Weight of mixed grain eaten.....	372 "	217 "
Weight of rutabagas eaten.....	630 "	1550 "
Weight of sheep at end of period.....	1222 "	1124 "
Weight of sheep at beginning of period.....	1125 "	1052 "
Gain in weight.....	97 lbs.	72 lbs.

FOOD AND GAIN OF SHEEP IN PERIOD 2.

	Lot 1. More Turnips.	Lot 2. More Grain.
No. of days fed.....	31	31
Weight of hay fed.....	640 lbs.	640 lbs.
Weight of mixed grain eaten.....	288 "	416 "
Weight of rutabagas eaten.....	1600 "	640 "
Weight of sheep at end of period.....	1246 "	1203 "
Weight of sheep at beginning of period.....	1222 "	1124 "
Gain in Weight.....	124 lbs.	138 lbs.

Gain of both lots of sheep eating more grain..... 235 lbs.
Gain of both lots of sheep eating more turnips..... 196 "

Difference in favor of ration containing more grain..... 39 "

The results of the entire experiment, covering 63 days of feeding, may be summarized as follows:

One-half of the sheep ate during this time 1340 pounds of digestible material, and the other half ate 1338 pounds. The difference between the two rations was simply this: that one-half of the sheep received more of their food from roots than did the other half, the total amount of digestible material being practically the same in the two cases. One-half of the sheep ate 1260 pounds of roots, and the other half ate 3150, the difference in the amount of dry digestible organic material in the two quantities being 206 pounds. This 206 pounds of nutrients from the roots was offset by 208 pounds of nutrients from grain, a practically equivalent quantity. Notwithstanding this equivalence in the quantity of material in the two rations, the twelve sheep receiving the more grain gained during the 63 days 39 pounds more than did the other twelve. There seems to be no reason why this test is not a fair one, and it furnishes a weighty bit of evidence against the somewhat common opinion that the dry matter of roots has a special and peculiar value beyond the small quantity which it may be wise to feed for the purpose of giving variety to the ration.

The Farm.

Central Business College, Stratford and Toronto.

In this brilliant period of human progress the opportunities for individual enterprise and advancement are most inviting. The earnest demand of the times is for young men, who, by their training and consequent power, can seize the golden opportunities that are offered—opportunities which if improved lead on to eminence and success, but which if once lost, are lost forever. The vast commercial interests of our country require thoroughly qualified, energetic, wide-awake and earnest business men. The business colleges are doing a grand work for the young people of our country. For years the Central Business College of Stratford, Ont., has held the proud position of being a strictly first-class school. Encouraged by the great success this institution has enjoyed during the past six years, the principal, Mr. W. H. Shaw, has concluded to open another Central Business College, in Toronto, in September next. The new college is in the Arcade Building, corner Yonge and Gerrard streets, and is without doubt one of the finest equipped business schools in Canada. All the apartments face the streets above mentioned, and are well lighted, thoroughly ventilated, heated with steam, and lighted with electricity and gas.

An important feature will be the new system of business practice. By this method, the students of the two colleges are brought into trade and correspondence relations through the mails. Instruction and practical work are combined in transportation, shipping, commission, jobbing, wholesaling and banking, bringing them much nearer the standard of actual business than has ever before been reached.

Associated with Mr. Shaw in the conduct of the two schools is Mr. W. J. Elliott, late principal and manager of the International Business College, Fort Wayne, Ind. Mr. Elliott is a well-known and experienced business educator. The local management of the Stratford school will be in charge of Mr. P. McIntosh, a first-class instructor and an experienced business college man. He will be assisted by Mr. Peter Bradshaw, an expert in the line of phonography, and an able and energetic instructor. All young men and women who intend pursuing a business or a shorthand course, should write to Shaw & Elliott for further particulars.

Legal Questions and Answers.

QUESTION.—A and B were owners of adjoining farms, and A built a fence part way along the line between the farms, B agreeing to build as much more when it was required. B then sold his farm to C, and he (C) now claims to own one-half of the fence put up by A. What are the rights as between A and C? **FAIR PLAY.**

ANSWER.—C bought only what B had to sell, and as B did not own the portion of the line fence already erected, so neither does C own it now, and C must erect and maintain his fair proportion of the line fence when required.

QUESTION.—Is it lawful for a person to run waste water and slops from his house through water pipes, etc., so that the water overruns his neighbor's land and causes damage to crops, etc.?
SUBSCRIBER.

ANSWER.—A person must not allow dirty water to overrun his neighbor's land so as to cause a nuisance, and if necessary he must construct proper drains. If the damage is caused by the natural overflow of clean water or surface water over the adjoining property, then, perhaps, the case may come within the drainage laws, and in that case, as something would depend upon the exact position of the party's house, and also on the natural course of the water, you had better write us more fully or consult a lawyer.

Spring Wheat.

MR. JAMES GRAHAM, PORT PERRY, ONT., SAYS IT COSTS HIM BUT 18c. PER BUSHEL TO PRODUCE IT.

I noticed in your June issue an article over the signature of Dairyman, in which article you will find the following assertion in the 2nd and 4th clauses, page 216, namely:—"As our conditions have very materially changed of late years, it makes it necessary that our system of farming must be changed, to meet the changed conditions. Not many years ago both grain-growing and feeding beef cattle were paying the farmers well, but now it is conceded neither of these branches is paying the farmer for his investments and labor." If this statement of Dairyman's could be established, it would certainly reveal, in the first place, a great amount of stupidity on the part of the farmers who persist in growing grain with the changed conditions of the times against them, and, in the second place, would cast a very unhappy reflection on the intelligence of the great bulk of the people of this country, who happen to be farmers. The ground upon which Dairyman bases his statements is a query not easily understood or accepted by a practical, experienced farmer. Now, if Dairyman could but open his eyes, he would see thousands of farmers all over this country enjoying prosperity in a marked degree; this they have because of the paying quantities of all kinds of grain which their labor produces. With this fact before him, surely he could not have any precise knowledge from experience as to the cost per bushel of growing grain. Therefore, with your permission, Mr. Editor, I will submit a few figures for the consideration of the subject of growing spring wheat, as it is the principal kind of wheat grown in this section of the country. In the first place, for our basis, we must select a certain number of acres upon which to make our calculations. In doing so, we will select a given number, so that all the implements employed in the cultivation and harvesting will work out as nearly as possible in even days. Whatever number of days we may select cannot in any way affect or change the result as to the cost per bushel. Say we make eighty-four acres the number for our calculation, made up as follows:—Sod thirty acres. Now, the usual way we take to manage sod is to plow it over as soon as the hay is taken off, and again late in the fall. We find this method works here very well. Others again advocate only one plowing, and cultivate for the remainder of the season; by this means they claim an advantage. It certainly is the least expensive, but we will base our statements on the two plowings, which will give us sixty acres. We will now take pea land, thirty-six acres. We allow it to remain untouched until some time in October, by which time the ground can be plowed perfectly. Now say root land, eighteen acres, which makes up the eighty-four acres to be only once plowed. This, altogether, gives us one hundred and fourteen acres of plowing, which can be easily performed in twenty-eight days. We use the double riding sulky plow, at

Say \$3.00 per day.....	\$ 84 00
Cultivating all the land before drilling, eight days, \$3.00 per day.....	24 00
Seed wheat.....	100 00
Drilling seed, 7 days, at \$3.00 per day.....	21 00
Harrowing once, 2 1/2 days, at \$3.00 per day.....	6 75
Rolling, 3/4 days, at \$3.00 per day.....	10 50
Reaping, 6 days, at \$3.00 per day.....	18 00
Stooking, 7 days, at \$1.50 per day.....	10 50
Two teams hauling to barn, 4 days, at \$6.00 per day.....	24 00
Man in field pitching, 4 days, at \$1.50 per day.....	6 00
Two men in mow, 4 days, at \$1.00 per day.....	8 00
Binding twine.....	22 50
Threshing machine and men.....	44 00
Total cost.....	\$379 25

Suppose we get on the eighty-four acres twenty-five bushels per acre, in all 2,100 bushels. If the 2,100 cost \$379.25, what will be the cost of one bushel? About 18c.

In submitting the foregoing statement of expenditure, it can be justly argued that I have made excessive allowance for the work of horses, which in reality are part of the plant thereof, and when charged for should be a small percentage.

[We are always glad to hear from Mr. Graham. Others may desire to discuss this subject in our columns. Let us hear from you if such is the case.—Ed.]

Corn and Corn Culture.

BY THOS. M'MILLAN, CONSTANCE, ONT.

(Continued from page 188.)

In the process of harvesting, no matter which way the crop is intended to be cured, so long as it is to be used for fodder, there is a certain stage in the growth of the corn plant at which time it is most desirable to cut it, in order to get the best quality of fodder—that is when the bottom leaves have turned yellow—when the cob is well on in the glazing stage, as it is termed, and quite ready to be cooked and used on the table. Taking into consideration the difficulty and labor in connection with saving the crop in the shock, and the great danger of it being destroyed by mice, I contend there is only one profitable way in which we can harvest the crop to advantage, and that is by means of the silo, for three reasons:—1st. It can be harvested in this way with less labor and expense than by any other. 2nd. There is less waste than by any other way. 3rd. Silage is fully as good fodder as cut corn stalks dried. After the silo is built, which is by no means an expensive undertaking if properly performed, by harvesting in this way we save all the labor of shocking and stowing away, when once the shocks have dried, along with the almost certainty of its heating when a bulk of it is put together, or if the corn is left and used in winter directly from the shock, it is by no means agreeable work handling it at that time. In cutting the corn, we use a knife with a blade about a foot or more in length, with the face curved slightly backward. Cut with the knife in one hand, and with the other put the corn into heaps just large enough for a man to handle and throw upon the wagon. After cutting, if the weather is fine, it is an advantage to let the corn wilt a day or two before cutting it into the silo. There is very great difference in the quality of the silage. Corn cut in the green stage and siloed at once will give silage of a very sour, acid taste; whereas the sweeter it is when cured, the better fodder it is; but corn cut in the glazing stage and allowed to wilt will make comparatively sweet silage. The acidity of the silage seems to be caused by the corn containing rather much water in its composition, and by allowing it to wilt a short time enough of this unnecessary water is withdrawn. When the weather is catchy and unsettled, however, as very good silage can be obtained from corn cut in the proper stage and siloed at once, it is a mistake to run too great a risk of allowing the corn to get a heavy rain while wilting, as it is so difficult to get it dried, and miserable work handling. In the process of filling the silo, after cutting each load of corn it requires to be spread, so that stock, cob and leaf are all well mixed, and also very well tramped round the edges and in the corners. After filling the silo and allowing it to settle about three days, and filling it up again, and covering the corn with about twenty inches deep of cut straw, it should be well tramped on top every morning during the time of settling, thus keeping the straw close to the corn, and preventing the air from penetrating to any extent. This work having been performed with reasonable care and judgment, there need be no waste fodder, with the exception of two or three inches on top. In comparing the value of corn silage cut in the green stage with corn silage cut in the glazing stage, and corn cut in the glazing stage and cured in the shock, from an experiment carried on at the New York Experiment Station, where three animals were taken and fed upon the three different kinds of food, their voidings kept and analysed to see what amount out of every 100 pounds of solids which the food contained was kept by the animals, it was found that from the immature corn siloed, 66 pounds out of every 100 pounds was kept; from corn cut in glazing stage and siloed, 69 pounds out of every 100 pounds was kept; from corn cut in glazing stage and shocked, 62 pounds out of every 100 pounds was kept. Both experiment and analysis seem to show that, taking into consideration the beneficial change which the corn undergoes in the silo, siloed corn is fully as good fodder as cured otherwise, and although there is no doubt that even yet in the minds of very many

farmers the silo is a humbug, yet I claim there is no reasonable ground for such a belief. I know that the farmer who will observe all the conditions necessary, who will grow the crop and cultivate it as it should be done, who will build his silo right, and harvest his crop properly, to such an individual the curing of fodder corn in the silo is a satisfactory task. In the whole system of operation reasonable judgment must be exercised, and without this show me a line of business in the country at which you can be successful. As silage is not a perfect food in itself, we have never fed it alone, but only use it as a factor in our system of feeding operations. Very many farmers seem to expect too great results from the feeding of silage, and failing this they consider it should be discarded. I contend that if feeding silage will give as good results as feeding other coarse fodder, such as hay, which is our most expensive coarse food, it is much cheaper, and that is what we must look to. Compare the cost and value of a crop of corn and hay. Take a five acre field of each. For the corn:—

Rent @ \$3 per acre.....	\$ 15.00
1/4 Cost of manure, 14 loads per acre, @ \$1 per load.....	\$ 70.00
Hauling and spreading.....	12.00
Flowing from sod 5 days.....	41.30
Seed, three bushels.....	15.00
Cultivating, harrowing, sowing and rolling 2 1/2 days.....	8.00
Hoeing corn 14 days @ 1.25 per day.....	7.50
Scuffling corn 6 1/2 days @ \$2.....	17.50
Right men and 3 teams 3 1/2 days, harvesting.....	13.00
	51.00
Total.....	\$163.30

Twenty tons of corn can be grown to the acre just as easy as two tons of hay. From five acres you get 100 tons at a cost of \$1.65 per ton.

Hay crop.—Rent, \$15; manure, \$41.30; seed, \$5; sowing and rolling, \$3; cutting and harvesting \$5. Total \$69.30, or ten tons for about \$7 per ton. Of course, it may be said that at least another crop of hay can be got from the same seeding, but the manure will be required in order to have a good crop. Suppose 2 1/2 tons of silage is equal to one ton of hay. In growing corn we have for \$4.12 what in growing hay would cost us \$7. But this is the smallest part of the gain, as from the five acres of hay in the one case you get ten tons, while in the other, counting 2 1/2 tons to equal one, you get 40 tons, or four times as much from the same land, which is an effectual answer to the idea which is often held to the effect that it is all right for a man with a large farm to engage in such work, but altogether out of the way for a farmer with a small holding. This, I contend, is a system of operation which particularly belongs to farmers with small holdings, with plenty of help. We often hear the expression from farmers carrying a full stock the year round that they can winter more animals than they can summer, and in fact there is scarcely one of such but whose stock suffers at certain times during the summer season from a shortage of pasture. To such the storing of fodder in the silo for feeding the following summer gives them the key towards the practice and adoption of the soiling system, which must eventually become general in this section of Ontario, where we are subjected to such lengthened periods of drought during the summer season, as will always unfit it from ever remaining a profitable pasturing country. In our system of farming our aim in the future must be, not so much to look for higher prices for our produce, but to strive to produce cheaper. Cheap productions must always be kept in view. It is an old saying, if you wish to succeed, always keep some definite object in view, and strive to attain it. Let this be our object, and let us apply ourselves. Doubtless, to the most of farmers who at present are accustomed to set apart 2 1/2 and 3 acres for the keep of a single animal during the summer season, it is in the very least an extravagant idea to think we should keep an animal the year round upon a single acre of land, but I feel convinced that at no very distant day in this section of Ontario where we are blessed with a naturally fertile soil, this idea shall be realized much more generally than is at present supposed. We must learn to look upon ourselves as manufacturers, seeking on every hand to cheapen the cost of our production by every available means,

and in doing this we may be cheered by the knowledge of the fact that this is the only solid basis upon which men in every line of business are able to gain success and competence. One great mistake is made by farmers in this country, viz., trying to keep more stock than they have sufficient food for, and as the needs and conditions of this province demand that every farmer must farm in order to keep as much stock as he can feed well, and knowing that through corn growing and the use of the silo so much more fodder can be obtained from the same land, it becomes the duty of every farmer to study and investigate the merits and advantages of the ensilage system, as a means of persuading themselves to adopt and practise it.

Weeds.

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

(Continued from page 223.)

3. *Rhus Radicans* (Fig. 18), Climbing Poison Ivy.

This is much like the preceding, but climbs by tendrils, ascending trees as high as forty to fifty feet, or climbing over fences. The stem is quite woody, and sometimes attains a thickness of two inches. Some confound this with the Virginia Creeper, but the leaf clusters of the latter have five leaflets, while this has only three, much wider and more oval in outline. Flowers greenish, and fruit in dull white berries.

Views differ regarding the way in which the poison from these plants is communicated. Some maintain that actual contact is necessary; others that it is given off from the leaves during sunshine when wet by dew; some attribute it to the pollen, and others say that the plant gives off a gaseous vapor. Persons affected show redness about the eyelids, ears and throat. These parts soon show inflamed blotches rising in blisters, the whole face becomes so swollen that sometimes blindness is produced for days. In some cases the poison spreads over the arms and other parts of the body, and the patient suffers with fever and headache, or even becomes delirious. It is not uncommon for those once affected to experience attacks from year to year without coming in contact with the plant again. Remedies: (1) Apply a strong solution of bi-carbonate of soda (baking soda) to the pustules as soon as seen. This is highly commended. (2) Bathe affected parts with sulphate of soda (glauber salts). (3) Rub on a lather made from common potash soap with a shaving brush. (4) Make a paste of sweet cream and gunpowder and apply three times daily to the eruption with a soft feather. This remedy is unfailing and gives relief in a few applications.

These three comparatively common plants should be known by all, and always be destroyed wherever they are apt to be injurious.

LEGUMINOSÆ (Pulse Family).

An order of great economic value, supplying us with some valuable plants, such as beans, peas, clover, etc. The flowers are irregular and in some respects present a resemblance to a butterfly. There are usually ten stamens, nine united into a sort of tube, the remaining one detached from the rest; the seeds are generally borne in pod-like structures.

***Trifolium arvense* (Rabbit-foot Clover).**

Stem erect, about one foot high and branching; whitish flowers, silky and soft; the calyx-teeth fringed with long, silky hairs, giving the head a sort of rabbit-foot appearance. Found in dry spots; very common in parts of Niagara district, especially along Lundy's Lane.



Tuffed Vetch.

Vicia Cracca (Wild Tare) Fig. 19.

Resembles a tare, but has smaller seeds and finer foliage. It bears many bright blue flowers, the tendrils somewhat branched and the root-stock creeping and perennial. It requires thorough cultivation to get rid of it.

***Medicago lupulina* (Black Medick).**

This plant is commonly called Yellow Clover, and is often sown as such. It is much the same as Yellow Clover in chemical composition, but in some parts it has usurped the land and become a weed. It can be distinguished from Yellow Clover by the form of its seed pods, which are kidney-shaped, and turn black when ripe.

***Medicago alba* (Sweet-clover).**

This rank species, 2-4 feet high, has become a weed in several places. It bears white flowers.



Common Yellow Melilot

M. officinalis (Fig. 20).

Much the same, but has yellow flowers; both forms are seen growing by the wayside. In Welland county the railway track is bordered with it. Where either variety reaches the field it soon disappears before thorough cultivation. The discovery within the last few years that plants in the order Leguminosæ possess the power

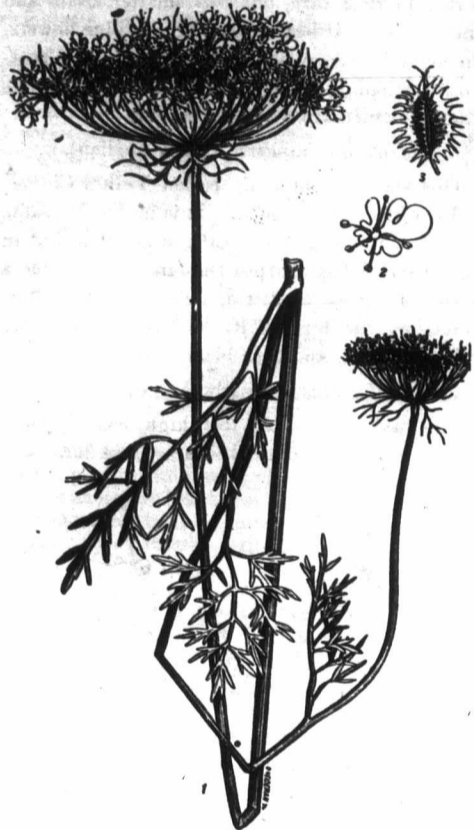
of aiding in fixing the free nitrogen of the air and rendering it fit for plant food will tend to raise the plants of this order, even as weeds, to a more exalted position than formerly.

Upon their roots small tubercles are found which afford a home for certain microbes, now known to be intimately connected with the fixation of nitrogen for plant food. This explains what practice long has discovered, that the use of nitrogenous manures is unnecessary to a great extent to plants of the pulse family. Consequently, even weeds in this order may yet become great factors in restoring fertility to the soil.

(Wild Peas)—A common name for several species in this order considered as weeds, especially in the eastern parts of Ontario. The writer has obtained the seeds of these, planted them with the hope of identifying the exact plants called by this general name. The seeds were obtained from different localities and four distinct kinds have been secured. Reference will be made to these on some future occasion.

UMBELLIFERAE (Parsley Family).

The stems of plants in this family are usually hollow furrowed, and the flowers in umbels (clusters) with stalks the same length. Here we find such plants as the carrot, parsnip, celery, parsley, and carraway.



Daucus Carota (Wild Carrot). Fig. 21.

A biennial, 2-4 feet high and resembles a carrot in many respects. Our common carrot is this naturalized; but as a weed this species has become a great nuisance. Hand pulling and destroying as fast as it produces flowers will be effective. Cutting well below the surface should also be successful.

Conium maculatum (Poison Hemlock).

Smooth, spotted stem 2-4 feet high; plant bluish green; root fleshy. A very poisonous perennial plant. Leaflets have a disagreeable odor when bruised.

Pastinaca sativa (Wild Parsnip).

is the common parsnip of the garden in its wild state. In this condition it becomes hard, with acrid taste and very poisonous. In the wild form it is much diminished in size; the flower clusters are large and made up of many small yellow flowers.

Handy Farm Contrivances.

BY "GEORDIE," GLADSTONE, MAN.

The request in recent issues of the ADVOCATE asking farmers for their experience, is in the right direction. Every intelligent farmer can tell us something. Little helps and aids, and their experience we shall all profit by. Your ADVOCATE is good now; but, as you say, everyone can help. I liked that article on tools which appeared in one or two numbers. If farmers would only save in this way, and stop the leaks, they would profit considerably. I have a few tools myself, and know their value, and the consequence is, when a break down occurs, I am ready to mend. Here is a description of a handy case I made for myself. I got a box at one of the stores 18 inches square, 12 inches deep. The bottom I divided into six compartments for nails of various sizes; these I keep filled. I then made a till about 5 inches deep with four compartments; one holds sewing materials (thread, awls, bristles, wax), another solder and resin, another chalk line and chalk, the fourth odd things, rivets, screws, tacks, etc. A lid is fitted on with leather hinges. Cost, nil. Neatness and comfort secured. I mentioned solder and resin. Now every farmer should get an iron—mine cost me a dollar, but they can be got for less—10 cents worth solder, and 5 cents resin will set him up. Now in this land of tinware where things will leak, such as milk pans or kettle, or the dozen and one things in the kitchen, he can save much vexation of spirit and loss of time in running to town, by learning how to use a soldering iron. Your tinsmith can show you. I picked up my knowledge by watching. A good way is to get a brick, heat your iron, file to a nice point while still hot, put some solder and resin on the brick, and rub your iron well into it till it is "tinned." Experience you will gain after attempting one or two small jobs. Last summer in taking a plow from field to field, my farm-hand dragged the tool, as many others do, to the detriment of the share and coulter. He only did it once. This is how I managed otherwise. I got a piece of poplar about 8 or 9 inches through, and made a big sabot or Dutch boot like this.

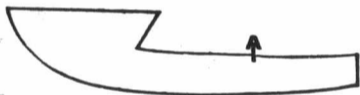


FIG. 1.

It was about 2 feet long, and you will notice I cut it slanting. Now put your plow point in this, resting the land side on A, and away you go. This is easier on the team, for the whiffletrees do not drag on their heels. Better for the plow? Why, certainly. Easier on the man? Of course. You don't break your back holding the plow handles. Cost, absolutely nothing. I like making helps of this kind; things run so much easier. There is a garden marker which I find after all is not original, still I did not know this at the time of making. I took a poplar pole about 4 inches through and 5 feet long. From this proceeded two handles or legs about 18 inches apart. These were fitted into the actual handles. See cut. The idea of using two legs was that the strain would be too great

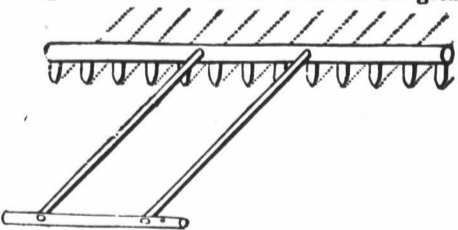


FIG. 2.

on one. Now I bored holes at 6-inch intervals, and made wooden pins to fit, which, of course, were movable. The holes were bored so that when the handle was held up the pins were perpendicular. Use any ordinary garden line, and run the outer pin by it. At one stroke then you can make as many seed rows as you have pins. You can vary the width. For instance, by putting two pins only 6 inches apart, you make a double row for peas or beans. I planted my corn, which I never hilled up, by running the

marker diagonally, and planted two seeds where the lines crossed. Mine was a success; cost, nil. If you haven't a watering can and can't afford to get one, do as I did. Get a wooden pail and bore an inch hole in the bottom, and fit a plug; then take a piece of tin or old stove pipe, and cut a little bigger than the bottom of the pail and tack on. All pails have about an inch space between the bottom and end of staves. You must perforate your tin, say with a nail. This did me two summers, and the pail is still in use as a swill pail. Cost, nil. You have to have a swill pail, anyway.

I should like to have a fling at your correspondent who says, haul the manure directly out onto your fields. Has he ever tried it? I know one who did and had the prettiest crop of weeds you ever saw. Of course, if it is only a feed patch, I suppose you could cut it before the weeds bloomed. But, as possession is nine points of the law, if the weeds ever got on your fields, you are going to have trouble to get rid of them, vide your table of how seeds accumulate.

Notes for July.

In the hurry of haying the quickest plan of curing and hauling hay is the order of the hour. Where a large acreage is to be got in, there is very little time to consider which plan gives the best results. When an extra quality of timothy or clover is the aim, cock up the hay when moderately well cured, and let it stand for forty-eight hours and place this hay by itself, and just see how superior this is to what is drawn from the windrow. This is the way to have hay come out in winter as green as when drawn, and with that aroma about it that is at once an evidence of its being palatable, and the certainty that all the nutriment is retained.

If hay has had eight or ten hours sun, and is still unfit to rake in the evening, it should be turned with a tedder or raked into windrows small enough to turn up the uncured grass before the dew begins to fall. The fresh green hay at the bottom of the swath will not be injured as much as that which is nearly dry. By this means it will be ready to rake earlier next day.

It is in the busy days of haying and harvesting that the cultivator is liable to be forgotten. If the weather is dry hoe crops will suffer. Shallow cultivation is the best remedy for dry weather; this prevents the escape of moisture by evaporation. Whenever cracks or a hard, smooth surface appear, as they always do when dry weather succeeds excessive wet, keep the ground fine and mellow by surface cultivation. If you are inclined to experiment take a wide mouthed glass such as a self-sealing fruit jar or glazed earthenware jar, chill this down with ice, and place the mouth over one of these cracks, cover the jar with several thicknesses of cotton, but first wipe the inside perfectly dry, and then see how much moisture has congregated in the inside in five minutes. By this you will find how much moisture is being lost; the information will pay for the trouble. Shallow cultivation acts like a mulch and arrests much of the evaporation, and the growing crop is benefitted by what would otherwise be lost. When the farmers have learned that cultivation is not alone required to kill weeds but to preserve moisture, they will have learned that which will place many an extra dollar in their pockets. Workmen fancy they must dig down deep in order to produce the desired effect. We have seen more than one field of corn entirely ruined by men who ought to know better. They simply kill every chance of a crop by cutting off the surface roots, by going close and deep to the plants, and yet they fancied they were doing the right thing. An inch and a-half of freshly stirred soil forms a mulch that pretty thoroughly checks evaporation, but when you hear the roots cracking you are too deep and injuring the prospects of a corn crop.

Continued cultivation will oblige the surface roots to seek sustenance deeper down. Again we say be careful, better go too shallow than too deep when cultivating corn the last time.

Don't be afraid of breaking off turnips a few leaves. The most successful root growers keep the ground well stirred between the drills, not only to kill the weeds, but to consume the moisture, without which no crop can grow.

Garden and Orchard.

Our Flower Garden.

BY J. W. HUNTER.

Tuberose.—Started in the house, they may be transferred to the garden now, plunging the pot in the soil up to the rim; and if not in flower by the fall they can then be easily removed to the house.

Dahlias.—These should be staked, as they are in great danger of being broken off by heavy rain and wind storms; and if more than one stalk from each bulb, cut back leaving only one, thereby insuring more and better flowers.

Perennials.—This and next month is a good time to sow all kinds of perennial flower seeds, to be transplanted about October, ready for next season's blooming.

Chrysanthemum is our favorite fall flower, and some of our local florists are so enthusiastic over it, that they have this season grown and distributed free to the school children of the city over one thousand small plants, to be shown at the chrysanthemum show to be held in the fall, for which three valuable prizes will be offered. Give them plenty of moisture and good, rich earth. Pinch back for the last time, and do not give more than four or five hours of sunshine each day.

Annuals.—Stir the ground around them often, keep free from weeds and thin out soon as possible, giving them plenty of room to develop and show their beauty.

Cacti.—Plunge pot in a warm, sunny spot after they have bloomed, and they will complete their growth.

Antirrhinum (Snapdragon).—The flowers are borne in magnificent spikes and in the most glowing colors. Take a bed of these plants and they show us the most striking colors known to Flora's kingdom, and I can hardly conceive of anything finer. Plants propagated from seeds or cuttings make rapid growth. As pot plants, they are hardly surpassed. If you have plants in the garden, take some cuttings and start them now for winter flowering.

Verbenas, Petunias, etc.—To increase the growth and bloom of the above, it is necessary to *peg down*, by taking some of the strong branches to the ground, and fixing them there by using ordinary hair pins.

Cuttings.—For winter-blooming cuttings of geraniums, fuchsias, heliotropes, petunias, candytuft, etc., should be taken and started now.

Lilies.—Those in bloom need abundance of water.

THREE PRETTY CLIMBERS.

Clematis.—No flower has more rapidly advanced in popular favor than the clematis. Within a few years it has become the favorite climber of the world. It makes quick, rapid growth, and produces its beautiful showy flowers in the greatest profusion. For pillars, trellises, etc., the clematis cannot be excelled. The cut herewith is of *Clematis Jackmanni*, which has large, intense violet purple flowers from four to six inches in diameter. This has proved itself to be the most hardy of all the varieties of the old plants, being literally covered with flowers.

Ampelopsis Veitchii.—This variety is also known as the Japan and Boston Ivy. It clings very firmly to the side of the house or wall, whether of wood, stone or brick, and will soon form a perfect mass of foliage. It is a most beautiful climber, and has become a great favorite. During the summer the leaves are a beautiful shade of green, overlapping each other with wonderful regularity, but it is nearly autumn when this unique plant assumes its greatest beauty, when the foliage gradually changes, until the whole plant is a glowing mass of the brightest shades of crimson, scarlet and orange.

Cobaea Scandens.—This is one of the most beautiful of our climbing annuals, on account of

its large size, rapid growth and large bell-shaped flowers, almost an inch and a-half across, and two inches in length. The flowers are at first green, changing to a deep violet-blue. Plants commence to flower when quite young, and continue in bloom until killed by frost. They can be potted and removed to the house for winter flowering. Cobæas set in a row two feet apart, supported by brush six feet high, make an elegant screen.

Picking, Packing and Shipping of Fruits.

BY G. W. CLINE, WINONA, ONT.

PACKING.

I know there are many Canadians who are not posted in the best methods of shipping what they grow, and are losing money every season because they do not make themselves personally acquainted with the commission merchants. I presume there are a great number throughout

altogether to commission men, the buyers know your brand or package in a day or two, and if you are caught with false packages you will be the one to lose, for they will buy your fruit at about half price, on account of the previous bad packing. Remember that trade once dropped because of bad packing and poor fruit is hard to regain, if it ever can be. If you have poor fruit, ship it as poor fruit. Send your good fruit sorted by itself, and if you send poor fruit, don't top out your package with good fruit; you will rue it if you do. If you don't do the packing yourself, watch the man who does. He will not be likely to pack right if not watched and instructed. The idea is just this: if you ever intend to succeed in fruit culture, you must strive to grow the best fruit possible, and pick at the proper time; pack and ship right good fruit, and you need have no fear of the consequence. The buyers are in the market among the sellers every day, and it only takes a few days to find out what kind of fruit the grower is sending, and the buyer is there to buy it on its merits. I will take up each fruit in rotation and give instructions gained by years of experience.

STRAWBERRIES

should be picked clean every second day, if possible; that is, the pickers should be watched to see that they do not run over the patches and leave ripe berries, as berries left to-day by the next picking will be too ripe, and will, if there are several of such in a box, spoil all the others if the weather is warm. How often does word come back from Montreal or Ottawa, or other places, "berries soft and mouldy." Another point is, see that pickers do not fill the bottoms of boxes with green berries and leaves. They have been known to do so in the past, and will do so again. Don't allow pickers to take crates in the field and fill by themselves, or, as a general thing, the two lower courses will not be filled, and you will get the name of not filling your boxes. Berry pickers are, as a general thing, very apt to leave their boxes slack if not closely watched. Always have strawberries picked with stems on, if possible. The general price for picking is one cent per box for strawberries.

RASPBERRIES

require very careful handling. Many pickers crush the fruit, and the whole box becomes soft and the juice runs out, almost spoiling them. Another thing pickers often do is to pull off stems with unripe berries which makes the boxes of fruit look bad, and spoils the sale. In fact, the greatest care must be taken with raspberries, even more so than strawberries, as they spoil more easily.

BLACK CAPS

are not so easily spoiled, so do not need the same watchfulness, except in the matter of seeing that no leaves are put in the baskets.

RED CURRANTS

should be carefully picked with stems on, and great care taken that none of the berries are crushed, and should be shipped in 8 or 12 quart baskets covered with red lino.

BLACK CURRANTS

should always be picked free from stems and well cleaned of all leaves, stems and dirt. Ship them in 12-quart baskets covered with lino.

LAWTON BERRIES

as they are always quoted in the market (though blackberries would be more proper, I think, as there are perhaps a dozen different varieties shipped to market, and the buyers call them all Lawtons), should be as carefully shipped as raspberries. What applies to one will apply to the other, as both are very soft and spoil easily, although I have shipped them to Winnipeg and they arrived in fair order in cool weather.

PEACHES

perhaps the choicest and most expensive fruit that consumers buy, should be most carefully picked. The trees should be gone over several



CLEMATIS JACKMANNI.

the province who would like to know how and when to pick, pack and where to ship their fruits. This is the greatest fruit producing part of Ontario. The amount of fruit that is sent to market by wagon, train or boat every season that is unfit for market is something enormous. Why is it that farmers or fruit-growers, who appear to have enough sense in many other matters, will persist in trying to sell to their city customers or friends fruit that they know is not fit for sale, and packages that they know they have packed with the best berries on top of basket or package, and that the bottom of said package, whatever kind it may be, basket, bag or barrel, is filled with poor, miserable, small and wormy truck, and entirely unfit for food? Farmers and fruit-growers, if you have been doing this, stop at once. To those who are free from the vice, I say, don't commence; you can't do it and make money. Pick and pack your fruit honestly and fairly, if you want to succeed in the end.

CUSTOMERS ARE HARD TO GET.

If you get a good customer, don't try to cheat him by giving him an inferior article for a good one; if you do, he is lost to you. If you ship

times, and only those that are mature picked. Some people, if they find one or two partly soft peaches on a tree, strip the whole tree of its fruit, when the most of the fruit on it should not be picked for a week later. Don't get in too much of a hurry when picking peaches; you will get better prices, your fruit will sell more readily, as customers do not want green peaches; they are worthless. Be very careful when packing that all the large, ripe and best colored ones don't get on top of the basket and the bottom filled with the green and worthless ones I have mentioned above. They are very apt to get mixed in that way, and if you should be behind the door when the customer who bought them for a large price is emptying them out and hear the remarks he makes about your packing, you would begin to think there was something wrong somewhere, and that you would never get anywhere, as Sam Jones puts it. The same picking and packing that applies to peaches will apply to

PLUMS.

Take care and not pick too green; ripe plums sell much better; 8 and 12-quart baskets are the best packages for both plums and peaches when shipping, covered with nice colored lino that suits the color of the fruit.

PEARS

are more difficult to pick and ship than most people think, to have choice dessert or cooking fruit. Take Clapp's Favorite; if picked too late, is all gone at core in a day or two; and if picked too early, will wilt and be worthless. The very best time to pick the fruit is when they part easily at the junction of the stem to the twig or limb. The Bartlett is, I believe, an exception to all others, as it can be picked at almost any time, even allowed to become quite well colored on the tree. Great care should be taken in grading pears. Generally about three grades, extra, No. 1, and No. 2. I believe half barrels and twelve-quart baskets are the package that will bring the most money for the shipper.

GRAPES.

If grape growers would take more pains in picking and packing, they would not grumble so often about low prices. Let growers wait until their grapes are ripe and fit to pick, then pick only the best of them, shipping in the neatest package, taking care that none are crushed in picking, cover neatly, stencil name of grape and who from, and I feel sure that better prices will result, as more grapes of that stamp are wanted. Growers of this fruit are too slovenly, many shipping in dirty baskets, packing good grapes and culls all together, the whole badly smashed. After the best grapes are picked and shipped wine can be made of balance if desirable, or they can be gathered and shipped to market. I have found the ten-pound basket is large enough for all table grapes, and for choicer varieties five and eight-pound boxes, packed in crates, bring the best prices, though in very hot weather the crates do not afford ventilation enough; but late in the season, grapes shipped this way very often bring two cents per pound more than 10-lb. baskets. Everybody buys and eats grapes, and they would buy more if put up in more tempting packages. Let all fruits be picked at the proper time and in the best manner, put in the neatest packages, and, my word for it, you will have less trouble in selling fruit at paying prices. I forgot to mention that in this section we are using only the 24-box gift crate for strawberries, raspberries and blackberries, having discarded the old box crate that was returnable, but which we rarely did get returned. This gift crate costs only about 20 cents per crate, including boxes, and is neat and easily handled; each having a handle, two can easily be carried. You will require

LENS.

Look them up in time, and be sure you get the right colors. Good bright cardinal is best for peaches, pears, and white and yellow plums, and is nearly as good for the dark plums as any. Red and white grapes also require the cardinal, but dark grapes must be covered with purple or plum colored material, which is also often used over dark plums. Never use green, yellow, dark red or blue, if possible to avoid it; the color often sells the fruit, in making it look good or bad in color.

MARKET.

For those who drive to market and retail their own fruit, this will be of no interest; but there are hundreds of people who have to ship, or prefer to ship, or sell to those who do ship. To those I would say, there is no trouble in finding good, honest commission men in any city, who will handle your fruit to the best advantage and remit the proceeds every Monday, if you will only take the trouble to look them up. Many who are now selling their fruit or produce to others, would make more money if they shipped direct themselves. If you are shipping every day, ask the consignee to wire you the price your fruit sold for immediately after sale; thus you know what to do again. Many a time the writer has made from \$10 to \$25 more on a shipment by using the wire a little, thus learning where the best prices are obtainable. Very often you will find that if you ship to a flat market, by the time your shipment reaches its destination the market is up, and the high market down flat. Although not as large a grower of

APPLES

as many, I always pack and ship my own, having done so for many years, nearly every year sending to the Old Country. I think on the average I clear from 50 cents to \$1 per barrel more than those who sell to the buyers. The first necessity is to pick and empty in barrels or heaps most carefully. Apples bruise more easily than most people suppose.

DON'T

wait too long in the fall before picking, for if too ripe they will not ship or keep as well. Grade them in No. 1 XXX, and No. 2 XX. The barrel should be shaken to settle them together every time a measure is emptied. Don't put poor fruit in your best brand. Apples require tight packing, to stand the jar of the cars; if loose when taken on shipboard, the roll of the boat converts them into cider almost before reaching land again. No. 1 fruit should be free from worm holes, knots, scabs or bruises, and as nearly alike in color and size as possible. No. 2 may have some spots, scabs, worm holes, and perhaps some bruises, but should be all fruit that can be used. Don't put in any rotten fruit or trash that you would not use yourself. Stencil your barrel with name of apple, your name, post office and initials of consignee and city, but first find out from the railway companies or steamship companies their best through rates to where you wish to ship, as prices are not all the same for carrying. Send invoice carefully made out of each and every variety in both No. 1 and No. 2 lots; and, I believe, when your returns come, you will have no reason to regret having packed and shipped your own fruit. The main point in picking and shipping fruits is common sense and care.

Poultry.

Poultry on the Farm.

BY IDA E. TILSON, WEST SALEM, WIS.

Whenever thinking of what cannot be eaten or drunk without danger, Mark Twain comes to mind, who says there are so many injurious substances, that he should stop eating entirely, were not the habit so strong. Why fowls will drink filthy, stagnant water, cannot be explained, except by supposing their scientific education has been neglected, and they have never heard of germs and microbes. Prevention meets this case better than philosophy does.

"Water, pure, cold water,
Sparkling and bright,
With its liquid light."

in an accustomed place, ready mornings, when fowls first come forth seeking what they may devour, will thereby get a start of the mud-puddle. If that little red worm, most often seen in impure water, is not the only cause of gapes, it is an important one. The age when little chicks can have water for drink may range from a few days to two weeks, in accordance with vigor of brood, warmth of weather, and kind of food, but the three weeks set by some authorities seem rather extreme and unreasonable. Sweet milk is a perfect food and model drink for "men, women and things."

If from a fresh cow, chicks may need it diluted; unlike the natural acid of fruit juice, a fermented sour is poisonous, hence sour milk needs scalding or a little soda dissolved with warm water then stirred in, lest bowel complaint be invited by its use. Thus corrected, old milk becomes a safe and valuable bone and muscle former. I have read of a poultry woman who, lacking pigs, threw her skim milk on the ground, not knowing what to do with it. Do you think the story could be true? City papers sometimes record cases of poisoning from decayed milk, when milkmen neglected to wash their cans. Hens' milk dishes, as soon as emptied, need a soaking in cold water, and these, with water-dishes, should be well rubbed and rinsed out each time refilled, so no slime can collect at the water-line. A stiff, new cob, of course minus its corn, surpasses even an iron dishcloth. (Patent not applied for.) Rather than wooden troughs, I prefer iron and tin dishes, which can at night be dried and aired somewhat like milkpans. A pancake baker or flat-iron heater from an old cook stove is a fine drinking dish for small chicks, which must have a shallow one or perhaps drown. They will perch on the rim of this and sip away like robins.

A little of most everything and not too much of anything, very well describes the fare required by chicks. Bread or cracker crumbs, bread and milk, custard, oatmeal, milk curd, or "Dutch cheese," are perfectly safe. Hard boiled eggs, sometimes recommended as sole food, may cause bowel complaint if fed oftener than once a day. I find them more digestible when boiled twenty minutes. Chopped, shells and all, with an equal quantity of bread crumbs, a fine supper is had. Boiled potatoes, raw onions, cooked lean meat, chopped together, is a Frenchified, salad-like dish, good once a day or every other day, and makes chicks frantic with delight. Wheat, gravel and bone meal are standards, as soon as they can be swallowed. It seems almost unnecessary to repeat what has so often been written on scalding corn meal and its combinations. The meal must swell, so one acquaintance thought by mixing with cold water some time ahead this process would be over before feeding, but the weather was warm, her meal soured and her chicks drooped. A chick is not of the pig family, and needs no sloppy pudding; this paradox is true, that food should be as dry as it can, and be moist. It is well to feed everything as fresh as possible, never cutting up vegetables, chopping boiled eggs, nor soaking bread in milk far ahead. The vegetables wilt or sour, the eggs' albumen hardens, and the bread becomes doughy. If food gets mixed with manure, and is not placed on clean sward, straw or boards, deleterious results follow. The right amount of food is just what experiment proves will be eaten up clean, and remember that only boa-constrictors can stuff and then fast; all other creatures like frequent, moderate and regular feeding. According to Gen. Sherman's biography, when a young officer on garrison duty he excelled as a chicken raiser, doubtless owing to soldier-like promptness and method.

If experience is the best teacher, the weeks as they pass are likely to develop a volume of instruction. Outside applications of water are no better than inside ones for small chicks. Dew and rain are their worst enemies. Fowls can readily be detained mornings till the dew disappears, and a well-mown range is favorable. But when

"The day is done, and the darkness
Falls from the wings of Night,
As a feather is wafted downward
From an eagle in its flight."

some of our little birds will refuse to fold their wings, and with drabbed feathers continue to chase the moths just tantalizingly come out, patience, guidance, and a supper made the best meal of the day, will conquer. Whenever a shower is seen approaching, some appetizing food must hurry them into their coops, which, to avoid all anxiety in flooded times, can be set on an elevation. I have not doubled up broods to the extent many do, but put only so many with a hen as she can well cover. A good general direction for chicks is, keep their toes dry and their backs warm, for, as some wit has said, they will comb their own heads,

Dairy.

Butter-Making.

BY JOSEPH YUILL, CARLETON PLACE, ONT.

We are of the opinion that Canadian butter will not take the place in the British market that our cheese does until it is made in creameries. We would strongly recommend fitting up our cheese factories with the proper appliances for the manufacture of good butter; and if your patrons would have their cows come in in the fall, say November or December, they could have their milk made into butter in winter, and cheese in summer. If we have the right breed of cows, and feed them properly, they will milk well all winter and all summer too. There are four points essentially necessary for the manufacture of good butter. Two of these belong to the men, and two to the women. The two that belong to the men are: first, the right breed of cattle for the purpose intended; the second is the feed. The two points that belong to the women are attention and cleanliness. First select the breed of cattle best suited for the purpose you intend them for. This being done, next comes the feed. When I speak of food, I mean water as well as food. When cows are milking, feed nothing but sweet and wholesome food. Do not allow your cows to eat at the stable door. I do not mean to say that horses' bedding is bad for young cattle or cows that are not milking, but it is not fit for cows that are giving milk. Allow your cows to get nothing but the purest of water, and of that as much as they will drink, at least twice a day.

The milk from our common Canadian cows when on grass contains 87% water. The cow has no filter to purify water; if the water is impure, the impurity goes straight to the milk. If a cow drinks 100 lbs. impure water, 87% of the impurities of the water will be found in the milk. Never allow your cows to drink water you would not drink yourself. We will take it for granted that the man has done his part; that is, he has got the right breed of cattle and has fed and watered them properly.

Next comes the woman's part. The first is the milking, which should always be done with clean hands. The cow's udder should be either washed or wiped off clean before commencing to milk. Always milk into tin pails, then strain into can 8 inches in diameter and 20 inches deep as soon after milking as possible, then add enough warm water to bring it up to 90° Fah., place it into ice water sufficiently cold to bring it down to 40° Fah. In summer the cream will be all at the top in twelve hours; in winter it will require 24 hours. Skim with a tin cup. Put the cream into a crock or tin can; keep it below 55° Fah. until you have enough to churn. Twelve hours before you have enough of cream to make a churning, take a half gallon of cream, heat it to 60° Fah., keep in a warm place to ripen, warm all the cream you want to churn to 60° Fah., then add the half gallon of ripening cream, stir thoroughly, put on the cover until it is ripe enough for churning, which should be in less than twenty-four hours. Churn as soon as the cream is slightly acid. Never allow it to rise above 62°. If your cream has been taken off without any milk in it, add one-quarter water before churning. If your churn requires a higher temperature than 62°, raise it by adding hot water. Have a yard of best cheese cloth,

run a wide hem in both ends of it, run a wooden rod through the hems and hang over the mouth of your churn and strain the cream through it. There can be no cast-iron rule laid down for the temperature at which you churn; that depends a great deal on the heat of the room you churn in and the time of year, and also the kind of churn you use. In summer we churn at 58° to 60°, in winter 62° to 64°. Churning should be done in from forty-five minutes to an hour. When the particles of butter are the size of a grain of wheat, or even smaller, draw off the buttermilk; let it pass through a fine strainer, to catch any small particles of butter that would otherwise escape. Then put the pin in, and put two pails of cold water into the churn, put on the cover and churn for a moment, draw off the water and repeat the water process, then put in two pails cold water with a pound of salt in it, and churn a little longer and draw it off. Then salt one ounce to every pound of butter, put on the cover and turn until the butter is formed into rolls. By this time the salt and butter will be thoroughly mixed. Lift the butter into a tub with a wooden ladle, and let it remain eight hours. The hand should never be allowed to touch the butter.

HOW TO PREPARE THE TENENTS.

Fill them with fresh buttermilk and let stand for twelve hours; empty out the buttermilk and wash with cold water, using a brush, then fill with boiling pickle, and let stand for twelve hours; scour with coarse salt, rinse with cold water, put in one-half teaspoonful of fine salt, two tablespoons saltpetre, and one tablespoon white sugar in the bottom, cover with a piece of cloth, then it is ready for the butter. When filling the tub, keep the butter high in the centre, so as to run the pickle to the outside of the tub, as that is where the butter spoils first. After the first churning is put in, cover with a cloth and put in an inch of salt over the cloth to exclude the air; when adding each churning, remove the cloth, and put it on again until the tub is full.

Fill it to within a quarter of an inch of the top, cover with two plies of cloth, press the cloth well down round the edge, cover with the following mixture: One pound salt, two ounces white sugar, one ounce saltpetre; wet with boiling water, then allow it to cool, and spread it over the top of the tenent—this will become perfectly hard and air-tight. Have a rough box in the milk room large enough to hold all the butter you will make in the season; as soon as a tenent is full put it into the box, and cover with coarse salt, to keep it from the air. In conclusion, let me say, if women would use a brush instead of a cloth to wash all dishes used around their milk and butter, they would find it much easier to keep the dishes sweet and clean. Although we tell how butter can be kept, we do not recommend keeping it after it is made.

The Adulteration of Butter.

Some idea of the extent to which foreign butter is still adulterated with margarine, in spite of the law passed to check such malpractices, is afforded by a report submitted to the British Home and Foreign Butter Exchange by Mr. Otto Hehner, President of the Society of Public Analysts. Out of 148 samples of so-called butter sent to him to be analysed, during twelve months, eighty-six were found to have been adulterated with margarine to an extent varying from 6 to 95 per cent. This must not be taken to represent the average condition of imported butter, as the samples were sent because they were regarded as suspicious; but the fact that so large a number of adulterations have been detected among samples submitted by the members of one association, indicates fraud on an extensive scale. Unfortunately, as Mr. Hehner points out, the improvement in the manufacture of margarine has been so great that mixtures containing 20 to 30 per cent. of it cannot easily be detected by the best judges without analysis. Moreover, he has every reason to believe that shippers regularly employ chemists to advise them as to the kind and percentage of adulteration which may with some degree of safety be practised. To what base uses is science prostituted, in order that grasping, avaricious men may defraud their fellows!

Dairy Notes and Comments.

A writer in one of the leading American dairy papers says: "The cow wants to see an improved breed of dairymen established." This is a very pithy sentence. There is no doubt room for a great improvement in the breed of dairymen, as well as in the breed of dairy cows. Unless the dairyman is well up in his business, and keeps himself posted, he will find that some one else who is well up will leave him behind.

We noticed when looking over the last report of Mr. John Dike, emigration agent at Liverpool, that the trade in Irish tinned butter continues to make rapid progress. Why cannot Canadians secure some of this trade? There is no reason why some of our best Canadian creameries could not make and put up quite as fine butter as that supplied by the Irish. Would it not be well for our Dairy Commissioner to look into this matter?

There is not sufficient value and importance attached to land plaster as an absorbent and disinfectant in the dairy stables. If used judiciously and carefully it will add many dollars to the value of the manure pile. If from a pint to a quart per day for each cow is used, it will impart a degree of sweetness to the stables not before known to the user. This quantity will absorb all the volatile ammonia, and this, for sanitary, if for no other reason, should not be lost sight of.

Every day the dairy appliances of the factory and creamery grow more and more intricate, which requires the factorymen to be good mechanics, so that the different machinery will do perfect work. The separator and other dairy appliances need and require a mind of a high intellectual type to manage and work them. The market each year is growing more and more exacting; only the very best goods find ready sale. A skilful manager will in the future play a most important part in the education of the patrons, and thus bring up the quality of the milk and cream. To this end he must be posted as to the character of the different foods and their effect on milk and butter. This requires a great amount of preparatory study, and practice as well. Every cheesemaker and buttermaker will do well to take these things into consideration and apply himself.

The Western Fair prize list is now before us. The dairy department is well to the front with some very valuable and important special prizes in addition to the regular prizes. We notice a Bankers' prize of \$100, also a special prize from D. H. Gowing, manufacturer of Arnold's Extract, another from D. H. Burrell & Co., manufacturers of Hansen's Extract and Annatto. There is also one from the Thatcher Manufacturing Co. who are manufacturing butter color, and one from Cornish, Curtis & Greene, who are among the largest manufacturers of dairy appliances in the United States. We also notice a very handsome prize will be given by R. A. Lister & Co., who are manufacturing the celebrated Alexandra Separator, J. S. Pearce & Co. being the Canadian agents for these machines. Our readers who are interested in this work, and have anything to exhibit at this fair, will do well to send for the prize list. Write the secretary, Mr. Thomas A. Browne, London, Ont.

The opinion is being advanced that it will not be many years before the future butter and cheesemakers of this country will have to be graduates of a dairy school. The majority of our butter and cheesemakers are not giving their duties the attention they should, and are not keeping themselves posted. They have learned a little about cheese or buttermaking while working as a second hand in some factory, rarely attend a convention, and they do not take a dairy paper. Some of them express the opinion that the Babcock test is of no use, and that inspectors are a nuisance, and sundry other remarks. Scores of those so-called cheesemakers have never had sufficient education to figure out the dividends for the patrons. They are annually handling thousands of dollars' worth of milk, and are liable at any time to incur heavy losses on account of their lack of knowledge. These so-called cheese and buttermakers will have to reform or quit the business. There will be a day of reckoning for such men.

While a great deal has been written and said about scientific methods in the cheese factory and creamery, the farmer's dairy has been completely lost sight of. The farmer's wife seems to be expected to make good butter without rule or any of the facilities which make possible the system of setting, churning, working and salting; but all is uncertain and haphazard. This should not be. Every farmer's wife should be provided with the proper appliances, from a good thermometer up to a first-class milk house or cellar. If she is not thus provided with these appliances, it is unreasonable and unfair to expect her to make first-class butter.

We like to read of and hear of progressive dairymen. A writer in Hoard's Dairyman tells the following story:—"It is not so very many years ago that one day when the rain was falling in torrents, a man who said his name was Mr. Strong, from Java, came to my house and for hours we talked dairy, silos, and fancy butter-making. The next we heard from him was as a "fancy" dairyman whose six cows had increased to twenty-five, one silo had become two, and the butter was so fine that the supply was not equal to the demand." Now the Dairyman credits him with three silos, forty Jersey cows, and a per head income of \$76 per annum. Dairying does not pay, does it?

At this season the question of bad water and bad odors in the milk will crop up and will be discussed with many cheesemakers. Foul water is an abominable thing and should not be tolerated by any dairyman. No man should allow his cows to drink water that he would not be willing to drink himself. About 87 pounds of every 100 pounds of milk is water. Milk is intended for human consumption, and if the water in the first place is not fit for man to drink, then the milk is not fit to drink or to be made into cheese. Every dairy farmer who has stagnant pools on his farm should be compelled to fence them in and put down a good well, and erect a wind-mill. This would improve the milk wonderfully, and would save the cheesemaker very many anxious days.

What is to hinder any dairy farmer who is desirous of so doing from stepping right into the current of good, pure dairy blood, and in a few years increasing the dairy performance of his cows very greatly. The road has been opened—it has already been travelled. There are farmers who have in this way brought up their herd from an average yield of 150 lbs. of butter per year per cow to 300 lbs. per cow. Let any practical dairyman figure up the profit and difference between the cow which yields 150 lbs. and the one that yields 300 or even 250 lbs. There are some dairymen who have brought their cows up to this degree of perfection, yet their example is lost on the majority of farmers. No practical improvement has been made in their cows since their grandfathers' days. Apparently these people seem to be desirous of hindering instead of helping the work on. Why cannot they move and do something along the lines of improvement? We sometimes wonder if a charge of dynamite would move them on.

Dairy schools and dairy instructors are now the order of the day in England. These schools are of the very highest order of merit, and are supported in part by private contributions. They are being held in nearly all the dairy districts of Great Britain. Every step in the handling of milk for the production of the finest butter is being discussed and exemplified, and the product is submitted to the judgment of experts in dairy markets. A class is made up from those attending who are interested in the practical work of the dairy. At one of these schools the committee in charge exemplified three systems of butter-making. One was the old Cornish system of milk scalding, another the Jersey Gravity Creamer, and the other the celebrated Alexandra Separator. In a two days' trial, from equal quantities of milk, the milk scalded produced 16 lbs. 2½ oz. of butter; the Jersey Creamer, 16 lbs. 8½ oz.; and the Separator, 19 lbs. 14½ oz. The three different samples of butter graded respectively in the Birmingham market as follows:—"Inferior," "fair," and "fine." This is another indication of what the Separator will do towards making fine butter.

The Apiary.

Twenty-second Annual Meeting of the North American Beekeepers' Association.

The above convention was held in the Agricultural Hall, Albany, N. Y., U. S., December 9th and 10th.

G. M. Doolittle considered the bees, the location and the apiarist, the chief factors in bee-keeping. Bees, he stated, could not be produced without good queens. It took twenty-one days to develop the perfect worker from the eggs, and it took about sixteen days more before the bee commenced to store honey. From this the importance of having good queens breed early could be judged.

As to location, some could select their location, others had to take the location they were situated in; those that could select should make a careful choice before settling. A locality that had clover, basswood and fall flowers, was good. If he has two of these it was a fair locality; if only one, a poor location.

Basswood sometimes yielded only three days, and in such a case the necessity would be seen of being ready and having one's dish right side up. It was important to know one's location. Some claimed it was all in a good hive, but the hive was nothing if the right man was not with it.

The apiarist wanted to be a man who looked at the sun, not to see how soon it would go down, but how long it would remain up. Failing to have the bees, meant failure to get the honey. An extra push was required to get bees ready for white clover blossom.

He used to be an enthusiast in the spreading of brood, but it required a wise head to manage that; unless rightly done it had better be left alone. The brood combs should not be spread out, but their relative positions changed. Outside packing had much to do with facilitating building up strong colonies in spring.

The question was asked, Should bee-keeping be made a specialty? The majority appeared to favor combining bee-keeping with some other occupation.

Captain Hetherington, who has over 2,000 colonies of bees, and who has been extensively engaged in bee-keeping, said when he was about sixteen years of age he wrote to Mr. Quinby and asked him if he would advise a young man to make a specialty of bee-keeping, and he said Mr. Quinby advised to the contrary; a good many years later he asked Mr. Quinby if he had changed his mind, but Mr. Quinby said no. Captain Hetherington said he did not know if he was a specialist; he kept bees mainly. Looking back twenty years he thought there were few indeed who were specialists who had made a success of bee-keeping. Mr. Quinby has suggested connecting bee-keeping with dairying, manufacturing, school teaching, &c.

J. E. Crane said that bee-keeping as a specialty carefully carried out was all right. He knew the bee-keepers better in Vermont than any other State, and although not rich, he felt sure they compared very favorably with the farmers.

Captain Hetherington here made an excellent point. He said many bee-keepers he found had energy, they were intelligent, they know what is wanted, such as a good queen, that they should get ready for the honey flow, that they should have good worker comb, and stores enough. The failure lay in that they thought they had these conditions, but they were often mistaken; they should make a point of knowing. It would be well to pause and reflect over our own failures, and many of them can doubtless be

traced to this fault. We thought our bees had enough for winter, but when we came to pack them we found how mistaken we were. We thought the queen was young and prolific, but when spring came, the season when every day counts, and queens are scarce and expensive, we found but few eggs deposited in the hive. We thought there was plenty of room in the hive, when swarming awakens us to the fact the bees have been idle during the best of the honey season, and the hive has no more room in it. We thought the moths were not working in the combs, when we find that they have destroyed dollars' worth of them. We thought there was abundance of room in the can when the honey is running in it from the extractor, and we find the floor a sea of honey and dollars' worth of honey lost. The consensus of opinion appeared to be that bee-keeping should be started in a small way, and as experience and success warranted, the apiary enlarged.

A paper by W. F. Clarke next received attention. Mr. Clarke thought swarming was an abnormal condition of the hive. He had during the past summer given his bees plenty of room and only one out of six had swarmed. It was thought that in running for extracted honey it was a comparatively easy matter to prevent swarming by shading, ventilating and room, but the trouble came in when taking comb honey, because then the colony had to be crowded to a certain extent. Some had tried removing the queen just before the honey season; the objection was the labor and care required in getting the queen, and then reintroducing. There is no doubt this method is not one favorable to the farmer, as the less "tinkering" he does with his bees the better. For a man who does a great deal of work in the apiary and who has his attention strongly fixed on the bees, it may work. Some thought the black bees were less liable to swarm than other races, but this was solely because they were less energetic. Swarming was to a certain extent considered desirable, as the new swarm gave the best results in the taking of comb honey.

The plan of C. W. Ford was given. He has two scantlings crossing one another at right angles, and where they cross revolve on a post in the ground; on each end a swarm of bees is placed as they come from the cellar and the affair given a quarter of a turn every day. The flying bees all get into a new hive every day, and it is claimed will not swarm.

President Elwood, who has about 800 colonies of bees, thought that the strain of bees made quite a difference; some strains were less liable to swarm than others. We should breed for non-swarming strains. He practised breaking down queen cells. It would not do to examine combs with the bees on; they must be shaken off so as to expose every part of the combs and destroy every cell. When examining the bees, he destroyed all old queens and had them replaced by young later. If a young queen, a comb of brood and bees is taken out with her, and at the close of the honey season she is returned to her own hive.

TO BE CONTINUED.

Shropshire Sheep Record.

Through the courtesy of Mr. Mortimer Levering, the secretary, this office is in receipt of the seventh volume of the American Sheep Record. This book is more than a third larger than any of its predecessors, and contains the pedigrees of 11,076 sheep, or from No. 21,173 to 32,248 inclusive, together with indices of names and numbers of the sheep recorded in it, lists of members and their addresses, names and addresses of breeders, owners, and importers, also transfer of sales. The system of searching pedigrees is simple and convenient. To the efficient management by the secretary and editor, together with the systematic manner in which the record is kept, may be largely due the wonderful popularity this breed of sheep has attained.

Experience has proved that when cows are provided with shade and shelter from the hot sun for a few hours in midday when grazing they produce a much larger quantity of milk and not only a larger quantity, but it is of a much better quality.

The Toronto Exhibition—\$150,000 to be Expended in Improvements.

The directors of the Toronto Industrial Fair intend expending \$150,000 improving their exhibition grounds, which should make them second to none on this continent. The improvements contemplated are as follows:—New grand stand, 675 feet long to seat 12,000 people; New horse ring, track, fencing, draining and grading, etc., \$58,752; 800 new horse stalls, 600 cattle stalls, new sheep and pig buildings, \$78,000; 2,000 feet of fencing to enclose new ground, \$1,000; re-arrangement of fencing in old ring, \$400; enlargement of carriage building, \$5,500; 1,700 feet of new fencing on Dufferin St., and 2,500 feet along Grand Trunk Ry., \$2,100; architect's fees and sundries, \$4,246; total, \$150,000.

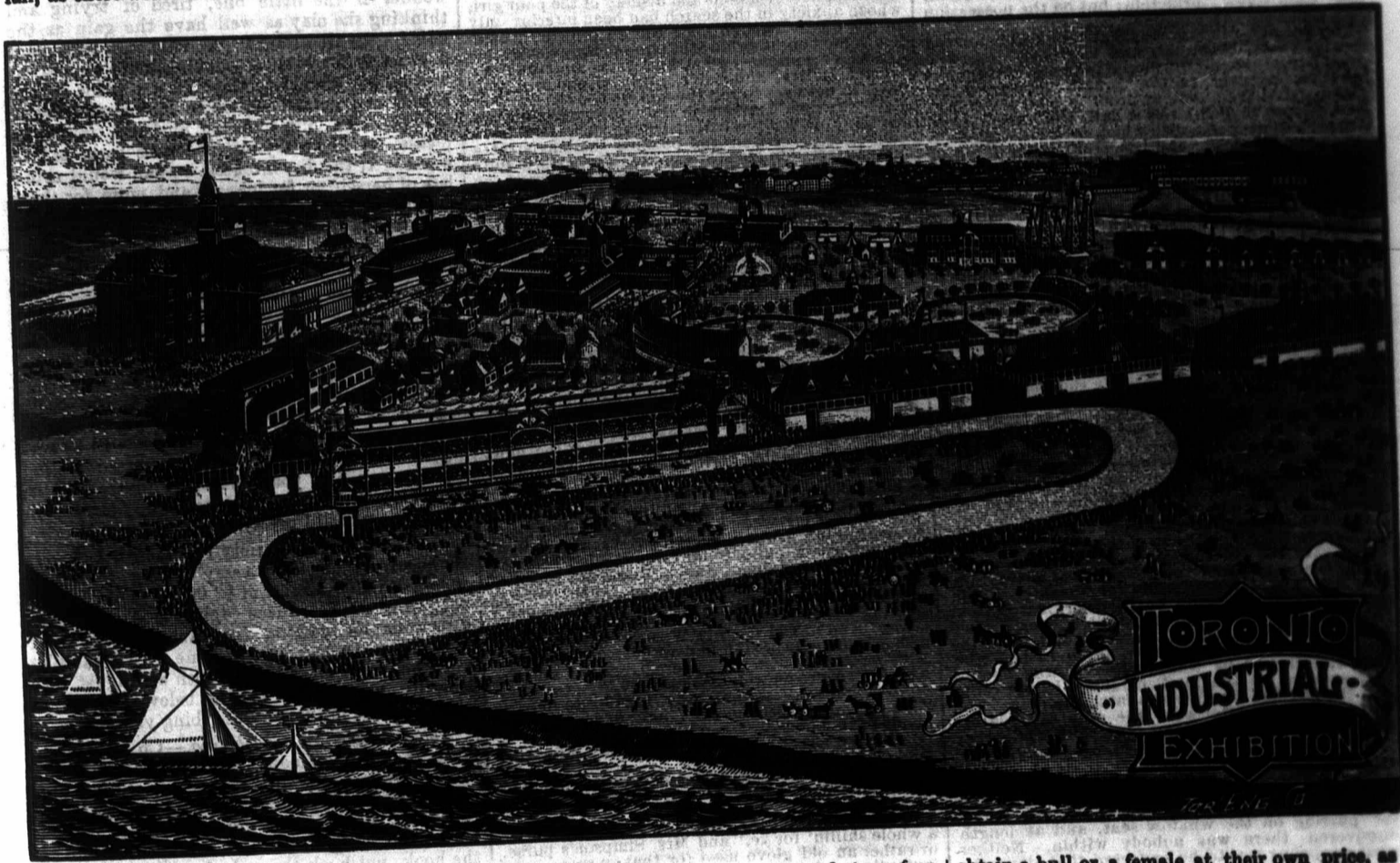
The erection of the new grand stand and some new stables, the enlargement of the carriage building and the construction of the new half-mile track and horse ring, will be done in time for this year's fair, which opens on the 5th of September, but it is probable that the balance of the work will not be commenced until the fall, as there would not be time to complete the

grounds showing the position of the new track and grand stand. The old ring will be converted into smaller rings for the judging of cattle and the heavier classes of horses.

The proposed improvements have given a great boom to this year's fair, as already the number of entries and applications for space at this time are far in excess of the same period in previous years. The new Lieutenant-Governor of Ontario, Hon. G. Kirkpatrick and Mrs. Kirkpatrick, will formally open the show on the 6th of September.

The prize lists for this year have been mailed to all parts of the country, but should any of our readers have failed to receive one and would like to possess a copy, a post card addressed to Mr. H. J. Hill, the manager at Toronto, will bring a prompt response. Intending exhibitors are reminded that all entries in the live stock department must be made before the 16th of August, and in the Agricultural and Horticultural departments before the 24th of August. The work of the Secretary and his staff and the compilation of the official catalogue would be rendered much easier if exhibitors would be prompt in making their entries. The

colored skin, and, to judge from the calves we saw from him, a grand stock-gutter. Among the other bulls, of which there were several on hand, we noticed a very nice two-year-old of Mr. I. J. Clapp's breeding, and a yearling bred at the farm from Ontario's Pride, and out of a cow purchased from Mr. Clapp. This last we fancied very much, and if he passes into good hands at the sale, we shall expect to hear of him again. The cows and heifers were an excellent lot, some of the young things being especially promising; and it may be as well to say here, as Guernseys are not perhaps as widely known throughout Ontario as they should be, that there is no breed of dairy cattle in more favor in the south of England than the Guernseys, possessing as they do considerably more size than the Jersey. They are very handsome cattle, and when crossed with grade cows the bulls not only impress very strongly their excellent dairy properties on their offspring, but also leave calves of sufficient size to enable the steers to be fed to advantage. From our own experience with Guernseys in past years we would very strongly recommend the breed be given a more thorough trial throughout Ontario; and certainly this sale will be an excellent opportunity for parties to



whole of it previous to the fair. It is proposed, however, to carry on the work day and night by electric light and with different gangs of men to get it completed in time, if possible. The new grand stand will be 675 feet long by 100 feet wide and two stories in height, the lower floor seating 8,000, and the upper floor 4,000 persons. It will contain 12,000 chairs and 26 private boxes, and will be provided with every accommodation for the comfort of the visitors. The basement will be asphalted and fitted up with refreshment counters, cloak rooms and wash rooms, etc. In front of the stand, and between it and the track, will be a lawn for the use of occupants of the stand, 700 feet long by 75 feet wide, with a gradual slope down from the stand to the ring fence. The track itself will be the standard half-mile track, 70 feet wide in front of the stand and 60 feet on the back stretch. Inside the outer track will be a second track for the exhibition of harness and saddle horses, when the outer track is in use for speeding purposes. The new stables, cattle stalls, sheep and pig buildings will be on the latest improved plans, and will have every known convenience for exhibitors. We present our readers with a view of the exhibition

Toronto Association are determined to refuse any entries not made before the above dates.

Important Sale of Guernseys and Yorkshires.

In our advertising columns will be found an announcement from Mr. George Pepper, the well-known Toronto horseman, who lately purchased the farm of Messrs. Wm. Davies & Son, in Markham, together with the herds of pure-bred Guernseys and Improved Large Yorkshires.

Mr. Pepper announces a very extensive credit auction sale of Guernseys and Yorkshires, as well as a number of very well-bred saddle and carriage horses. A member of our staff visited Roseberry Stock Farm a few weeks ago. The Guernseys, which number about eighty head of pure-bred registered and high grade cattle, were found in the very pink of condition. The foundation stock was purchased from the herd of Hon. Sir John Abbott, of Montreal, while more recent additions have been made from the famous herd of the Hon. I. J. Clapp, Renosha, Wisconsin, U. S. The bull at the head of the herd now is Ontario's Pride, bred by Sir John Abbott, a capital pattern of a dairy bull, with a beautiful mellow hide and deep orange

obtain a bull or a female at their own price, as the herd combines individual excellence with some of the best blood in America.

It is almost needless to say anything about the imported Yorkshires, as while in Messrs. Davies' hands the herd made a widespread reputation. Sufficient, therefore, to say that the stock was purchased from such well-known breeders as Messrs. F. Walker-Jones and S. Spencer, in England; and Messrs. Ormsby & Chapman, in Canada. The offerings will comprise boars and sows of all ages, including a number of very fine sows in pig. The boars at the head of the herd are, Kinicroft Justice, an imported boar of Spencer blood, and Kinicroft Hero, imported from the herd of F. Walker-Jones. These have both proved themselves excellent breeding pigs, and the young boars of their get will be found worthy the attention of buyers.

Among the horses to be offered will be found a number of extra well-bred youngsters, as well as a few mares bred to the imported Hackney, Sea Gull, and to the sweepstakes thoroughbred horse, Mikado, winner of so many first prizes throughout Canada. Mr. Pepper's reputation as a horseman should be in itself sufficient to guarantee the excellence of this portion of the stock.

Family Circle.

THE SILVER SPOONS.

The Parish of Bathgate, in Linlithgowshire, ought to be reckoned among the classic spots of Scotland, inasmuch as it formed part of the dowry which Robert the Bruce bestowed on his eldest daughter, Margery, when she married Walter, the high steward of Scotland, and thus became the progenitrix of the royal and unlucky house of Stuart. Lying midway between Edinburgh and Glasgow, those rival queens of the east and west, but out of the common track of traffic and travel, it has been for ages a pastoral parish of small and rather backward farms.

Of late years coal has been found there, and steam and trade, which bid fair to leave the world no rustic corner, are rapidly turning it into a mining district, which nobody thought of about the time of the general peace, when Bathgate lived on its own oats and barley, wore its own hoddie gray and had but two subjects of interest—the corn market and the kirk session. Among its peaceable and industrious population there was one dame who, though neither the wealthiest nor the best born, stood in her own esteem above all but the laird and the minister, and her style and title was Widow Simpson. This lady valued herself, not on the farm left her by the good man who had departed this life some seven years before the commencement of our story, for its acres were few and they consisted of half reclaimed moorland; not on her grown up son Robin, though he was counted a thrifty housekeeper though it was known to be on the "tight screw" principle; but on the possession of a dozen silver teaspoons.

Her account of them was that they had belonged to the young chevalier, and had been bestowed upon her by her grandfather in return for entertaining that claimant to the British crown on his march from Culloden—in proof of which she was accustomed to point out a half obliterated crest and the initials C. S., with which they were marked. The widow's neighbors, however, had a different tale regarding their coming into the family. It was to the effect that her grandfather, who kept a small inn somewhere in Fifeshire, had bought them from an ill-doing laird for three gallons of Highland's whiskey, and bestowed them on his granddaughter as the one of his family most likely to hold fast to such an important acquisition.

In the family resided in the capacity of "help" one Nancy Campbell, a girl about nineteen, who was suspected of having taken a fancy to Robin, who reciprocated the sentiment. Nothing however would soften the heart of the widow as regards a match, until at last the following event occurred and caused her to give way: About the haymaking time a distant and comparatively rich relation was expected to call and take tea one evening on his way to Linlithgow. It was not often that this superior relative honored her house with a visit, and Mrs. Simpson determined that nothing should be wanting to his entertainment, brought out the treasured spoons early in the forenoon, with many injunctions to Nancy touching the care she should take in brightening them up.

While this operation was being conducted in the kitchen, in the midst of one of those uncertain days which vary the northern June a sudden darkening of the sky announced the approach of heavy rain. The hay was dry and ready for housing; Robin and two farm men were busy gathering it in; but the great drops began to fall while a considerable portion yet remained in the field, and, with the instinct of crop preservation, forth rushed the widow, followed by Nancy, leaving the spoons half scoured on the kitchen table. In her rapid exit the girl had forgotten to latch the door. The weasel and the kite were the only predators known about the moorland farm, but while they were all occupied in the hay field, who should come that way but Geordy Wilson.

Well, the kitchen door was open, and Geordy stepped in. He banged the kettle with his staff, he coughed, he hummed, he saluted the cat, which sat purring on the window seat, and at length discovered there was nobody within. Neither meal nor penny was to be expected that day; the rain was growing heavier, some of the hay must be wet, and Mrs. Simpson would return in bad humor. But two objects powerfully arrested Geordy's attention: one was the broth pot boiling on the fire and the other the silver spoons scattered on the table. Bending over the former Geordy took a considerable sniff, gave the ingredients a stir with a pot stick, and muttered "Very thin." His proceeding with regard to the latter must remain unmentioned; but half an hour after, when he was safely ensconced in a farm-house a mile off and the family had been driven within doors by the increasing storm, they found everything as it had been left—the broth on the fire, the cat on the window seat, the whitening and flannel on the table—but not a spoon was there.

"What's the spoons?" cried Mrs. Simpson to the entire family, who stood by the fire drying their wet garments. Nobody could tell. Nancy had left them on the table when she ran to the hay. No one had been in the house, they were certain, for nothing was disturbed. The drawer was pulled out, and the empty stocking exhibited. Every shelf, every corner, was searched, but to no purpose the spoons had disappeared and the state of the farm-house may be imagined. The widow ran through it like one distracted, questioning, scolding and searching. Robin, Nancy and the farm men were dispatched in different directions as soon as the rain abated, to inform the neighbors, under the supposition that some strolling

beggar or gypsy might have carried off the treasure, and would attempt to dispose of it in the parish. Nobody thought of Geordy Wilson. He had not been spied from the hay field; his circuits were wide; his visits to any house were not frequent; and if he avoided Widow Simpson's from the day of her loss, it was believed Geordy knew that neither her temper nor her liberality would be improved by that circumstance.

Lost the spoons were beyond a doubt, and the widow bade fair to lose her senses. The rich relation came at his appointed time, and had such a tea that he vowed never again to trust himself in the house of his entertainer. But the search went on; rabbits' holes were looked into for the missing silver and active boys were bribed to turn out magpies' nests. Wells and barns in the neighborhood were explored. The cries of the three nearest parishes were employed to proclaim the loss; it was regularly advertised at kirk gate and market place, and Mrs. Simpson began to talk of getting a search warrant for the beggar's meal pouch. Bathgate was alarmed through all its borders concerning the spoons; but when almost a month had worn away and nothing could be heard of them, the widow's suspicions turned from beggars, barns and magpies to light on poor Nancy. She had been scouring the spoons, and had left the house last; silver could not leave the table without hands.

It was true that Nancy had always borne an unquestionable character, but such spoons were not to be met with every day, and Mrs. Simpson was determined to have them back in her stocking. After sundry hints of increasing breadth to Robin, who could not help thinking his mother was losing her judgment, she one day plumped the charge, to the utter astonishment and dismay of the poor girl, whose anxiety in the search had been inferior only to her own. Though poor and an orphan, Nancy had some honest pride; she immediately turned out the whole contents of her kist (box), unstrung her pocket in Mrs. Simpson's presence and ran with tears in her eyes to tell the minister.

As was then common in the country parishes of Scotland, difficulties and disputes which might have employed the writers and puzzled the magistrates were referred to his arbitration, and thus law suits or scandal prevented. The minister had heard—as who in Bathgate had not—of Mrs. Simpson's loss. Like the rest of the parish, he thought it rather strange; but Nancy Campbell was one of the most serious and exemplary girls in his congregation, and he could not believe that the charge preferred against her was true. Yet the peculiarities of the case demanded investigation.

With some difficulty the minister persuaded Nancy to return to her mistress, bearing a message to the effect that he and two of his elders who happened to reside in the neighborhood would come over the following evening, hear what could be said on both sides, and if possible clear up the mystery. The widow was well pleased to have the minister and his elders come to inquire after her spoons. She put on her best mitch—that is to say, cap—prepared her best speeches and enlisted some of the most serious and reliable of her neighbors to assist in the investigation.

Early in the evening of the following day—when the summer sun was wearing low and the field work was over—they were all assembled in the clean scoured kitchen, the minister, elders, and neighbors, soberly listening to Mrs. Simpson's testimony touching her lost silver, Nancy, Robin and the farm men sitting by until their turn came; when the door, which had been left half open to admit the breeze—aside. And in slid Geordy Wilson, with his usual accompaniments of staff and wallet.

"There's nae room for ye here, Geordy," said the widow; "we're on weighty business."

"Weel, mem," said Geordy, turning to depart, "it's of nae consequence. I only came to speak about your spoons."

"Hae ye heard o' them?" cried Mrs. Simpson, bouncing from her seat.

"I couldna miss bein' blessed wi' the precious gift of hearin, and what's better, I saw them," said Geordy.

"Saw them, Geordy? What are they? and here's a whole shillin' for ye," and Mrs. Simpson's purse, instantly produced.

"Weel," said Geordy, "I slipped in ae day, and seen the seller unguarded I thought some ill-guided body might covet it, and jist laid it by, I may say, among the leaves o' the Bible, thinkin' you would be sure to see the spoons when you went to read."

Before Geordy had finished his revelation Nancy Campbell had brought down the proudly displayed but never opened Bible, and interspersed between its leaves lay the dozen of long sought spoons.

The minister of Bathgate could scarcely command his gravity while admonishing Geordy on the trouble and vexation his trick had caused. The assembled neighbors laughed outright when the daft man, pocketing the widow's shilling which he had clutched in the early part of his discourse, assured them often the spoons would be certain to turn up. Geordy got many a basin of broth and many a luncheon of bread and cheese on account of that transaction, with which he amused all the firesides of the parish. Mrs. Simpson was struck dumb even from scolding. The discovery put an end to her ostentatious professions, and, it may be hoped, making amends for her unjust imputations on a daughter-in-law within the same year, and it is said there was peace ever after 'n the farm-house; but the good people of Bathgate, when discussing a character of more pretense than performance, still refer to Widow Simpson's spoons.

Minnie May's Dep't.

MY DEAR NIECES:—

There is nothing so adverse to the comfort of a household as discontent, and if we let the kill-joy grow, there will be no end to the destruction it will cause. The discontented woman thinks her neighbor's house far the prettier, though her own may be the larger and more comfortable; then her children are not as pretty nor as good as others she knows. Well; the more admired children are puny little creatures, with not enough of strength to romp and play as her's do. The dresses she has are not grand enough. Grandeur would not suit her surroundings or position. And her kind husband, like a sensible man, is laying by a little every year against the time when neither can work any more, to be enjoyed in their old age. Believe me, there is nothing lacking in your surroundings to prevent your home being the happiest on earth, your children the sweetest and dearest, and everything about you as lovely as Eden, except a little less selfishness and a little more self-respect. Only think how discouraging to a child never to do or say anything that pleases you! And who can wonder if the little one, tired of trying and thinking she may as well have the gain as the name, goes all wrong? A little encouragement does go so far towards making little people, as well as big ones, feel they have a place in the world, and spurs them on to higher and better things. The long-suffering husband, failing to please, gives up trying, and goes from bad to worse. If the discontented woman would think less of herself, or for herself, and more for those about her, she would make the most of her surroundings and find much to reconcile her to her lot. There is a great want of the proper pride about people who feel that the possessions of everybody else are better than their own. Now, the way to cure this bad habit is to continue trying to do and think for the comfort of others. Make your meals appetizing. Give more thought to the care of your house. Put out your best china sometimes; it is as easily washed as the everyday set. Say cheerful things; cease finding fault, and you will be surprised how soon the worried, fretted feeling passes away, and your efforts to please will be appreciated and returned to you fourfold in heartily expressed praise. MINNIE MAY.

P. S.—By way of variety this month I change the competition from essay-writing to handiwork, and offer a prize of \$2 00 for the prettiest pattern of crocheted lace edging in cotton, with directions for making the same. The work must be clean and evenly done. All samples must be in our office by the 10th of August. To simplify your work I give below a form of abbreviations for use in describing your pattern.

Abbreviations in Crocheting.—Cb, chain; a straight series of loops, each drawn with the hook, through the preceding one. Sl st, slip stitch; put hook through the work, thread over the hook, draw it through the stitch on the hook. Sc, single crochet; having a stitch on the hook, put hook through the work, draw the thread through the work and the stitch on the hook. Dc, double crochet; having the stitch on the hook, put the hook through the work, and draw a stitch through, making two on the hook; take up the thread again and draw it through both stitches. Tc, treble crochet; having a stitch on the hook, take up the thread as if for a stitch, put the needle through the work, and draw the thread through, making three on the hook; take up the thread and draw through two, then take up the thread and draw it through the two remaining. Stc, short treble crochet; like treble, except that when the three stitches are on the hook, instead of drawing the thread through two stitches twice, it is drawn through all three at once. Ltc, long treble crochet, like treble, except that the thread is thrown twice over the hook before inserting the latter in the work; the stitches are worked off two at a time, as in treble. Extra long stitches; twice the thread three times around the hook, work as the treble stitch, bring the thread through two loops four times. P, picot; made by working three chain, and one single crochet in first stitch of the chain.

Tired Travellers.

Poor monkey and poor traveller, wearied with their journey! Foreigners both, one from Italia's sunny shores by the blue Mediterranean, and the other from the groves of his eastern home, from whence the coconuts and the spices come. The hand-organ is laid aside, the music is still, the monkey rests from climbing over the difficulties presented by the givers of the cents, and sad enough he looks. Even in his antics, which are most amusing, there is something sad in a monkey, dressed in a red coat, earning his living with his antics, and travelling up and down over the country, suffering or rejoicing, as fortunes use him and his master. The climate is hard on them here, and their lives are far from being enjoyable. Most human are they in look and gesture, and very interesting, but somewhat mischievous, playing queer pranks on their owners, and on his pets, if he be foolish enough to have others after this one comes.

PRIZE ESSAY.

Travelling as an Educator.

BY EVELYN L. LONDON, ONT.

In no other form of education is the principle that "Whosoever hath, to him shall be given" more forcibly illustrated than in the subject before us. Many who travel, do so, figuratively speaking, with their eyes shut. Just in proportion as the powers of observation are developed, and the mind stored with the knowledge of past events, will travelling prove an educator.

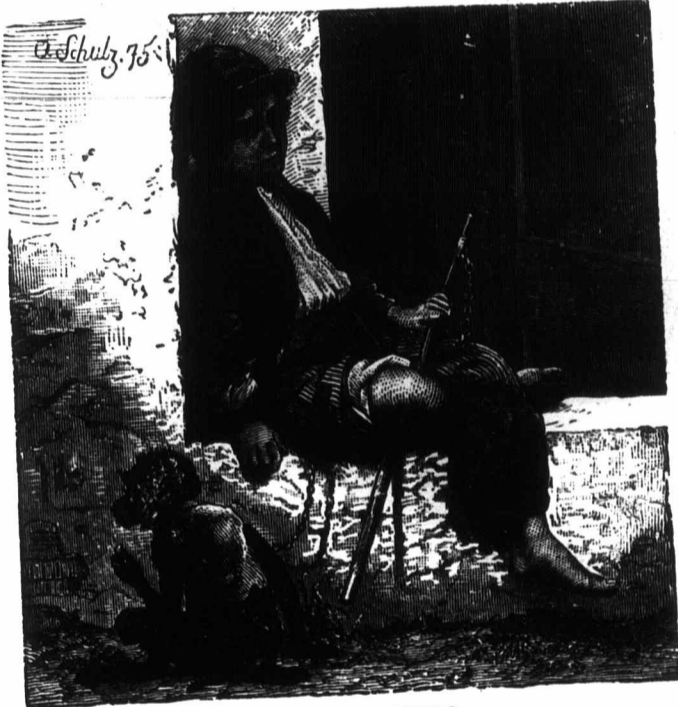
The effects produced by it differ greatly with the countries visited. On the continent of Europe almost every foot of land, particularly in the southern and western portions, teems with historical associations; these in many cases being the chief attraction. The battles of ancient Greece and Rome seem almost to be present to our sight as we visit the fields where the clash and din of arms once resounded. Then with what different feelings do we view the Catacombs where the early Christians met together for their services of prayer and praise, and where they placed with loving care the earthly remains of those who yielded their lives for their faith. Passing through Spain, with its Moorish suggestions, and across sunny France, with its recollections of tottering powers and revolutionary cries, we cross the channel and come to that land which, next to our own, holds first place in our affections. Time and space do not permit that we should even mention the many places, both of natural beauty and historical interest, with which it is crowded, from the southern portion to the "land of the heather", whose beauties have been immortalized by the Great Wizard of the North, not forgetting the Emerald Isle, of which the poet Moore so sweetly sings. Travelling amongst these scenes in the old land brings the past before us with great vividness, and gives it a reality which mere reading could never do. It is upon exactly the same principle that we show a picture to a child, thus presenting to his mind ideas which it is doubtful if mere words could ever convey.

When we travel in the far East our thoughts must go back even to the birth of the human race, and the events recorded in Holy Writ, and we are at once impressed by the totally different conditions of life, manners and customs, which contrast so strongly with those to which we are accustomed in our western land.

Coming westward again to our own continent, we cannot fail to notice that life gathers momentum as it rolls toward the west, and that here the average man lives immeasurably faster than in the older countries. He crowds into his life, or, at least, endeavors to crowd into it, that which some years back no one person would ever think of attempting. In many of the cities on the continent of America the one object which seems to be considered worthy of effort to obtain

is wealth. Everything else is of secondary consideration, and must take a secondary place. Nothing is counted too dear to sacrifice in its attainment, and a man is considered successful only in so far as he becomes rich in worldly possessions.

Travelling in our own land, our broad Dominion, should surely educate us to appreciate more fully her boundless resources, her great natural beauties, her wonderful possibilities—should stir up within us a more patriotic spirit and a greater love for the broad, free land in which we dwell. We, as Canadians, are not half enthusiastic enough about our country, and only need to travel upon her great rivers and lakes, and amongst her mountains, rivalling in beauty and grandeur the famous Alps, crossing on our way the rolling prairie lands, rich and fertile, to give us a true sense of her greatness. Thinking of mountains recalls the introductory chapter in one of Charles Kingsley's novels, in which he remarks upon the number of heroes which have sprung from mountainous countries. It seems as if the courage and hardihood requisite for the dwellers there stand them in good stead in the battle of life. Even the traveller among mountain scenery must, for the time being, be lifted out of himself and brought nearer to the great Creator, whose hand hath formed both mountain and plain.



TIED TRAVELLERS.

Then, again, there are other ways in which travelling educates. It brings us into contact with our fellow man, broadens our sympathies, and does away to a great extent with the petty localizing influences which surround us. We are so apt to be occupied with our own small affairs to such an extent that we have neither time nor inclination to look out into the world about us and see how others do. Travel must, to a large extent, do away with this and open our eyes to much that would otherwise never be known. That which we read never comes home to us with such force as that which we see and experience for ourselves.

All these ways in which travelling educates may be summed up under two heads. The grandeur and beauty of natural scenery should lead "from Nature up to Nature's God"; and as we are stirred by the remembrance of those who have passed away, but have left their impress upon the world's history, surely there should arise within us the desire so to live, that, even in some small degree, we may benefit our fellow man.

In the after part of the day, when the main business of life has been attended to, take recreation; thus resting the working faculties, while exercising those which have been idle; and so giving occupation each day for the whole man.

Humorlets.

A convict, however poor, can always have a watch and chain.

This is a glorious and favored land for the fellows who don't get left.

It's smitten at first, and it's mitten later on; yet there is a heap of difference.

Decollete boots show a low tied in the affairs of men.

There are a great many p's in pepper, but not half so many as there are in coffee.

There isn't so much atmospheric depression when a pie is formed as there is when a form is pied.

We hear of a man in Duluth whose breath is so strong he can't hold it more than ten seconds. It is only the unsophisticated maiden who likes moonlight nights. The others prefer the dark, genuine article.

The most afflicted part of the house is the window. It is full of panes; and who has not seen more than one window blind?

"It's never too late to do good." Reckon that's why so many wait until they are going to die before they begin to do good.

It must be hard on a talkative woman to marry a barber. Whenever she'd think she had the last word, he'd be sure and have the "next."

"Lemmy, you're a pig!" said a father to his son, who was five years old. "Now, Lemmy," he continued, "do you know what a pig is?" "Yes, sir! A pig is a hog's little boy."

"What did Adam and Eve wear before they put on aprons?" asked the teacher. And after a moment's hesitation the new boy from Hardacre Crosslot said: "Nuthin' but bathin' suits."

One of the greatest puzzles to the observing spectator who watched the youngsters playing copenhagen, was to know why those girls who fought so hard against being kissed played the game at all. They didn't have to.

The Cleveland Medical Society expelled a doctor for agreeing to take no pay if he did not effect a cure. The unanimous opinion expressed was that the establishment of such practice would fill the almshouses with physicians.

He sat on a log on the banks of the Arkansas creek, when a traveller came along and saluted:

"Good day, mister. Waiting for a rise!"

"That's just what I am waiting for," was the reply.

"Got a flat-boat up stream?"

"No, sir. I'm a government engineer. Congress has appropriated \$18,000 to improve the river, and I'm waiting for a rise so I can find the stream. How long since you saw anything of it?"

Silence is the fittest reply to folly. Much learning shows how little mortals know. Every person has something about him to spoil him.

Troubles are like dogs; the smaller they are, the more they annoy you. It does not take long for a man with a small mind "to make it up."

Gossip is defined as putting two and two together and making five out of them. The road to ruin is always kept in good order, and those who travel it pay the expenses.

The first principles of economy are: Get only what you need, and don't waste what you get.

The shortest Parliament that ever sat, met in the reign of Edward I., and sat one day; and the longest was in the reign of Charles II., which met and sat for seventeen years.

All great things are done little by little. Atoms make worlds. The greatest fortunes consist of farthings. Life is made up of moments, and a succession of well-spent moments makes up a well-spent life.

Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES:—

As I sit here in my old arm chair, looking over my spectacles, wondering what to write this time, the birds are singing all around, and the July sunlight is smiling on an earth full of beauty in foliage and flower. I see the school bags are hung up, and bare feet wade in the stream, and straw hats are sailing there too—just to get wet enough to cool the warm head from whence they came. The smell of clover is in the air, and already the mower is on its rounds, cutting the heads which stood so strong before, to wither in the same hot sun that called them first to life and gave them strength.

What a beautiful world this is! and as my hearty, healthy girls and boys enjoy the July days of rest from school, but with rake or hoe or spade, may they be the happiest of happy children. You ought to be, for where in this wide world shall we find boys and girls enjoying so many blessings? Not the least are good homes, good health, good food, fresh air, and this July sunshine. "It's too hot," you say. Yes, it is pretty hot as you hoe the turnips and hill up the potatoes, or cook the dinner, bake the bread, and bend over the frying pan, to make sure the meat is cooked just right. But then there are cool evenings on the verandah, fresh mornings, beautiful shade trees, nice spring water, cold milk from the creamer, cool lettuce, and radish, and parsley from the garden—yes, and onions, too, which look cool, and are very tasteful and healthful, and, if all the family eat them, not so very disagreeable. Then when the shutters are closed and the rooms are cool, how nice home seems after the heat and sun outside! How many ways there are to make a room cool! Fresh ferns and flowers from the woods in a basin of water almost make one feel cool to look at them. Another method you may find very useful in a sick room is to dip sheets or towels in clean, cold water, and cool the air, and refresh the fevered patient.

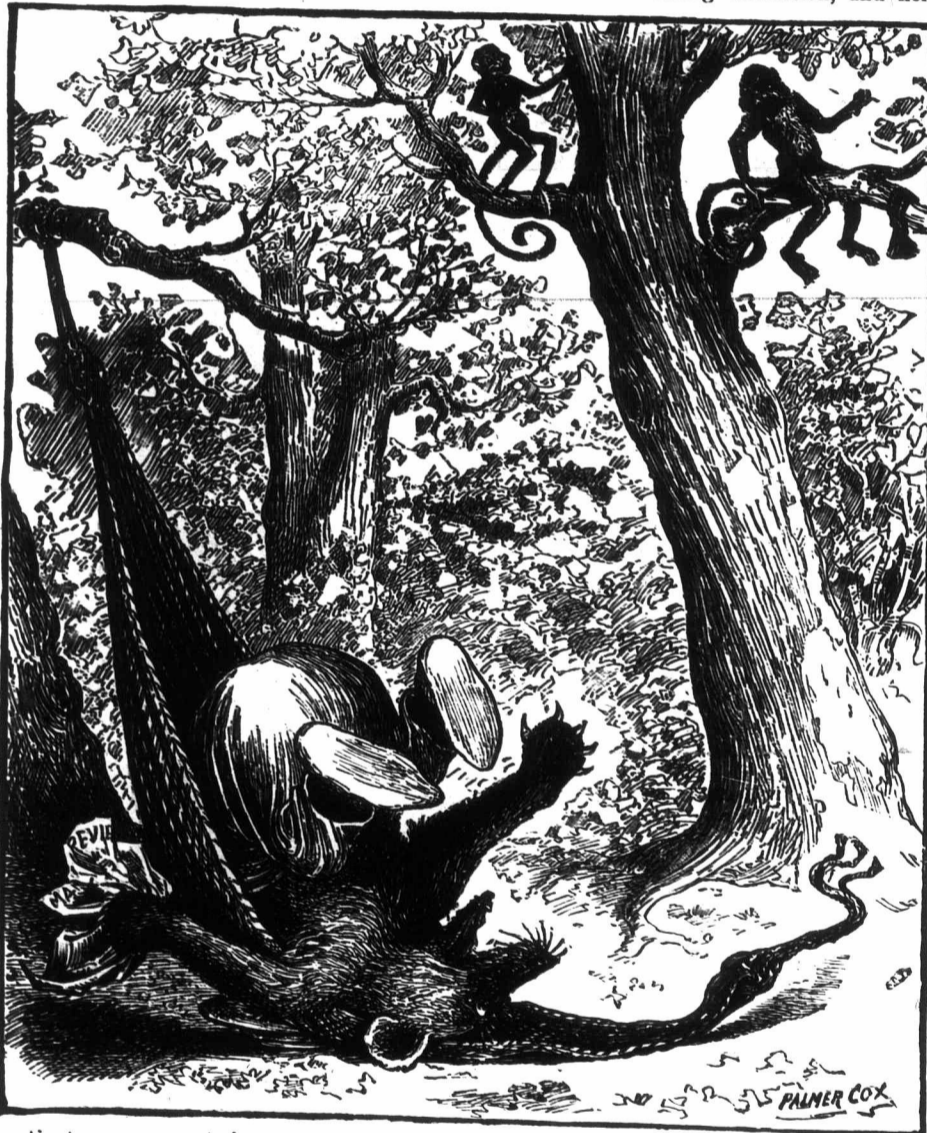
Some of my elder nieces have already gone to take up their work as nurses. To every one there comes a time when one is required to use all he or she knows in this line, and it is well if in boy or girl there are held in possession the strong nerve, the cool mind, the soft hand, the quiet step,—who knows, before the patient does, what is required next.

I need not tell Canadian boys and girls the name of the river and canal which joins the two largest in our chain of lakes of which we are so proud. Last month while passing through this canal, which has been made for the passage of boats from one lake to the other, a little dog jumped from the high perpendicular bank to gain the boat. It missed and fell in the water below, but swam bravely for some time. The side of the boat gave him no chance of getting up, neither did the stone wall on the bank side. It seemed as if he could but swim while strength remained and then drown. A man went down

with a rope, but could do nothing, and again the little creature swam, barking piteously as before. There were plenty watching, but all seemed helpless, and felt the little dog must go. Again a man went down, and he knew how he could succeed, and put his plan in execution, and soon the sailor lad in navy blue and brass buttons came carrying the little dog in his arms, climbing up the rope over the side. A cheer from the crowd, and the man was gone, while the wet dog stood rescued. In that crowd I wondered how many would rejoice over a rescued boy or girl—rescued from sin—free again after being in the depths. But I must close.

UNCLE TOM.

P. S.—This month W. J. Owens is the successful prize-winner, but I must congratulate all the writers. I am astonished at receiving so many good stories. The girls complain that the subjects I have given are only suitable for boys, so this month I will introduce a more amusing



picture, and the boys had better look out, for I believe the girls will send the funniest stories. As usual, a prize of \$2 will be given for the best. All communications must be in our office by the 15th August.

Grains of Gold.

Be charitable and broad in all your judgments. A defeat suffered gracefully is half a victory. Think of others as you would have them think of you.

Poverty is in want of much; but avarice of everything.

The kindest heart is that which shrinks at its own inhumanity, rather than at another's.

That man is voted a bore who persists in talking about himself when you wish to talk about yourself.

A man with knowledge and without energy is a furnished house, but not inhabited; a man with energy, but no knowledge, is a house dwelt in, but not furnished.

PRIZE STORY.

A Hunter's Dilemma.

(Based on Illustration in May Number of the ADVOCATE.)

BY W. J. OWENS, FOREST, ONT.

"Good-by, wife! I'll be gone all day I think, unless I have good luck. I want to bring home nothing short of a moose hump this time, so I'll likely have a day's work before me, for they're none too plenty hereabouts."

"Good-by, John! Don't tramp too far: there'll be something ready for a hungry man when you come back," answered the wife, and she turned into the cabin.

John Carpenter was a backwoodsman, who had removed from Lower Canada, in order to better provide for his family in this more fertile province. His wife, named Marie, was of French extraction, and here they had for six months been battling, not unpleasantly, with the stern duties of life. The season now was winter, and as breadstuffs were very scarce, the larder had regularly to be replenished by the fruits of the chase.

On this morning, as he leaves the door of his hastily-built cabin, let us glance at the man's appearance. We see a typical Canadian backwoodsman, of the early part of the nineteenth century—a farmer, lumberman, trapper, huntsman, and shall we include it in the same sentence, a staunch neighbor and a true friend.

His dress is the common costume of the times—long boots of the hide of the deer and elk, belted coat of the same, pantaloons of corduroy, and hat of "true beaver." He stands upon the accustomed home-made snowshoes, and across the hollow of his left arm lies the long rifle. With the plaintive whistle of the Canadian voyageur, he moves lightly over the deep snow, and rapidly nears the forest.

Marie watched her husband until he disappeared over the brow of a neighboring hill, and then she turned into the hut where her morning work was awaiting her, and where the children, who had been sleeping during their parents' early meal, now demanded attention.

John wended his way past clumps of scattered forest, and the steady tramp, tramp, of the snow followed each successive footfall. Out of the bushes scampered the rabbits, and an occasional partridge arose with a flapping boom and steered away for some distant bushes. But these did not draw John's attention. The rabbits' flight was not followed by the "ping" of the bullet, for the hunter was bent on securing larger game. Had he not promised his Marie an elk hump? and there was the Christmas dinner only two days ahead, the tongue and nose of some unlucky moose must then be on the table.

On he tramped over hill and valley, past stretches of some of the finest land in Ontario. The feeble sun was near the meridian, and the hunter had not seen the coveted game, although tracks were plentiful. He was just thinking of stalking a few red deer that were scratching away the snow and feeding in a depression about half

a mile distant, when he struck fresh indications of moose. The track led past some rocks into a straggling bush, that grew in a rough, swampy place. He examined the priming of his rifle, for he knew he might at any moment come upon the deer. Just as he stepped out from behind an oak tree, he saw a young moose some distance ahead; it was rubbing its neck against the side of a young spruce, and thus presented a favorable shot; so placing his gun against the side of the oak, he took careful aim and fired.

To his joy the moose fell, and John, greatly elated at his success, sprang from his retreat, and, without taking the usual precaution to reload, started quickly toward the animal that lay motionless on the ground. He had not taken more than a dozen steps when a noise to the right attracted his attention. Imagine his surprise, when, a few rods distant, he saw a huge moose, bearing large pulmated horns, with mane erect, roaring as it made gigantic efforts to break through the brushwood and reach him.

Here he was with an unloaded gun in his hands and an infuriated animal within a few yards of him. What was he to do? At first he thought of drawing his hunting knife and standing his ground, but as this thought passed through his mind like a flash, he suddenly remembered a tree that had fallen from the top of a bank and lodged in the top of another tree that grew from the valley below. He was quite close to the spot, and, dropping his rifle, he sprang to reach it. The deer covered the ground very rapidly, while the hunter momentarily expected to be tossed or trampled upon. Suddenly the noise ceased, but John without turning to find out the cause of the silence, ran out on the horizontal surface and secured a safe place in the mangled tops of the trees.

Turning around, he saw the moose lying on the ground apparently in a fit, and the hunter fervently thanked Providence for giving the means of escape. Seeing his enemy prostrate, John started towards the animal, but before he reached the bank he saw that he was not yet done with that deer. (For truth of this peculiarity in moose, see Audubon's tales of animals.) Recovering from its paroxysm, it leaped up and made for the hunter again, but, of course, was unable to reach him. Like a sentry on guard, there it stood shaking its head, exhibiting unmistakable signs of offensive war, and John, who thought discretion in this case the better part of valor, perched himself comfortably among the branches, pulled off his snowshoes to ease his feet, and started disconsolately at the enemy. Hanging his snowshoes on a dead limb, and his coat and hat above them, he thought he might slide down the tree without aggravating the moose, but this proved a failure, so he again mounted his lofty seat, put on his coat and cap and prepared to sit it out.

What puzzled him most was the ferocity of the elk, which he had always found to be a timid animal that never showed fight unless severely wounded. As he now had a chance to examine the animal closely, he could see blood dripping from the shoulder, and a long wound across the shoulder and neck. This explained the deer's actions. It had been shot, and maddened by the pain of the wound, had rushed upon the object which it discovered in its way.

After an hour of patient watching, the hunter was beginning to think that he would have to remain there until dark, but the sharp crack of a rifle near by dispelled this fear, and caused the moose to roll over and over as it fell and tumbled down the bank. John walked quickly along the tree and met his deliverer on the spot where the moose had stood.

The man was a brother hunter, and one of John's nearest neighbors, although they lived five miles apart. Will Ray had started out that morning also on a moose-hunting expedition, and wounded the deer (John's prosecutor) a short distance from home, and, following up the tracks, had come upon him in time to remove his neighbor from an awkward situation.

The hunters shouldered their pelt and meat and started for home, and one of them, at least, reached his cabin a great deal sooner than he had dared to hope when an anxious prisoner in the united tops of two Welland birch trees.

Puzzles.

1-CHARADE.

My first an exclamation is
Of pain—of pleasure too;
An organ of your body
My second brings to view;
To wind or write my third is;
Connect them if you can,
The whole makes the pen product
Of a celebrated man.

2-CHARADE.

Into our mystic circle
New friends come every day,
But first of them just leave their cards
And straightway go away.
Perhaps because they do not win
An honored place first time,
They give it up for TOTAL
More lucrative than rhyme.
Now would you hear my story?
When I first tried to "pose"
My poor wee contributions went
Where—dear me! no one knows.
But any way I did not see
It in the ADVOCATE.
But some fine man has said that "all
Things come to him who waits,"
So like the well-known spider
That cheered poor Bruce's heart,
I waited but a moment
Then made another start.
Success has crowned my efforts,
The same your fate may be;
Then bear this disappointment
And try once more. You see
On that April illustration
A story I did write
(Of course I hoped to win the prize
I tell you, honor bright).
Now June arrives, the paper comes,
I look my name to see
As the successful writer;
But ah! Alas for me!
The "coal-man" had been there ahead—
The prize had taken in,
And I got left, with seventy more
Who like me, failed to win.
But I am not discouraged.
I mean to try once more,
Perhaps I may "tis but "perhaps")
Do better than before.
Just one more LAST I'll tell you
Dear cousins, one and all,
Let "try again" your motto be,
And luck will sure befall.

ADA ARMAND.

3-WORD REBUS.

Come all ye people now who try,
The solving of this "bus":
I've "set the value far too low,"
Now make it prosperous.

And when you've solved it (in your mind),
Just take a moment's time,
Send the solution to "Uncle Tom,"
You'll find it nice pastime.

FAIR BROTHER.

4-CHARADE.

My first's a ball of light,
My second is not night,
My whole's the day that's blessed
With heavenly peace and rest.

I. IRVINE DEVITT.

5-CHARADE.

I beg your pardon, cousin dear,
If I have said or done,
Aught that would hurt your feelings;
You know I was in fun.

But really now, you know that some
Aspiring to be Miss,
A lot of flirting doth at times,—
I don't count you in this.

You say I ought not tales to tell,
About a lady fair.
What constitutes a lady, pray?
Does flirting or false hair?

Does playing cards a lady make,
Or painting on the sly?
Some put it on their faces,
Then out of it would lie.

My ideal of a lady—now
Don't take offence, I pray—
Is one who dresses neatly, and
Not all PRIME display.

My "corn patch" oft needs hoeing,
But be careful how you hoe;
This maiden whom you speak about,
Too true, is all for show.

My confidence you've tried to LAST,
And now you've got it, say,
When writing letters to your friends,
COMPLETE me not, I pray.

FAIR BROTHER.

Answers to June Puzzles.

- 1. Catacomb. 2. Because. 3. Glass, Cass, Ass.
- 4. ONE NOT ERA IMPUTABLE NORTHHERLY PROTECTOR ERR ALL AYE
- 5. Cowslip. Riddle—A. Ball.

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

Addison Snider, Oliver Snider, I. Irvine Devitt, Elsie Moore, Willie Morehead, Jessie Cumberland, A. R. Borrowman, Charlie S. Edwards, Geo. W. Blyth, Frank Elwell, Mary Marshall, H. C. Cox.

Our Library Table.

"Table Talk" for June; \$1; Philadelphia. Truly the women of Canada should be good cooks, housekeepers, and good women, with such guides as "Table Talk," for it contains all that is best worth knowing in the housekeeper's line.

Cassell's Family Magazine for June; \$1.50; New York. Our old favorite is quite up to the mark in the variety and quality of its reading matter, from fiction to miscellany.

Current History; \$1; Detroit: Is one of our most useful periodicals, and the contents of this number are well worthy of the reading. The Behring Sea dispute is treated from an anti-British point of view.

"The Housekeeper"; \$1; Minneapolis: Is a bright and welcome visitor—readable and instructive.

"Home Queen"; Philadelphia: Contains the usual amount of pretty fiction, poetry and fashions, and useful domestic recipes.

Domestic Monthly for June; New York: Is teeming with all subjects, from the closely written article on cats to the pages of illustrated fashions, and beautiful illustrations of the River St. Lawrence.

"Home Maker" for June; \$2; New York: Is just the magazine every home should possess, for it abounds in excellent reading matter, home hints, gardening, etc.

Ladies' Home Journal; Philadelphia: Is like the face of an old friend—always welcome with its well-filled pages.

Things not Generally Known.

The word "Rubric" implies a rule or direction. It is derived from the Latin word rubrica, which signifies red earth, and it is employed to designate the rules which are laid down in the Book of Common Prayer to direct the minister and people in the performance of divine worship. These rules were formerly printed in red letters to distinguish them from the prayers and other parts of the liturgy, which were printed in black letters.

"HEAR, HEAR."

This phrase, originally "hear him," was first used in parliament to remind members of the duty of attending to the discussion, but gradually became what it now is, a cry of admiration, acquiescence, indignation or decision.

"CONSERVATIVE."

This name originated with a Mr. Crocker in the year 1850. In a speech he says: "He is attached to what is called the Tory, and which might be more properly called the Conservative party."

Sorrow sobers us and makes the mind genial, and in sorrow we love and trust our friends more tenderly, and the dead become dearer to us, and just as the stars shine out in the night, so there are blessed faces that look at us in our grief, though their features were fading from our recollection.

The man who marries for mere worldly motives, without a spark of affection on the woman's part, may, nevertheless, get in every sense of the word a good wife; but when a woman is married for the sake of her fortune, the case is altered, and the chances are a hundred to one that she gets a villain.

There is a feeling of jealousy that seems to be innate in some natures. There are many persons who can look neither with pleasure nor approbation on the successful accomplishments of their neighbors, and if by honest worth one struggles to achieve an unblemished reputation, there are hundreds ever anxious and ready to pick flaws in both his personal character and business relations, their motive being prompted by no reasonable prejudice, but rather impelled by their inordinate selfishness and envy.

A Bunch of Shakespeare's Flowers.

Did you ever think how dearly Shakespeare loved flowers? He knew them all intimately, true child of Nature that he was; and none of their charms or peculiarities escaped his observing life. How quaintly and beautifully he links them with human nature, forever associating them in our minds; clothing the simple, common wayside flower with a poetic grace, which, like its own dew drop, it will always bear for us. Suppose we take a peep into his garden and meadows and see what blossoms we can gather. Where could we find a sweeter spring handful than these?

"Now, my fairest friend,
I would I had some flowers of the spring that might
Become your time o' day; daffodils,
That come before the swallow dares; violets, dim,
But sweeter than the lids of Juno's eyes,
Or Cytherea's breath; late primroses, bold oxlips, and
The crown-imperial; lilies of all kinds,
The flower de luce being one."
(*Winter's Tale*, Act IV., Sc. III.)

And here is an ideal bower he has made for us—

"I know a bank whereon the wild thyme blows,
Where oxlips, and the nodding violet grows;
Quite over-canopied with luscious woodbine,
With sweet musk-roses, and with eglantine."
(*Mid. Night's Dream*, Act II., Sec. II.)

Listen to him as he sings of the time—
"When daisies pied, and violets blue,
And lady-smocks all silver-white,
And cuckoo-buds of yellow hue
Do paint the meadows with delight."
(*Love's Labor's Lost*, Act V., Sc. II.)

How appropriate his offerings are, and how gracefully bestowed—

"Here's flowers for you:—
Not lavender, mints, savory, marjorane;
The marigold that goes to bed with the sun,
And with him rises, weeping; these are flowers
Of middle summer, and I think they are given
To men of middle age; you are very welcome!"
(*Winter's Tale*, Act IV., Sc. III.)

And again—
"Give me those flowers, there, Dorcas:
Reverend Sirs, for you there's rosmary and rue,
these keep
Seeming and savor all the winter long;
Grace and remembrance be with you both,
And welcome to our shearing!"
(*Winter's Tale*, Act IV., Sc. III.)

Here is a pretty picture of a young girl—
"Kate, like the hazel-twig
Is straight and slender; and as brown in hue
As hazel-nuts; and sweeter than the kernels."
(*Taming of the Shrew*, Act III., Sc. I.)

What could be more beautiful than his comparison of truth and fragrance?—
"O, how much more does beauty beauteous seem
By that sweet ornament which truth doth give!
The rose looks fair, but fairer we it deem
For that sweet odour which doth in it live."
(*Sonnet 54*.)

The Smallest People.

Skeletons of two Akkas, the pigmy people discovered by Schweinfurth in 1870, have been acquired by the British Museum, and show that this race is undoubtedly the most diminutive known. The stature of the male skeleton is about an inch below four feet, and that of the female about as much above. The few previous measurements recorded, indicate that these heights are rather below the average, though a living adult female of three feet ten inches is known. Prof. Flower finds that the Akkas belong to the black or Negroid branch of the human species, and that they are not allied to the Bushmen or Andaman Islanders, which tribes they most resemble in size.

Shifting the Responsibility.

The railway accident had been a terrible one, and one of the men who were carrying the thirty-seventh victim up the embankment said with strong feeling:

"Somebody will have to pay dearly for all this!"

The mangled passenger opened his eyes and glared at the speaker.

"The company is not to blame," he said, feebly, "this is a dispensation of Providence!"

He was the attorney for the road.

The Fellow in Greasy Jeans.

Whew! How the drivers hammer!
We are late by an hour or more;
We sway and swerve on the ringing curve,
And the bridges reel and roar.

Look how the engine lurches—
And out of its window cranes,
With grey eyes wed to the track ahead,
A fellow in greasy jeans.

Scarcely looks like the fellow
To trust with so grave a care—
In that grimy face 'twere so hard to trace
The mettle that should be there.

Faster we roar and faster—
The hand at the throttle shows
Steady enough, if the face is rough—
And the landscape melts and flows.

Into the cut—and horror!
There death has the right of way!
The whistle wakes to a shriek for brakes;
And what does his swift brain say?

Jump, for Moll and the babies,
And for dear life's love supreme!
Jump from the doom of a crunching tomb
And the hell of the howling steam!

Stay, for the hero's duty,
The trust of a hundred lives!
Stay, for the sake of the hearts would break,
And for others' babes and wives!

He stays! with white teeth gritting,
And with hands that snatch a man,
The monster reels on reversing wheels,
And the air brake chokes the train.

We are safe with our scratches—
There's only the engine wrooked,
And the engineer! Oh, well, I fear
That's only what all expect.

And in the torn steel's chaos
I read what our life ordains,
And shivering pause—for von cinder was
The fellow in greasy jeans.
—Charles F. Lummis, in *Frank Leslie's*.

Philadelphia Wet Weather Sign.

Miss Chestnut—I guess it is true that Postmaster General Wanamaker is going to mitigate his temperance views, so to speak, and have wine on his table hereafter.

Miss Filbert—I don't believe he will. He isn't that kind of a man.

Miss Chestnut—May be so; but just the same, I bought a new patent corkscrew on the bargain counter to-day.

NEW ADVERTISEMENTS.

Choice Shorthorns—H. & W. Smith, Hay.
Sheep Dip—Wm. Cooper & Nephews, Galveston, Texas.

Manitoba Farm Lands—W. M. Moore & Co., London.

Stubble Reliever—Arthur Petch, Aurora.

Fertilizer—W. A. Freeman, Hamilton.

Western Fair—Thos. A. Browne, Sec., London.

Shropshires for Sale—Isaac Johnstone, Ravensar.

Maple Grove Stock Farm—H. Bollert, Cassel.

Manitoba Farm Lands—And. Park & Son, Toronto.

Shropshires, Clydesdales and Polled-Angus Cattle—

Jas. McFarlane & Son, Clinton.

Scotch Shorthorns and Yorkshires—W. J. Biggins, Clinton.

Shropshires—Jas. Cooper, Kippen.

Lincoln Sheep—J. T. Gibson, Denfield, and Wm. Walker, Ilderton.

Plymouth Rocks—C. W. Eckardt, Ridgeville.

Shorthorns for Sale—Wm. Grainger, Londresboro'.

Organs—Goderich Organ Co.

Cattle for Sale—J. Carpenter, Winona.

Veterinary Surgeon—J. Tennent, London.

Cotswold Sheep—Wm. Thompson, Uxbridge.

Cattle—F. A. Fleming, Weston.

Bicycles—Geo. F. Bostwick, Toronto.

Ensilage Cutter—M. Moody & Sons, Terrebonne, P.Q.

Canada Business College—R. E. Gallagher, Hamilton.

Holsteins and Yorkshires—R. S. Stevenson, Ancaster.

Holsteins for Sale—E. H. Foster, Picton.

Organs—Thomas Organ Co., Woodstock.

Yorkshires—J. M. Hurley, Belleville.

Yorkshires for Sale—J. Y. Ormsby, London.

Ontario Agricultural College—Jas. Mills, Guelph.

Conservatory of Music—F. W. Halle, Boston, Mass.

Binder Twine—Samuels, Benjamin & Co., Toronto.

Ploughs—Thom's Plough Works, Watford.


Central Business College—Stratford and Toronto.

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Auction Sale of Guernsey Cattle—Geo. Pepper, Toronto.

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AND YORKSHIRE COACHERS.**

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40 HEAD PEDIGREED IMPROVED LARGE YORKSHIRE HOGS. 40.

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who has bought out the Farm and Stock of Messrs. Wm. Davies & Son, Markham, will dispose of the above, at the premises, Lots 19 and 20, Con. 9, Markham, Ont., known as ROSEBERRY STOCK FARM

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The attention of parties needing first-class Dairy Cattle and pure-bred Hogs is especially called to this sale, as the herd of Guerneyses comprises some of the finest cattle money could buy on this continent, including

Stock Bulls, Cows in Calf and in Milk, Yearling Bulls and Heifers and Calves.

The Hogs are bred direct from stock imported from the well-known herds of Sanders Spencer and F. Walker-Jones, and include

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The horses are an A 1 lot; the colts being especially well bred, and the mares in foal to the Imp. Hackney Stallion "Sea Gull," and the champion thoroughbred stallion "Mikado."

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Sale will commence at 11 a. m. sharp.

Farm Horses and Machinery will be sold first. Lunch will be provided at noon.

Terms.—Twenty Dollars and under, cash; over that amount 15 months' credit on approved security, or 8% discount for cash.

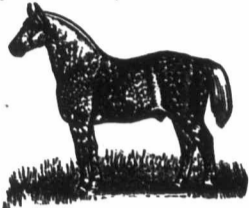
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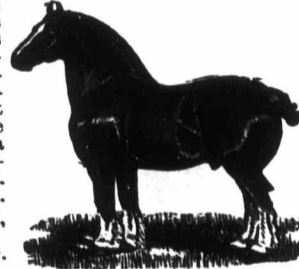
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SEVERAL choice spring litters to select from; also a few sows fit for service.
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OAK RIDGE STOCK FARM

Shorthorns & Berkshires



My herd of Shorthorns are from select milking strains. Young animals at right prices. A few fine yearling bulls now ready. For particulars and pedigrees of stock address **DAVID HAY, ARKONA, ONT.** 309-y-OM

MAPLEWOOD STOCK FARM.

SCOTCH SHORTHORNS; IMP. YORKSHIRE AND BERKSHIRE FIGS. Herd of Yorkshires headed by Favorite (Imp.) and Royal Duke, both prize winners; also registered Berkshires of Snell's stock. Pairs supplied not akin, and satisfaction guaranteed. Correspondence invited. Address, **J. G. MAIR, HOWICK, P.Q.** 310-y-OM

SCOTCH SHORTHORNS AND YORKSHIRES.
Matchless, Mina and Village Girl strains, also a few very choice pigs, of both sexes, from an imported Spencer sow, at low prices. **W. J. BIGGINS**, Elmhurst Farm, Clinton, Ont. G. T. R. Station, 1/4 mile. 319-y-om

SCOTCH-BRED : SHORTHORN : BULLS,
Scotch-Bred Heifers,
Imported Shropshire Rams, Imported Ewes,
Home-Bred Rams, Home-Bred Ewes,
FOR SALE,

in any number. All of very best quality, and at the lowest prices. We want 500 recorded rams for ranches. Correspondence solicited.

John Miller & Sons,
Brougham, Ont.

Claremont Station, C. P. R., 22 miles east of Toronto. 306-y



SHORTHORNS!

The Briars Herd, the property of Dr. F. C. Sibbald, Sutton, Ont., is one of the largest in Canada—over 60 head of registered breeding stock. Young bulls always for sale. Address

F. C. SIBBALD,

The Briars,
Sutton West, Ont. 318-y-om



DEEP MILKING SHORTHORNS.

WM. GRAINGER, Londesboro', Ontario, offers for sale, a yearling bull and a three-year-old heifer in calf, of the best milking strain of Shorthorns in Canada; both registered and good colors; dams made 30 lbs. of butter in seven days on grass.

COME and SEE THEM. THEY are GOOD ONES.
319-y-om

SCOTCH SHORTHORNS.

Imported Prince Royal and cows bred by S. Campbell, Kinnellier, and James Bruce, of Burnside, together with their descendants by imp. bulls. Seventy head to choose from; also Cotswold sheep. Farm close to station. **J. & G. Taylor**, Rockwood, Ont. 317-y-om

The Sweepstakes Herd of Herefords.

My herd won both the 1st and 2nd herd prizes at Toronto, Montreal and Ottawa, 1891, in competition with the largest herds in Canada. An unequalled record. Over forty head of the choicest breeding. Write me for prices, and mention this paper, if you want a bull of the grandest beef breed on earth. **F. A. FLEMING**, The Park, Weston, Ont., or 51 Wellington street, Toronto. 319-y-om

Estate of Robert Hay,

Breeder and Importer of

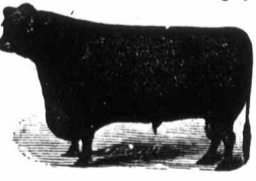
choice Aberdeen-Angus

Polled Cattle, also

Shropshire Sheep from

the best blood of Eng-

land, Ireland & Scotland



We have now much pleasure in telling our patrons that we have never been in better shape to meet their demands. We have not shown for three years, and all our stock have been on grass from May to December, and on swede turnips and rye hay from December to May. We can supply farmers with bulls to breed the best class of steers, besides settling once and for all the vexed dehorning question. Our strong point in the past has been the breeding and feeding of **Show Animals**. We are breeding them **NOW**, and can turn out herds fit to stand against the world at Chicago next year. Our prices will be found most reasonable, and we shall gladly welcome farmers and stockmen, whether on business or pleasure. Send postal card for private Sale List and give us a call before investing.

J. G. DAVIDSON,

Kingsme Park Stock Farm, 317-y-om
New Lowell, Ont. MANAGER.

Herefords, Leicesters, Imp. Yorkshires and Poland-Chinas.

Send in your orders now for Ram Lambs for fall delivery. Three really good Yorkshires Boars and one Sow, 7 months old, registered pedigrees, \$15 each if taken soon. **DAN. REED**, The Spruces, Glanford P. O., Ont. 318-y-om

HEREFORD CATTLE & CHESTER WHITE HOGS.

The undersigned offers for sale three grand bulls and a few heifers of the above breed. Also pigs of both sexes. Prices dead right.—**JOS. CAHENS**, CAMLACHIE, ONT., 14 miles from Sarnia. 313-y-OM

HOLSTEINS & YORKSHIRES.

None but the best are kept at

BROCKHOLME FARM, - Ancaster, Ont.

R. S. STEVENSON, Proprietor.

Write me for prices if you want first-class stock at moderate figures. Holsteins in the advanced registry; Yorkshires all recorded. 319-y-om

HOLSTEINS FOR SALE

Maple Grove Farm, Picton, Ont.

A grand opportunity for securing a number of this fine milking breed. Write or call on

E. H. FOSTER,

319-a-om **PICTON, ONT.**

ONLY-HOLSTEINS-ONLY

We are making a specialty of breeding Holsteins of the following strains:—Aagies, Barringtons and Mercedes. Our last importation comprised nineteen head from one of the leading herds in the United States. Our herd now numbers close to 30 head. Young bulls and heifers for sale. Prices right and terms reasonable. **E. M. S. & C. S. MOTT**, The Gore Farm, Box 95, Norwich, Ont. 318-y-om

THE GREAT MILK AND BUTTER HERD OF HOLSTEIN-FRIESIANS.

SMITH BROS., Credit Valley Stock Farm,

CHURCHVILLE, PEEL COUNTY, ONT.,

(24 miles west of Toronto).

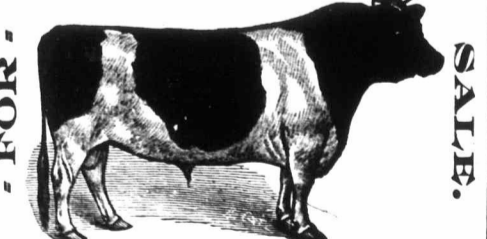


This is the place to get stock of best quality at reasonable prices. We have seventy-five head, including prize-takers; best strains, cows and heifers, with large milk and butter records; young bulls of superior quality. Send for catalogue. 316-y-OM

HOLSTEIN - FRIESIANS

The Choicest Herd in Canada.

A few rich-bred bulls left, fit for service for 1892, sired by our silver medal bull, and out of cows with large records. Will sell at a bargain in order to make room for young stock. Other stock of all ages and highest excellence for sale. Write at once for prices. Railway station, Petersburg on G. T. R.; New Dundee P. O., Waterloo Co., Ont. 318-y-om **A. C. HALLMAN & CO.**



A choice lot of thorough-bred Holsteins. We have on hand a large number of choice bull and heifer calves which we offer for sale at reasonable prices. They can be seen at Wyton, which is on the St. Mary's Branch of the Grand Trunk R. R. Before buying, give us a call. For further information apply to **W. B. SCATCHERD, Secretary,** 312-y-OM **Wyton, Ont.**

ADVERTISE IN THE ADVOCATE.

--- WRITE ---

RIDEAU STOCK FARM

KINGSTON, ONT.,

AND GET PRICES ON

Holstein Bull Calves

Calved since January 1st, 1892.

F. A. FOLGER,

315-y-om Proprietor, Box 579.



Holstein-Friesians

OF THE CHOICEST MILKING STRAINS.

Extra individuals of both sexes for sale.

J. W. JOHNSON,

313-y-OM **SYLVAN P. O.**

REGISTERED HOLSTEIN BULLS AND HEIFERS.

John Pringle, Maple Lawn Farm, Ayr, Ont., offers for sale a few well-bred bulls and heifers of the above breed at reasonable figures. My bull, Ira's King, was bred by Dudley Miller, and my cows are all of choice breeding. 308-y-OM

HOLSTEINS at WALNUT HILL FARM

Messrs. H. McCAUGHERTY & SON, Streetsville, Ont., offer for sale, at low figures, choice young Bulls and Heifers of the best dairy strains. Write for prices, or, better still, come and see us. Visitors welcome. No trouble to show stock. Streetsville Station 1/2 mile. 318-y-om

HOLSTEIN-FRIESIAN CATTLE.

My stock is selected from the leading herds. Choice young stock for sale. Before you buy elsewhere, write me for quotations.

W. McCLURE,

Mint Creek Farm, NORVAL, ONT. 310-y-OM
On main line G. T. R.

MAPLE GROVE STOCK FARM.

Holstein-Friesians of the greatest individual excellence. The breeding for butter quality a specialty. Colanthus Abbekerk, the richest butter and milk bred bull in Canada, now at head of herd. Always something for sale at living prices. Write for description and prices. 318-y-om **H. BOLLERT, Cassel, Ont.**

Ingledale Farm, Winona, Ont.

JONATHAN CARPENTER

offers for sale at very reasonable figures a number of very fashionably bred Jerseys, bulls and heifers, of all ages; also standard-bred colts and fillies from such sires as Gen. Stanton, sire of thirteen in the 30 list, and Almont Wilkes, trial in 2.16. "Good individuals with gilt-edged pedigrees." Come and see them. 319-y-om

JERSEYHURST FARM, MARKHAM, ONT.

ROBT. REESOR, importer and breeder of A. J. C. C. Jerseys of the choicest breeding, with the St. Helier bull Otolie 17219 at the head of the herd. Stock of all ages on hand and for sale. 308-y-OM

SUNNY BRAES FARM

Hillhurst, P. O.

ST. LAMBERT JERSEYS.

The prize-winning herd of the Eastern Townships, headed by Rene of St. Lambert (20343), winner of 1st prize and sweepstakes wherever shown. I make a specialty of pure St. Lambert blood, and breed none but the best. Choice young stock for sale. Terms, prices and pedigrees on application.

Mrs. C. H. Crossen,

Sunny Braes Farm, 310-y-OM **HILLHURST, P. O.**

GLEN ROUGE JERSEYS!

WM. ROLPH, Glen Rouge Farm, Markham, Ont., offers for sale Jerseys of all ages from his famous herd. The world-renowned St. Lambert blood a specialty. Also registered Clydesdale Horses. 309-y-OM

BELVEDERE JERSEYS SERVICE BULLS ARE
 Canada's John Bull.
Canada's Sir George, (Canada's John Bull)
 Pure St. Lambert, 2634 lbs. butter a week; 56 lbs. milk daily.

Hugo Chief of St. Ames, Pure St. Lambert.
Massena's Son Massena, over 20 lbs. a week; 9,099 lbs. milk, estimated to have made 902 lbs. 2 oz. butter in 1 yr., 11 days.
Signal of Belvedere Miss Satanella (Signal cow), 20 lbs. 6 oz. butter a week, on 2nd calf.

Believed to be the three greatest living bulls. Silver cup at the Kellogg Combination Sale; Silver Tea Set (Farmer's Advocate) for milk test; over 20 medals, gold, silver and bronze; over 300 prizes in money, also numerous diplomas, commendations and special prizes.

Special Offering Now.
 3 Sons of Canada's Sir George, (pure St. Lamberts).
 2 Sons of Massena's Son, from tested cows.
 Registered and express paid to any reasonable distance. - MRS. E. M. JONES, Brockville, Ont., Canada. 313-y-OM

JERSEYS AND TROTTERS.
 Herd headed by Carlo of Glen Duart (1:37), the champion bull of 1891, and Pussy's John Bull (21:20), a son of Canada John Bull.
 Stud headed by Arkian (10:31), a son of the world-renowned Guy Wilkes, 2:15 3/4.
I breed none but the best and keep no culls.
 A. C. BURGESS, Arkian Farm,
 312-y-OM Carleton Place, Ont.

Ayrshire Cattle & Poland China Hogs, MERINO SHEEP AND FANCY FOWL.
 We have the largest herd of Poland Chinas in Ontario. At the last Industrial Fair we carried off 17 prizes out of 26, including both prizes for pens. We breed from none but the best, and our aim is to supply first-class stock at living prices. We mean business. Write, or come and see us.
 W. M. & J. C. SMITH,
 310-y-OM Fairfield Plains P. O., Ont.


DOMINION PRIZE HERD OF AYRSHIRES
 This herd has taken all the first prizes wherever shown in Quebec and Ontario since 1887 to 1891. From imported stock. Young stock for sale at liberal prices.
JAMES DRUMMOND & SONS,
 315-y-OM PETITE COTE, MONTREAL, P. Q.

Prize-Winning Ayrshires for Sale

GURTA 4th (1181)
 Mine is one of the largest and most successful show herds in Canada. They are finely bred and of great individual merit. Bulls, heifers and cows always on hand for sale; also a few good Leicester sheep. Correspondence solicited. Visitors well-come. Address
THOMAS GUY,
 314-y Sydenham Farm, Oshawa, Ont.

MAPLECLIFF STOCK FARM
Choice Ayrshire Cattle for Sale.
 We make a specialty of these grand dairy cattle, our stock consisting of very heavy milkers, and have some fine young stock for sale; also high grades. One mile from Ottawa.
E. REID & CO.,
 311-y-OM Hintonburg, Ont.

PRIZE-WINNING AYRSHIRES FOR SALE.
 I have at present one of the largest & best herds in Ontario, which has been very successful in the prize ring. They are deep milkers and of a large size. Bulls, cows and heifers for sale always on hand.
JAS. McCORMICK & SON,
 311-y-OM Rookton, Ont.

PRIZE-WINNING AYRSHIRES FOR SALE.

MAGGIE OF
JAS. McCORMICK & SON,
 311-y-OM Rookton, Ont.

LINCOLN SHEEP.



319-y-om

LAMBS AND SHEARLINGS of both sexes always for sale.
 Our last importation was made direct from the flock of Hy. Dudding, Esq., of Great Grimby, and comprises the pick of a flock numbering 1700 head.
 If you want a ram or a few ewes send along your orders.
J. T. GIBSON, Denfield, Ont.
W. WALKER, Ilderton, Ont.
 on London, Huron and Bruce Ry.

CHOICE REGISTERED SOUTHDOWNS.

Messrs. A. Telfer & Sons, Springfield Farm, Paris, Ont., have been breeding Southdowns for thirty years. A fresh importation just arrived. Stock for sale. 308-y-OM

SHROPSHIRE, CLYDESDALES and Polled-Angus Cattle.

Two imp. stallions, one yearling bull and eighty choice Shropshire rams and ewes of all ages. Prices reasonable. Write quick. All registered. **JAS. McFARLANE & SON, Clinton, Ont.** G. T. R. Station 1/2 mile. 319-y-om

SHROPSHIRE FOR SALE!

Fifty head of Ewes and Lambs of the very best breeding quality. "One fine two-shear Ram, bred by John Campbell. Write for particulars."
Isaac Johnston,
 319-c-om RAVENNA P. O., ONT.

1881 - SHROPSHIRE - 1881.

My flock is one of the oldest in Canada, my first importation being made in 1881. My present stock of ewes were imported direct from the flocks of Bradburne Bros. and H. Parker. Write for prices.
JAS. COOPER,
 319-y-om KIPPER, ONT.

THE GLEN STOCK FARM.

Clydesdales, Shropshires and Berkshires. - Choice young registered stock for sale. Telegraph office, Innerkip. Farm, 3/4 miles from Innerkip Station on C.P.R. and 6 miles from Woodstock G. T. R. **WHITESIDE BROS.,** Innerkip, Oxford Co., Ont. 318-y-om

BREEDING EWES WANTED

— TO PURCHASE, ABOUT —
200 GOOD GRADE SHROPSHIRE DOWN EWES, IN THE FALL.
 T. V., Farmer's Advocate, Box 214,
 318-b-om Winnipeg, Man.

SHROPSHIRE!

A choice lot of ram lambs sired by my imp. Thomas ram, and out of Bradburne and In-stone ewes, for sale at reasonable prices. Several of these are good enough to head pure-bred flocks. Also a yearling Shorthorn Bull, by my Sheriff-Hutton bull The Premier. **WM. PETTIT, Freeman** Hutton P. O., Ontario, Burlington Station. 318-y-om

SHROPSHIRE AND YORKSHIRE.

Imported and Home-bred
EWES, LAMBS

— AND —
SHEARLING EWES
 of best quality and lowest prices.

ALSO
YOUNG YORKSHIRE PIGS.
 Come and see me before buying elsewhere.

T. H. MEDCRAFT,
 Sparta P. O., Ont.,
 309-y-OM Eight miles south-east of St. Thomas.

SHROPSHIRE!

I AM now ready to take orders for the coming summer, and after weaning. My flock consists of 170 imp. ewes and lambs; a few shearling rams, with a fresh importation to arrive shortly. If you want size and quality I can supply you. Visitors welcomed.



W. S. HAWKSHAW,
 GLANWORTH P. O.
 (7 miles south of London.) 315-tf-OM

SHORTHORNS and SHROPSHIRE.

I offer for sale at right prices, a very choice lot of imported ewes and rams; also Scotch Shorthorns from the very best strain in Scotland. Write or come and see them.
W. B. COCKBURN, ABERFOYLE, ONT., Corwhin,
 C. P. R., 7 miles east of Guelph. 310-j-om

Cotswold Sheep!

Wm. Thompson, Mt. Pleasant Farm, Uxbridge, Ont., Importer and Breeder, takes pleasure in intimating to the public that he is importing a large number of show sheep, which are expected to arrive early in August. Call and inspect personally. Visitors always welcome, and met at Uxbridge Station, Mid. Div. G. T. R. 315-y-om

Cotswold Sheep.

The gold medal flock; established in 1854. All bred straight from imported stock. Three imported Rams in use. Young stock for sale.
Berkshires. Herd established in 1865. Imported and bred from imp. stock. Sows in farrow

and young stock for sale at all times. Spring Pigs now ready to ship. We ship to order, guarantee satisfaction. Come and see, or write.
Jersey Cows, Hefers and Calves; registered; pure-bred unregistered, and high grades, bred from rich butter stock. 315-y-om
J. O. SNELL, EDMONTON, ONT.

DORSET HORNED SHEEP.

T. W. HECTOR, IMPORTER AND BREEDER. The oldest and largest flock of Dorset in Canada. First Prize Toronto and Montreal Exhibitions, 1891, for flock. Sheep of all ages for sale, ewes and rams not skin. **T. W. HECTOR,** The Cottage, Springfield-on-the-Credit P. O., Ont. Stations, Springfield and Cooksville on the C. P. R. Port Credit on G. T. R. 314-y-OM

McGILLIVRAY & TAZEWELL,

Jerseydale Farm, Uxbridge, Ont., Midland Division G. T. R., importer and breeder of **DORSET HORN SHEEP.** 314-y-OM

SHEEPMEN! READ!!

The Cooper Sheep Dip Powder

is the recognized cure for Scab, Ticks, Lice, etc., among leading sheepmen the world over. It has 50 years' reputation, and is used on 90 million sheep yearly. It improves the wool and does not stain it. Gives good results every time. It is easy to use and cheap, costing about a cent per head. A \$2 packet makes 100 gallons. Write for "Guide to Dipping" and pamphlet of three hundred testimonials, just received from sheepmen on the American continent, mailed free. Agents: - G. Dudgeon, Guelph; Carey Drake, Compton, Quebec; Bole, Wynne & Co., Winnipeg, Man.; F. A. Dixon, Wolfville, N.S.

Proprietors, **WILLM. COOPER & NEPHEWS,**
 Galveston, Tex. 319-b-om

EUROPEAN ADVERTISEMENTS.



SHROPSHIRE SHEEP

DAVID BUTTAR,
Corston, Couper-Angus, N.B., Scotland
Has taken all the principal prizes in Scotland for several years. His sheep are of the purest blood, and carefully bred; every sheep eligible for registration. Pedigrees and prices on application. 284-y-OM

SHROPSHIRE SHEEP

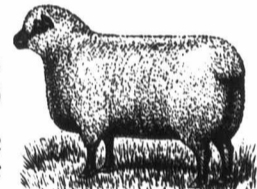


We handle none but the best. We sell at living prices. We have one of the most successful flocks in the show yard in England. We import direct from our English to our American flocks. Write for prices. We can suit you.

THONGER & BLAKE BROS.,
Wolf's Head Farm, NESSCLIFF, Salop, Eng.,
309-y-OM and GALESBURG, Mich., U. S. A.

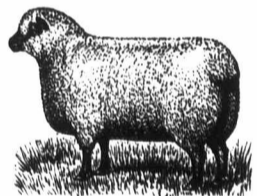
BEAM : HOUSE : SHROPSHIRE SHEEP

WM. THOMAS
offers for sale
RAMS AND EWES
from his famous flock, which has sent so many winners to the leading shows. Address—



WM. THOMAS,
Beam House Farm, Montford Bridge, Salop,
316-y-om England, 7 miles from Shrewsbury.

Astwood Hill Shropshires,
the most famous flock in England. We led in the show ring at the Royal and the Bath and West of England in 1891.
I. & S. BRADBURN,
Astwood Hill, Redditch, Eng. 316-y-om



SHROPSHIRE SHEEP, -:- SHORTHORNS and Yorkshires.

My Shropshire flock is founded on the best blood in England. My Shorthorns are of the deepest milking strains. American and Canadian visitors always welcome.



Young Stock always for sale at reasonable figures.
GEO. THOMPSON, Wroxall, Warwick, England. Station and Telegraph:—Hatton. 316-y-om
Trains met by appointment.

SHROPSHIRE SHEEP

The Loughcrew flock has been very successful in England and Ireland wherever exhibited. It consists of 300 breeding ewes of the most fashionable appearance & blood. Eavens, Beach, Harris, Coxon and Mansell. The Annual Sale first Wednesday in September.



EWES AND RAMS FOR SALE.

Apply to **J. DIXON,**
Loughcrew, Oldcastle, Co. Meath, Ireland.
319-y-OM

ADVERTISE IN THE ADVOCATE

ALCESTER PARK SHROPSHIRE SHEEP.

It will pay Canadian buyers to visit the above flock, which is founded on the best strains in England. Rams and Ewes always for sale. ALSO IMPROVED YORKSHIRE PIGS.

H. PARKER,
The Park Farm, Alcester, Warwickshire, Eng.
316-y-om

DORSET HORN SHEEP

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

THOMAS CHICK,
Stratton, Dorchester, Dorset, England.
295-2y-OM

DORSET HORN SHEEP!

CULVERWELL BROS., Durligh Farm, Bridgewater, Somerset, Eng. Breeders and Exporters of Improved Dorset Horn Sheep. Sheep and wool from this flock have won many first prizes at all the leading shows in England and Canada. Flock registered in English record. For price, etc., in Canada and U. S. A., apply to—
JOHN TAZEWELL, Uxbridge, Ont., G.T.R. 315-y-OM

LINCOLN -:- SHEEP

I always have for inspection and sale a large flock of pure Lincoln Longwool Sheep, including many prize-winners, having taken eighty prizes the last two years at the Royal and other shows, for both rams and ewes, also the first for the best collection of Lincoln fleeces of wool at the Royal Windsor show last year, which proves the character of this flock, which is most famous for their great size and 120 years' good breeding. Also breeder of

WHITE -:- YORKSHIRE -:- PIGS

Address—
HENRY DUDDING,
Riby Grove, Gt. Grimsby, Lincolnshire, Eng.
307-y-OM

BLAIRTUMMOCK -:- CLYDESDALES

Prof. McCall invites inspection of his Stud of Clydesdales, by American and Canadian buyers. Among the many good ones bred at Blairtummock may be mentioned Col. Holloway's renowned Cedric, acknowledged the greatest breeding horse in America. Address—

PROF. MCCALL,
The Veterinary College, GLASGOW, SCOTLAND.
317-y-om

THE HOME OF SPRINGHILL DARNLEY.
Clydesdale dealers when in Scotland should not fail to visit Messrs. R. & J. Findlay's Stud, Breeders and owners, amongst others, of the famous H. A. S. winner, Chrystal 5887. Address—Springhill, Baillieston, Glasgow. 317-y-om

THE HOME OF SIR EVERARD!

Wm. Taylor, Park Mains, Paisley, Scotland, calls the attention of American and Canadian buyers to the fact that his stud of Clydesdales and Hackneys is one of the best in Scotland. Inspection solicited. No trouble to show horses. 317-y-om

CLYDESDALES AND AYRSHIRES

Walter Park, Halton, Bishopton, Scotland, the breeder of the world-renowned "Lord Erskine," has always for sale a choice lot of Clydesdale Colts and Fillies; also pure-bred Ayrshires of the best milking strains. Visitors welcome. 317-y-om

HACKNEYS!

Duncan Jenkins, The Cross, Govan, Scotland, offers for sale Stallions and Fillies, the get of such sires as Danegut, Anconus, Sir Gibbie, etc.; all registered, and of the very choicest quality. All American and Canadian buyers should visit this stud. 317-y-om

W. G. BUTCHER,

The Chestnuts, Needingworth, Hunts, England offers for sale a grand selection of **HACKNEY AND SHIRE-BRED COLT AND FILLIE** of the choicest breeding, and good individually. All registered. Visitors welcome. Station: St. Ives, Hunts. 317-y-om

CLYDESDALES AND AYRSHIRES.

Parties visiting Scotland to purchase the above should call on the undersigned, who always has a choice selection bred from the best strains of blood. **ROBT. WILSON,** Manswraes, Bridge o' Weir, Renfrewshire, Scotland. 317-y-om

2250 SHROPSHIRE SHEEP

Including most of the greatest winners, also Horses, Ponies, Cattle, Pigs and Sheep

Of other breeds, exported during 1891, by **E. GOODWIN PREECE,**
Live Stock Exporter, - SHREWSBURY, ENG.

Who has personal knowledge of the best flocks, herds and studs, experience in shipping, and the privilege of selecting the choicest specimens of any breed, either for exhibition or breeding. American buyers supplied at lowest rates, and those visiting England conducted round the best stocks, so as to compare merits and prices before buying, and assisted in buying and shipping, FREE OF CHARGE. All necessary documents furnished. Highest references. Information free. All importers should communicate. 318-y-om

NOTICES.

BINDER TWINE

is an article that most Canadian farmers will be very much interested in for the next few weeks, and doubtless many have already decided what sort they intend to use.

We have recently examined and tested a sample of pure. Sisal binder twine, that is begin sent out by Messrs. Stanley Mills & Co., Hamilton, Ont. To those that want a thoroughly reliable twine we have no hesitation in recommending it. The fibre is very long and strong, and the cord itself has been very evenly drawn and twisted. As a proof of its strength, a strand of this twine, taken at random from a ball, held up eighty pounds.

The twine is very light in color, and appears perfectly free from oil or other foreign matter.

We are informed by Messrs. S. Mills & Co., that it is not encumbered by any combination. As they are endeavoring to build up a trade directly with farmers, they will sell this twine at \$11 per 100 lbs. for cash, for which price it is placed free on board the cars. See advertisement in another column.

We would draw attention to the "Common Sense" binder twine advertised in this issue by Messrs. Samuel's, Benjamin & Co., Toronto. We hear very good reports of this twine from dealers who handled it last harvest.

MONTHLY PRIZES FOR BOYS AND GIRLS.—The "Sunlight" Soap Co., Toronto, offer the following prizes every month till further notice, to boys and girls under 16, residing in the Province of Ontario, who send the greatest number of "Sunlight" wrappers: 1st, \$10; 2nd, \$8; 3rd, \$3; 4th, \$1; 5th to 14th, a Handsome Book; and a pretty picture to those who send not less than 12 wrappers. Send wrappers to "Sunlight" Soap Office, 43 Scott street, Toronto, not later than 29th of each month, and marked "Competition"; also give full name, address, age, and number of wrappers. Winners' names will be published in the Toronto Mail on first Saturday in each month.

One railway company will advertise that it is a "short line to Omaha". A competing line then positively states that it is a "shorter line to Omaha than any other," and now the Chicago, Milwaukee & St. Paul Railway insists that it is the "shortest line to Omaha," and proves it. The Chicago, Milwaukee & St. Paul Railway Company also says that it is the "best line to St. Paul and Minneapolis," with "electric lighted trains" and reading lamps in each berth so that one can read all night long if he has a book and don't want to sleep. It brags about the "finest dining cars in the world," with the best of meals served on imported china by the most expert and civil of colored waiters, at seventy-five cents, while the lines east of Chicago charge a whole dollar. And, once more, the Chicago, Milwaukee & St. Paul Railway opens up a few through car line from Chicago to Denver, via Omaha and Lincoln, and it isn't long before the whole world says to itself that "shortest line to Omaha," that "best line to St. Paul and Minneapolis," and that "new route to Denver," must be the only first-class railroad in the western part of the United States, and what the whole world says must be true. All coupon ticket agents in the United States and Canada sell tickets via the Chicago, Milwaukee & St. Paul Railway. For information concerning the line, time tables, etc., address A. J. Taylor, Canadian Passenger Agent, 4 Palmer House Block, Toronto, Ont.



W. G. EDWARDS & CO.
IMPORTERS AND BREEDERS.



SCOTCH SHORTHORNS.

The imported Cruickshank bull **GRANDEUR** is at the head of this herd of Imported and Home-bred Cows and Heifers of the most approved Scotch families.

ALEX. NORRIE, Manager.

ELMHURST STOCK & DAIRY FARM
CLARENCE, ONT.
Shorthorns, Shropshires and Berkshires

Our flock is from the choicest English flocks, headed by the ram sent out by Mr. Thos. Dyke, also milking Shorthorns with imported bull **PIONEER** at the head of the herd.

HENRY SMITH, Manager.

Laurentian Stock AND Dairy Farm.

North Nation Mills, P. Q.
Ayrshires, Jerseys and Berkshires.

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

GEORGE CARSON, Manager. 316-y-OM

GLENHYRST.
50 acres, bordering on the City of Brantford.
JAMES MAXWELL, SUPT.
Shropshire Sheep.
Shetland Ponies.
Apples—(in quantity)—Plums.
Registered Stock, all ages; for sale.

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100 acres, bordering on the City of Brantford.
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Have on the farm a modern wooden Silo. Capacity 250 tons.
Dorset-Horned Sheep. Jerseys. A.J.C.C. Holsteins (Royal Aag. gie family). Advance Register. Chester White Pigs.

Three grand modernized stock farms under one management.
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CEDARS FARM.
175 acres, eleven miles from City of Brantford.
ROBERT WALKER, SUPT.
Oxford-down Sheep.
Shorthorn Cattle.
Medium Yorkshire Pigs.

BRANTFORD P. O., CANADA.

NOTICES.

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

Attention is directed to the advertisement in another column of Central Business College, the proprietors of which are very enterprising gentlemen who take great interest in their work, and give the students thorough training in the leading commercial branches.

It is very gratifying to note that the New England Conservatory of Music, the oldest and largest in America, has just completed one of the most successful years of its existence. The students in each department are admitted to all the free courses, which consist of many lectures and concerts of the highest type; they also have free access to the library, gymnasium and numerous other privileges maintained by this great institution.



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Our last importations comprise a large number of one, two, three and four-year-old registered stallions and mares, the gets of such sires as Macgregor (1487), Darnley (2222), and Prince of Wales (673). Also a few choice **SHETLAND PONIES**. Correspondence solicited, and visitors always welcome.

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TO STOCKMEN AND BREEDERS.

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

For the destruction of Ticks, Lice, Mange, and all Insects upon Sheep, Horses, Cattle, Pigs, Dogs, etc. Superior to Carbolic Acid for Ulcers, Wounds, Sores, etc.
Removes Scurf, Roughness and Irritation of the Skin, making the coat soft, glossy and healthy.
The following letter from the Hon. John Dryden, Minister of Agriculture, should be read and carefully noted by all persons interested in Live Stock:

"MAPLE SHADE" HERDS AND FLOCKS.
BROOKLIN, ONT., Sept. 4th, 1890.
DEAR SIR,—I cannot afford to be without your "Little's Sheep Dip and Cattle Wash." It is not merely useful for Sheep, but it is invaluable as a wash for Cattle, etc. It has proved the surest destroyer of lice, with which so many of our stables are infested. I have ever tried; it is also an effectual remedy for foul in the feet of Cattle. I can heartily recommend it to all farmers and can breeders.

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

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Sole Agent for the Dominion. 315-y-OM

THE MARKHAM HERD, Locust Hill, Ont.
(Farm one mile from Locust Hill St., C. P. R.)
Registered Improved Large Yorkshire, Berkshire and Suffolk Pigs. Stock selected from the best herds in Canada. Am booking orders for Spring Pigs.—LEVI PIKE, Locust Hill, Ont. 308-y-OM

CHOICE PURE-BRED BERKSHIRES—Two grand boars fit for service, also a few sows. Cheap. A. D. ROBERTS, Walmer Lodge, Ancaster, Ont. 315-y-OM

FOR SALE

A choice lot of young Berkshire pigs, from two to three months old, from imp. and prize-winning stock; also a few choice boars fit for service. I have also some Yorkshire pigs fit for show purposes, boars and sows from six weeks to six months old. Prices reasonable. Address H. J. DAVIS, Breeder of Berkshires, Yorkshires and Shorthorns, box 290, Woodstock. 318-y-OM

FOR SALE
COTSWOLDS

—AND—
BERKSHIRES.
We have for sale forty head of yearling Cotswold Rams; thirty head of yearling Cotswold Ewes, and a number of young Berkshire Sows, in farrow to imported boars. We are now getting young pigs, which will be ready to ship in April and May. Write us for prices.

J. G. SNELL & BRO.,
EDMONTON, - - ONTARIO.

Brampton and Edmonton Stations. 310-y-OM

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Breeder of Pure-Bred Berkshire Pigs and Reg. Cotswolds of the choicest strains. A few choice sows, six months old, for sale. Now is the time to order young pigs to be shipped in April and May. Nothing but choice stock shipped, and satisfaction guaranteed. Write for prices, or if convenient come and see my stock.—C. P. R. Station, Claremont, Ont. 316-y-om

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Young Boars and Sows from two to eight months old. Also booking orders for spring pigs. Satisfaction guaranteed. E. E. MARTIN, Nithside Farm, Paris Station, Canning P.O., Ont. 309-y-OM

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A few very choice young boars, between 3 and 4 months old, at \$10 each.—J. W. S. BARBOUR, KING P. O., Ont. 318-y om

Stock.

Believing that the dissemination of reliable information regarding Jersey cattle will be of great value, not only to all dairy owners, but also to every farmer and every milk and butter user in the land, the American Jersey Cattle Club has decided to offer fifty prizes for acceptable essays on Jersey cattle. In these days of keen competition the successful man must not only consider cost but quality of product. It is claimed for the Jersey cow that she meets both of these requirements in the dairy better than any other breed, and that her real merits, even at the present time, are imperfectly understood. Consequently it is contended that many dairy farmers, from lack of knowledge as to cost of production and quality of product, are losing money that might be made if their present cattle were replaced with Jerseys. It is also believed to be a fact that in very many cases quality is sacrificed to quantity, and that milk and butter consumers, through lack of knowledge, are paying unreasonable prices, quality considered. At a meeting of the Board of Directors of the American Jersey Cattle Club, held May 4, 1892, it was directed that fifty prizes of \$25 each should be offered for acceptable essays on Jersey cattle. This competition is to be governed by the following rules:—1. Subject, Jersey Cattle—Anything pertaining to their history, value, usefulness, care, treatment, peculiarities of product, etc. It is desired that these essays shall cover as far as possible all the points on which present owners, intending buyers, persons who do not but who could probably keep Jerseys, consumers of milk, butter, etc., would naturally desire information. 2. Size—No essay shall contain less than 600 nor more than 900 words. 3. Time—All essays must be submitted on or before September 1, 1892. They may be sent earlier, and the committee request as prompt attention as practicable. 4. Conditions—All essays submitted are to be the property of the American Jersey Cattle Club, regardless of prizes. No essay will be awarded a prize unless it is considered by the committee to merit publication. 5. Competitors—Forty of the prizes are open to competition by men. Ten of the prizes are open to competition by women, and, in view of the great interest taken in Jersey cattle by women, it is confidently expected that many will submit valuable essays. 6. Awards—Prizes will be awarded and paid within sixty days after contest closes. 7. Committee—Well-known gentlemen will act as judges in this competition. 8. Suggestions to New Writers—Write plainly and only on one side of the paper. Write simply, just as you would talk. Don't criticise or attack other breeds. There is more of value to be said about the Jersey than can be put in any one essay. Don't try to cover too many points, take one part of the subject and make it complete. If you wish to write more, put it in another essay. Competitors may submit as many essays as they choose. Should you desire circulars for your friends, they will be sent on application. Address all communications on this subject to the American Jersey Cattle Club, No. 1 Broadway, New York, N.Y.

All our readers that are interested in sheep-raising will do well to notice Mr. Wm. Thompson's advertisement of Cotswolds, as he is importing a large number for show purposes to arrive early in August.

Mr. H. H. Hinds, of Stanton, Mich., has been appointed Commissioner of the American Short-horn Breeders' Association for the purpose of securing the necessary cows for the breed competition at the Dairy School of the Columbian Exposition. All parties owning registered Shorthorns and having in their herds animals possessing merit as milkers are hereby requested to immediately report the same to Mr. Hinds, at Stanton, Mich. He will advise with you about the conditions, and, if deemed of sufficient importance, is authorized to visit your herds to inspect the cattle. It is hardly necessary to repeat that in order to make this a success the Association must have the entire co-operation of Shorthorn breeders, and we would especially urge upon them the importance of embracing this opportunity of exhibiting to the world the dairy qualities of Shorthorns. It is desired that this exhibit be a popular one, and that representatives of different herds throughout the country may enter this competition, and with that in view it is hoped that breeders in general will at once commence testing some of their most promising cows. In this test a general note of the pounds of milk as well as the amount of butter produced should be taken account of, as it is well understood that but few breeders have the facilities for obtaining the best possible results from the test by the churn alone. These animals should be placed upon liberal rations, as the "grass alone" treatment will hardly do justice to the test. To better enable you to judge of what will be required of Shorthorns entering this test, we will give a short abstract from the rules: The School will be in operation during the entire time of the Exposition, during which there will be a number of tests under varying conditions, so far as the methods of handling the milk and cream and the manner of determining the awards are concerned. One period of the School will be devoted to illustrating the methods of handling milk and cream; another period to making cheese. There will be a breed test for three months under such uniform methods of handling milk and cream as may be agreed to by the representatives of the various breeds. All cows entered must be on the ground not later than May 1st, 1893, and must participate in all the above tests, and should be bred so as to produce previous to that time. The entire product of the Dairy School will become the property of the World's Columbian Exposition, but this Association will furnish (free of expense to the owner) transportation, all stable help necessary for the proper care and handling of their cattle and the help necessary to milk same. The Exposition will furnish a liberal supply of water and food commonly fed to dairy cattle. All cattle will be weighed immediately upon arrival at the grounds and at certain designated periods thereafter, and these weights will be considered in making the final awards. An accurate account will be kept of the kind and quantity of food given to each breed, which will be charged up against such breed at prices to be designated by the Chief of the Department of Agriculture, and all increase in weight of animal as well as all dairy products produced will stand to the credit of each breed. There will be a committee on tests, which will see that all tests are properly and fairly made. All cows will be milked in the presence of some member of the Committee on Tests or other persons authorized by the committee to be present. Milk from each cow will be weighed as soon as drawn and record kept of the weight. A weighed sample will then be taken and the amount of butter fat in same determined by some improved and rapid method. The milk of cows from the same breed shall then be mixed, and a weighed sample of the mixed milk be taken and the butter fat determined as above. The mixed milk will then be delivered to the Superintendent of the Dairy School. No foreign substance, except salt, water or ice, shall be put in the milk or butter during the tests of three months and one month. The basis upon which milk and butter shall be tested will be 80 per cent. butter fat, which will in all cases be determined by some approved and correct method. The Committee on Tests will make a daily comparison of the pounds of butter or cheese actually obtained from each breed and the amount calculated from the test, based upon 80 per cent. of butter fat. All cattle entered must compete in all the tests except the test for young herds. In the three month test awards will be based upon the value of the products obtained, after deducting the cost of the food consumed and allowing for the increase or shrinkage of live weight in accordance with a scale provided by the Chief of the Department of Agriculture. The awards in this test will be as follows: a. For the best individual cow in each breed competing. b. For the best individual cow in any breed competing. c. For the best herd of five cows in each breed competing. d. For the best herd of five cows in any breed competing. e. For the best herd. In the cheese test the award will be for the best herd competing. In the one month test the awards will be based upon the butter obtained, calculated upon the basis of 80 per cent. butter fat for one day, six days and twenty-seven days, and will be for individual cows and herds as above. There will be a test of young herds upon the same conditions as the last test mentioned above. Cows participating must be under three years old, and cannot be shown earlier than September 15th, 1893. The award will be to the best herd competing. As the season is already far advanced, it is hoped that no breeder will put off till tomorrow the preparation for entering this contest. The Shorthorn possesses too great merit to be left out of it, and this Association is determined to do all it can to afford the various breeders of the country the opportunity to win for the breed the dairy honors which it undoubtedly deserves.

FOR SALE.

Three Grand Improved Yorkshire Sows, one of them imported; a 1st prize sow at Toronto and a grand show sow, also a young sow. All registered. Sole reason for selling, I have given up farming. No better brood sows in the country. Prices moderate.

J. Y. ORMSBY,

319-tf-om FARMER'S ADVOCATE, London, Ont.

Improved Large White Yorkshires, Pedigreed.

We have lately added to our herd, which are from the strains of Sanders Spencer, Charnock, and F. Walker-Jones, England. Young stock on hand at all times for sale. Apply to

Wm. Goodger & Son,
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Improved Large (White) Yorkshire Pigs and Scotch Shorthorns.

Sweepstakes herd of Yorkshires wherever shown in 1891. The largest herd in Canada. Breeding stock selected from the most noted English breeders. All stock registered. Shipped to order and guaranteed to be as described.

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Importer and Breeder of **Ohio Improved Chester White Swine**

The largest and oldest established registered herd in Canada. I make this breed a specialty, and furnish a good pig at a fair price. Write for prices. 317-v

CHESTER WHITE SWINE AND DORSET HORNED SHEEP A SPECIALTY.

R. H. HARDING,
MAPLEVIEW FARM, THORNDALE, ONT.

Has young stock of the above breeds for sale at right prices. None but first-class stock shipped. Write for particulars. 310-y-om

Registered Poland-Chinas - Canadian Black Bess Herd.

Stock strictly of the Corwin, King, Butler and Black Bess blood. Choice stock of all ages for sale at reasonable prices. Imported from the head of head, assisted by Imported Boars Condit, Luck and Moorish King. Farm two miles south of G. T. R., C. P. R. and E. & H. R. stations. Correspondence and inspection of herd solicited. Reduced rates on shipment by express.—J. J. FAYNE, Chatham, Ont. 314-y-OM

PURE-BRED TAMWORTH HOGS AND CLYDESDALES

JOHN BELL,
Clydesdale Farm, Amber P.O., Ontario.

Young Boars and Sows bred from registered stock, imported from the best herds in England. This famous breed of bacon pigs is recommended by the largest bacon curers in the world. Try them, it will pay you. I have several pair unrelated. Some AI Clydesdale Stallions kept for service. Imported and home-bred Colts and Fillies. 317-y-om

TAMWORTHS

Improved Large Yorkshires.

Our stock is all imported from the very best herds in England, and every pig traces to the English Herd Book. We offer for sale at lowest figures Boars and Sows of the above breeds and of all ages. Write for prices, or give us a call and see our stock. Over forty head on hand.

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The Pioneer Herd of these famous American hogs has its headquarters in Essex County, Ont. Address: **PETER LAMARSH,**
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PLYMOUTH ROCKS
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COLBORN GRIFFITH, 317-b-0 Ealing P. O.

EGGS! EGGS!

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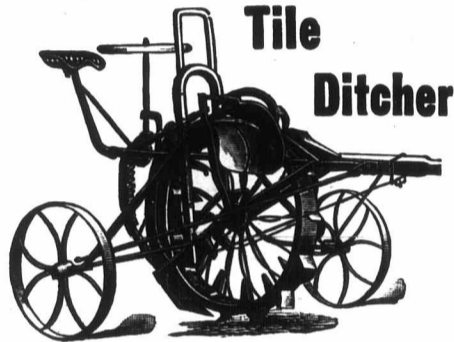
Agent for sale of C. P. R. and Canada Northwest Land Company's lands, and of thousands of acres of other lands in the neighborhood of above town and along the little Saskatchewan River, where there is abundance of hay and first class water. No better part for mixed farming. Improved lands among the above. Enquiries promptly answered, and any information required will be cheerfully given. 318-y-om

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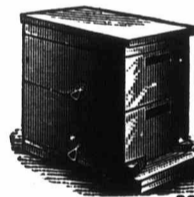
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KEEP YOUR EYE AND HAND ON THIS
"THE DOLLAR" KNITTING MACHINE
Ask your sewing machine agent, for it, or send a 3ct. stamp for particulars and price list. **THIS IS GOOD FOR \$2. SEND TO CREELMAN BROS., Mfrs., Georgetown, Ont.** 314-f-eot-0

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THE ZIMMERMAN
The Standard Machine
Different sizes and prices. Illustrated Catalogue free. **THE BLYMYER IRON WORKS CO., Cincinnati, O.** 316-f-0

\$50.00 FREE.

We offer in prizes as follows—1st, \$50.00; 2nd, \$15.00; 4th, 1 Box C. B. S., value \$3.00; 4th, 1 Box C. W. C., value \$2.40, to parties sending most words made out of the word "Cottam's" and eleven capital letters in next column.

COTTAM'S

- P. C.** (Cottam's Patent Bird Bread.)
- B. B. W. B.** (Cottam's Bird Seed.)
- B. S. C. P. M.** (Cottam's Washing Compound.)
- (Cottam's Baking Powder.)
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Old and young, everybody can compete. Mail 10c. for rules governing contest and we will send you a sample box of C. P. B. B., worth 10c. 316-l-om

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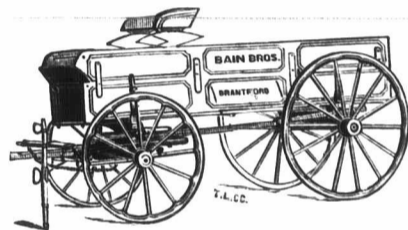
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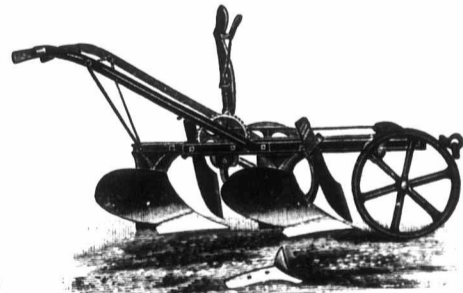
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Our Big 5 is a Two-Furrow Plow, made of fluted steel frame and steel axles. The mould-board is the best American cast steel, making it the best cleaning, easiest running, and most durable plow in Canada. We guarantee the frame to stand three horses, and any farm boy can handle it. Price, only \$20. Liberal discount for cash.

Be Sure and See it Before Buying.

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

STOCK GOSSIP.

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

Mr. A. J. C. Shaw, of Camden View Farm, Thamesville, reports the following sales:—To Jas. Blackburn, Dresden, Ont., a yearling bull, by Myrtle Duke; to John Bateman, Turin P. O., Ont., a yearling bull, by Myrtle Duke; to J. A. Powell, St. Mary's, the cows Lady Camden and Maud C; to E. S. Hubbell, Thamesville, a three-year-old heifer, by Widder Hero.

Mr. R. S. Stevenson reports the following sales: One bull calf, by Netherland Romulus, out of Joanna Tensen, to Embury Bros., Jerseyville, Ont.; also one Improved Yorkshire boar to Wm. Mullen, Hillsburgh; one Improved Yorkshire sow, six months old, to R. I. M. Power, Harrowby, Man.; one boar to Geo. Haines, West Flamboro'; one sow to Sol. Fields, Copetown; one sow to Mr. Homing, Copetown; one boar to Mr. Rouse, Copetown. One of our staff who visited Brookholme Farm lately, was delighted with the way the cattle looked. Mr. Stevenson is a good feeder, while he never pampers his stock, and this fact, together with his principle of buying only the best, has placed him in the front ranks of Holstein breeders in Canada.

Mr. Wm. Rolph, Glen Rouge, Markham, reports as follows:—Since January 6th my sales have amounted to thirty head of bulls, cows and heifers, viz.: A. B. Cooper, Islington, Ont., two cows; T. Bacon, Wannocoda, Ill., one bull and two heifers; W. B. Hinman, Grafton, Ont., one bull; F. J. Lambert, Dunnington, Ind., three heifers; A. A. Wright, Renfrew, Ont., two heifers; John Carr, Brownsville, Ont., one bull calf; G. H. Reasnor, Three-Mile Bay, N. Y., two heifers; Jas. McClenaghan, Portage la Prairie, Man., two heifers; A. Potter, Boston, Mass., one bull and one heifer; H. Harrison, Cannington, Ont., one cow and two heifers; A. Griffith, Thorndale, Ont., one cow; J. Sharpless Worth, Coatsville, Penn., two heifers; P. C. Simpson, Indiana, one heifer; J. C. B. Suman, Valparaiso, Ind., one bull; T. Bacon, McHenry, Ill., one bull; G. A. Barker, Guelph, Ont., one bull; G. H. Cox, Porter Hill, Ont., one cow; W. H. Murray, Port Stanley, Ont., one cow. Mr. Rolph adds: "My cattle are looking well. My cows now number upwards of thirty. I find the ADVOCATE an unequalled medium for advertising. Since I placed my card my sales in Canada have largely increased."

The American Berkshire Association will, in accordance with resolution below, offer the following special premium at all State and Provincial Fairs in 1892:—Resolved, That exhibits of Berkshire swine at all State and Provincial Fairs where separate classes are provided in 1892 for recorded Berkshires, be encouraged by the American Berkshire Association, by the offer of a special prize of the first ten volumes of the American Berkshire Record, valued at \$50. Said prize to be offered for the best recorded sow and litter of not less than five recorded pigs under six months of age, bred and exhibited by a resident of the State in which the fair is held, the conditions of the competition for this premium to be as follows:—1st. That there shall be not less than three competitors for the prize of \$50 offered, 2nd. That the competing animals be recorded in the American Berkshire Record prior to date of entry at the fairs, and that lists of such entries be furnished the Secretary of this Association at the close of the fair. 3rd. That a copy of these resolutions be printed in the premium list of swine, or that reference be made at the close of the classification of swine, to the publication of this announcement elsewhere in the premium list. The following Fair Associations of Canada have accepted the conditions upon which this offer is made, and will make it a specialty for the benefit of Berkshire breeders:—Central at Ottawa, Western at London, Exposition at Montreal, Exposition at Winnipeg, Exposition at Toronto.

Under date of June 23rd, Mr. J. E. Brethour Oak Lodge, Burford, writes:—"I beg to report a number of my recent sales of Improved Yorkshire pigs. I have had a very active demand for stock from my prize herd during this spring. I have made sales of over fifty pigs for breeding purposes since January, 1892: An imported sow, H. E. Sharpe, Ida P. O.; one pair, James Findlay, Shoal Lake, Man.; one pair, Wm. H. Horsfall, Annapolis, N. S.; one boar, R. G. Martin, Marysville, Ont.; one breeding sow, Geo. Cumming, Washington; one boar, Ed. Arrowsmith, Brantford; one boar and two sows, A. O. H. Witford, Adam Centre, N. Y. State; one boar, Chas. Dukelow, Beaverton; one pair, Wm. Tait, St. Laurent, P. Q.; one sow, Amos Sipling, Wingham; one pair, Alex. F. Derrick, Noyan, P. Q.; one imp. sow, one sow in pig, one boar, Jas. Bray, Portage la Prairie, Man.; one sow, S. E. Parnell, St. Catharines; one boar, Nelson Nickerson, St. Catharines; one pair, L. S. Drew, Burlington Vermont, U. S. A.; one pair, James C. Wood, Florence; one pair, A. F. Stewart, Carleton Place, Ont.; one pair, Isaac Akhre, North Williamsburg; one pair, G. H. Hurdman, Mattawa, Ont.; one pair, Clarence Lamarche, Mattawa; one boar, Wm. Green, Busy's Green; one pair, M. Rapelge, Simcoe; one pair, D. A. Rogers, Genoa, P. Q.; one pair, Wm. Tackberry, Phillipsville, P. Q.; one pair, David Watson, Kingsbury, P. Q.; one boar, Alex. Hume, Burnbrae, Ont.; one boar, J. R. Dennis, Montrose Farm, P. E. I.; one pair, C. F. Silvernail Gibbon, Nebraska."

STOCK GOSSIP.

Messrs. Mott write us that they have sold the bull Lord Barnton to Nelson McDougall, of Burford. This bull made a good reputation round his old home as a stock getter.

Mr. T. W. Hector reports his flock of Horned Dorsets doing very well. He had a grand lot of lambs, and most of the ewes are in lamb again. He is offering some choice ewes and lambs for sale. See his ad.

Messrs. J. & J. Smith, breeders of Shropshire sheep, Paris, Ont., write as follows, under date May 31st:—"We have sold fifty head since April 1st. The lambing season has been very favorable; we have fifty lambs from thirty-three ewes."

At the late Philadelphia Horse Show, Miss Rickell, sold by Messrs. R. & J. Beith, of Bowmanville, Ont., to Messrs. Twaddell & Sharpe, was an easy first in the Hackney brood mare class. This mare is a grand specimen of the breed; she is very strong, and yet full of quality, with good all-round action, and very fast, having won three first and two second prizes in trotting matches under saddle in England. Miss Rickell is a dark chestnut, sired by Brother of Danegelt 1723, her dam being Kilwick Lass 174, by Denmark 177.

Messrs. J. C. McNiven & Son, Winona, report that last spring they tested three of their Holstein three-year-old heifers, while still in the stable on dry feed. Result as follows:—Lady Meringue 2nd, 495 lbs. 3oz. milk, which made 21 lbs. 10 oz. butter in 7 days. Margaret 4th, 429 lbs. 4 oz. milk, which made 21 lbs. 8 oz. butter in 7 days. Maud Tensen, 428 lbs. 12 oz. milk, which made 18 lbs. 12 oz. butter in 7 days. A wonderful test for three young cows your readers will admit, we think. They report the sale of a nice bull calf to Matthew Watt, Saltfleet, Ont. They still have a grand bull calf and a few heifers, as well as their prize-winning two-year-old bull, for sale.

MR. MORTIMER LEVERING, SECRETARY OF THE AMERICAN SHROPSHIRE SHEEP RECORD, SENDS US THE FOLLOWING LIST OF THE PRIZE MONEY TO BE AWARDED BY THE ASSOCIATION IN 1892, AS FOLLOWS:

\$50.00 offered by the English Shropshire Society, of England, will be awarded at the London, Ontario, Fair, for the best flock of registered Shropshire sheep, consisting of two shearing ewes, two ram lambs, two ewe lambs—first premium \$20, second premium \$15. Best flock of five lambs (three ewe lambs and two ram lambs) all to be owned by the exhibitor, \$15.

\$50.00 offered by the same (English) Society, to be awarded at the Sherbrooke, P. Q., Fair. Same premiums and classifications as above.

\$50.00 offered by the same (English) Society, to be awarded at the Indiana State Fair. Same premiums and classifications as above.

\$50.00 offered by the same (English) Society, to be awarded at the New York State Fair. Same premiums and classifications as above.

\$50.00 offered by the same (English) Society, to be awarded at the Michigan State Fair, at Lansing, Mich. Same premiums and classifications as above.

\$50.00 offered by the American Association, to be awarded at the Toronto, Canada, Fair. Same premiums and classifications as above.

\$50.00 to be awarded at the Lexington, Kentucky, Fair. Same premiums and classifications as above.

\$50.00 to be awarded at the Iowa State Fair, at Des Moines. Same premiums and classifications as above.

\$50.00 to be awarded at the Washington, Pennsylvania, Fair. Same premiums and classifications as above.

\$50.00 to be awarded at the Sedalia, Missouri, Fair. Same premiums and classifications as above.

\$50.00 to be awarded at the Pueblo, Colorado, Fair. Same premiums and classifications as above.

\$50.00 to be awarded at the South Dakota State Fair. Same premiums and classifications as above.

\$50.00 to be awarded at the Nebraska State Fair. Same premiums and classifications as above.

\$50.00 to be awarded at the Vermont State Fair. Same premiums and classifications as above.

\$50.00 to be awarded at the Ohio State Fair, in Columbus. Same premiums and classifications as above.

This Association will offer the following special prizes to be awarded at the American Fat Stock Show, in Chicago in 1892:—

Best Registered Shropshire Wether, 2 years old or over: First premium \$15, second premium \$10, third premium \$5.

Best Registered Shropshire Wether, one year old and under two: First premium \$15, second premium \$10, third premium \$5.

Best Registered Shropshire Wether, under one year: First premium \$15, second premium \$10, third premium \$5.

Grand Sweepstakes Premiums.—Best Shropshire Wether, or Wether sired by Registered Shropshire Ram, \$15.

Grand Sweepstakes Pen.—If won by Registered Shropshire Wethers, or Wethers sired by Registered Shropshire Ram, consisting of one Wether, two years old and over; one Wether, one year old and under two; one Wether, under one year, \$15.

Best Carcass, Wether, Registered Shropshire, or Wether sired by Registered Shropshire Ram: Two years old or over, \$10; one year old and under two, \$10; under one year, \$10. Extra special premiums not in the fat stock show list. Best Wethers sired by Registered Shropshire Rams, out of Merino ewes: Wethers, two years old and over: First premium, \$15; second premium, \$10. Wether, one year old and under two: First premium, \$15; second premium, \$10. Wether, under one year: First premium, \$15; second premium, \$10.

**THE NEW FODDER PLANT
Lathyrus -- Sylvestris.**

When once planted will last without renewal 50 years. Yields eighteen tons per acre. Successfully grown in India, Africa, America, Russia, etc. For further particulars address

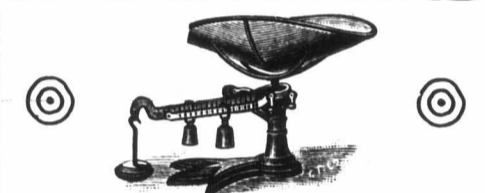
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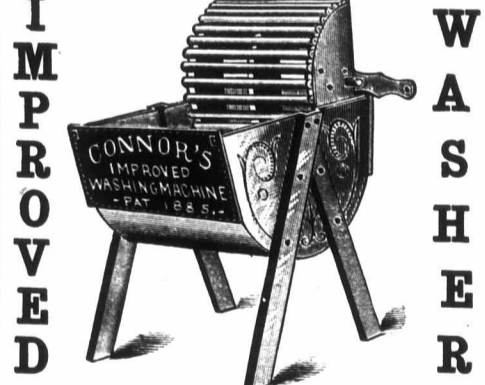


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Stock or Hay Scales!**

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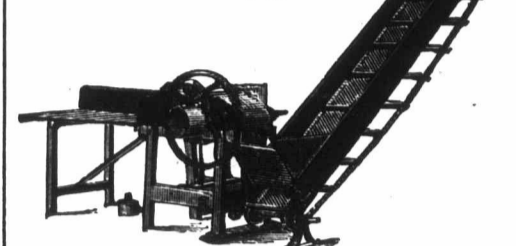


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**CAMPBELL'S
QUININE WINE
CURES—Dyspepsia,
Low Spirits, Loss of
Appetite, Painful Di-
gestion, Malaria, and
gives tone and vigour
to the whole system.**

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**OUR NEW ENSILAGE CUTTER
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MANY IMPROVEMENTS!

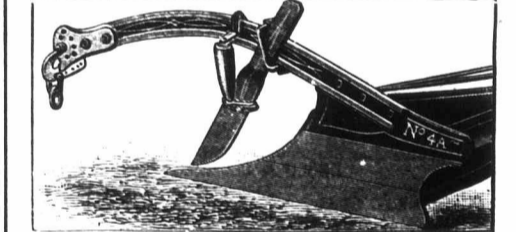
- IT HAS ---
- STOP FEED LEVER, ---
- DROP LEAF ENSILAGE TABLE,
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Safety Fly-Wheel has no Set Screws to Adjust, and Cannot get out of Order.

--- WE ALSO MANUFACTURE ---
**TREAD POWERS, SWEEP POWERS,
--- AND ---
Threshing Machines.**

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PETCH'S STUBBLE RELIEVER FOR PLOWS.



The Stubble Reliever is a roller standing in an upright position in front of the couler, as shown in the cut. It works on the roller principle, and is warranted to give satisfaction in the worst stubble that grows, also in manure, sods, grass, or any other obstruction. It can be put on any plow in one minute without any alterations. It will relieve the couler of all obstructions, no matter how wet. It is worth the price to plow in one field of manure, causing the same to pass off quickly and become completely covered by the furrow. Full information given on application. Agents wanted in every county. Address — ARTHUR PETCH, Aurora, Ont., Can. Sole Patentee for the Dominion. 319-c-0

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FATTENING HOGS

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--- IT GIVES ---
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SMALL FRUITS. Raspberries, Strawberries, Grape prices. It will pay you to get my price 1st. **PLY-MOUTH ROCKS,** Canada's best. Unsurpass. Eggs only \$2 per B. Catalogue free. — C. W. ECKARDT, Hazelton Fruit and Poultry Farm, Ridgeville, Ont. 26-y-M
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WILL RE-OPEN ON THE 1st OCTOBER.

Full courses of lectures, with practical instruction, on

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and other subjects required by young men intending to be farmers.

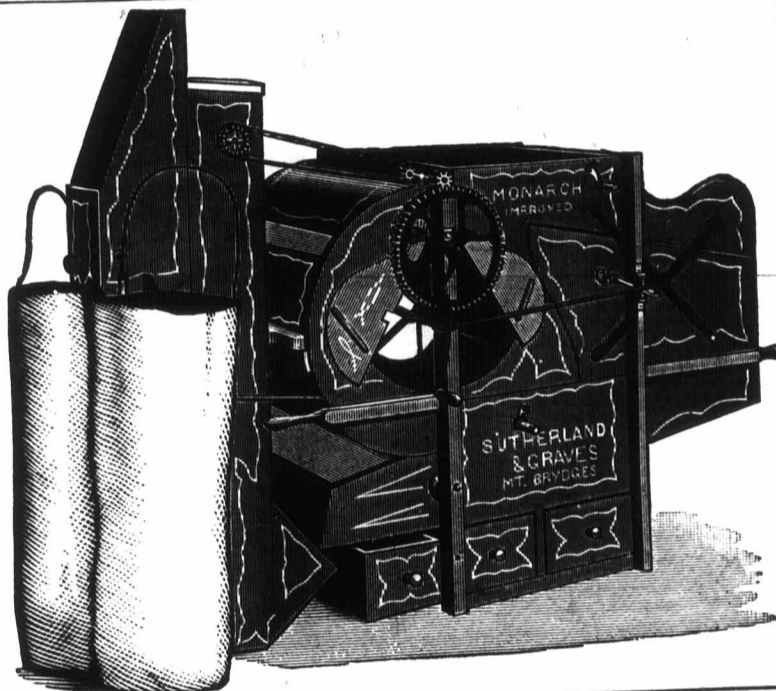
For circular giving full information as to cost, terms of admission, etc., apply to

JAS. MILLS, M. A.,

PRESIDENT.

Guelph, June, 92.

319-c-om



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— MONARCH — FANNING MILL

What It Does:

Separates and grades oats, barley, wheat, rye, peas, beans, corn, clover and timothy. It screens all chaff and fowl seeds by one going through. Fastest and cleanest mill made. Note the bagging attachment; two men with the bagger does the work of three. The MONARCH is the most superior, durable, simple, efficient and easiest operated mill in America. Testimonials and prices on application.

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Successor to

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MANUFACTURERS,

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NOTICES.

The following is one of the many testimonials received by Mr. Manson Campbell of Chatham concerning his fanning mill: "I think the Chatham Mill is the Farmer's Delight. My neighbor has a Brantford, but he has to borrow mine when he wants to clean grain good, particularly clover seed. I can clean both red and Alsike clover to perfection with mine. Yours truly, J. FREDERICK JOHNSON."

CENTRAL CANADA FAIR.

The prize lists of the Central Canada Exhibition to be held at Ottawa from Sept. 22nd to Oct. 1st, 1892, have been carefully revised and an early distribution thereof has been made through the country, the object of the early distribution being to give intending exhibitors ample time to peruse it and get exhibits ready. The different departments therein have undergone a complete and practical revision by the several committees who had charge thereof. The prizes offered in some of the live stock classes have been increased, and money prizes in several instances take the place of diplomas. A new class for horses and one for sheep has been added. Considerable changes in the several lists have been made, as well as an increase in the money prizes, as was also the case in the poultry and bench show departments. Several changes were also made in the agricultural, dairy and horticultural departments, and also in the fine arts and ladies' departments. Altogether the prize list of the Central Fair is as near complete as is possible to get it. The following is a list of special prizes offered in the different departments for this year's exhibition:—

Gold medal—By Messrs. H. N. Bate & Sons, for the best Thoroughbred stallion, 2 years old and over.

Gold medal—By Robert Thompson, Esq., for the best yearling by Jaubert.

Gold medal—By Robert Thompson, Esq., for the best foal of 1892, by Jaubert.

Gold medal—By O. Durocher, Esq., Mayor of Ottawa, for the best pair of matched carriage horses, geldings or mares, in harness, 15½ hands and over.

Gold medal—By J. W. McRae, Esq., Pres. Ottawa Electric Railway, for the best standard bred stallion.

Gold medal—By Wm. Hutchison, Esq., Vice-Pres., for the best thoroughbred Clydesdale stallion, 2 years and over.

Gold medal—By G. W. Monk, Esq., M. P. P., for the best Dominion bred heavy draught stallion, any age.

Gold medal—By W. C. Edwards, Esq., M. P., county of Russell, for the individual exhibitor from the county of Russell who takes the largest amount of prizes.

Gold medal—By Alderman F. Bingham, for the best herd of Ayrshire cattle, one bull and four females.

Gold medal—By W. T. Hodgins, Esq., M. P., county Carleton, for the individual exhibitor from the county of Carleton who takes the largest amount of prizes.

Gold medal—By John Ferguson, Esq., M. P., for South Renfrew, for the individual exhibitor from the south riding of Renfrew taking the largest number of prizes.

Gold medal—By Alderman E. Wallace and Robt. Surtees, Esq., City Engineer, for the best mantle and fire place decoration.

Gold medal—(or \$25 in cash)—By Geo. P. Brophy, Esq., Ottawa, for the exhibitor making the most artistic and attractive exhibit in main building.

Gold medal—(or \$20 in cash)—By Alderman Scrim, for the best 3 tinets of butter, not less than 40 lbs. each, made at any farm dairy, also best basket of 1½ lb. prints, not less than 10 lbs.

By the "American Berkshire Association," ten volumes of the American Berkshire Record valued at \$50, for the best recorded sow and litter of pigs, not less than 5 recorded pigs under six months' old, owned and exhibited by a resident of the province of Ontario. For conditions see page 29 of prize list.

Silver medals—By the Association, for the best flock of sheep, any breed, one ram and five of his get, all to be bred and owned by exhibitor.

Silver medal—By the Association, for amateur photography, landscape, any size, not less than two dozen.

By the Association, for the best performance of professional coachmen in livery, to be competed for on Saturday, September 24th, at 3 p. m. Pair of mares or geldings not under 15 hands, shown in T carts, mall Standhope, pheaton or carriage. Entire outfit and general display to be considered.—\$70. (First, \$30; second, \$10).

By the Gardeners and Florists' Club of Ottawa, for the best collection of outdoor grapes, 2 bunches of each, correctly named, grown in the Ottawa Valley and by the exhibitor, \$8.—(First, \$5; second, \$3).

FOR AMATEURS.—By N. Robertson, Esq., for the best collection of window plants, \$5; also, for the best collection of vegetables, \$5.

By Thomas Elmitt, Esq., of Ottawa, for the best bouquet of flowers, arranged by a young lady under 15 years of age, \$5.

In addition to other special attractions which are being secured for the coming fair, the Association offer the following amounts for exhibitions of speed, viz: Saturday, Sept. 24th, \$100; Monday, 26th, \$150; Tuesday, 27th, \$195; Wednesday, 28th, \$240; Thursday, 29th, \$285; Friday, 30th, \$330; Saturday, 31st, \$375.

Particulars of which are given on page 63 of the Association prize list, and any person desiring a copy can obtain one by dropping a card to E. McMahon, Secretary, 26 Sparks St., Ottawa.

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The Machines of the Season.

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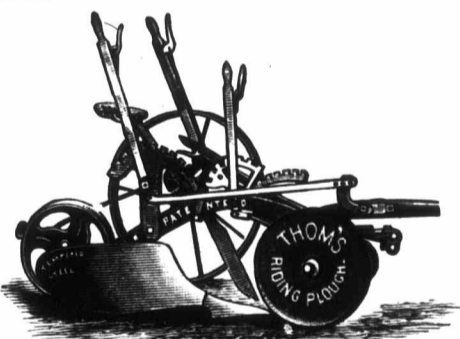
If you want to buy, sell or exchange any kind of farm lands in Western Ontario—the garden of North America, put yourself in the way of doing business by calling on

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TREES! Now in stock, a fine line of all kinds of nursery stock, including Roses, Shrubs, Fruit and Ornamental Trees. Best possible grade, and true to name. Salesmen wanted at once. Write for terms, quick.—THOS. W. BOWMAN, Peterborough, Ont., "The Rochester Star Nurseries." 314-y-OM

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THE LEADING SULKY PLOW.

Thom's Sulky's are the only plows having adjustable draft clevis and gauge wheel. Patented in Canada and the States. We manufacture the Standard Walking Plows of the Dominion, No. 3, 1 X L; No. 4, 5, 7 and 30. Also the latest improved and best two-furrow on the market, and the oldest manufacturer in Canada of this class of plows. We lead, others follow. All the latest improvements in riding and walking plows.

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MANITOBA, 160 ACRES MANITOBA.

Sec. 19, Township 6, Range 5, West. A splendid stream runs through this property.

640 Acres

Sec. 15, Township 2, Range 5, East. Anyone wishing to settle in Manitoba will find it to their advantage to write for prices to

ANDREW PARK & SON,

317-a-o St. Lawrence Market, Toronto.

STOCK GOSSIP.

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

The Department of Agriculture reports that according to the general census of 1890 the number of head of stock in the districts of Alberta and Assiniboine is:—Cattle, 215,078; horses, 55,419; sheep, 60,433. The same report shows that the number of head of stock in the district of Saskatchewan is as follows:—Cattle, 16,144; horses, 5,220; sheep, 4,487.

Mr. Adam M. Bald, of Sebringville, reports that his purebred Holstein cow, Emma J. Neptune, on winter feed, produced 74 lbs. of rich milk in twenty-four hours, and has since going on grass given as high as 85 lbs. and over in a day. These are the kind of cows which are profitable to keep for the production of butter and cheese. We shall be pleased to hear of anyone who can surpass this record.

The following special premiums, aggregating \$1,000, will be offered by the American Berkshire Association, at the World's Columbian Exposition, for pigs with certificates of record from the above:—Boar, two years old or over, 1st, \$40; 2nd, \$30; 3rd, \$20; 4th, \$10. Boar, one year old and under two years, 1st, \$40; 2nd, \$30; 3rd, \$20; 4th, \$10. Boar, six months old and under one year, 1st, \$40; 2nd, \$30; 3rd, \$20; 4th, \$10. Sow, under six months old, 1st, \$40; 2nd, \$30; 3rd, \$20; 4th, \$10. Sow, two years old or over, 1st, \$40; 2nd, \$30; 3rd, \$20; 4th, \$10. Sow, one year old and under two years, 1st, \$40; 2nd, \$30; 3rd, \$20; 4th, \$10. Sow, six months old and under one year, 1st, \$40; 2nd, \$30; 3rd, \$20; 4th, \$10. Sow, under six months old, 1st, \$40; 2nd, \$30; 3rd, \$20; 4th, \$10. Boar and 3 sows under one year old, bred by exhibitor, 1st, \$80; 2nd, \$60; 3rd, \$40; 4th, \$20.

The following special premiums will be offered by the American Southdown Association at the Fat Stock Show to be held in connection with the World's Columbian Exposition:—Wether, two years old or over, 1st, \$50; 2nd, \$25; 3rd, \$15. Wether, one year old and under two, 1st, \$40; 2nd, \$25; 3rd, \$15. Wether, under one year old, 1st, \$40; 2nd, \$25; 3rd, \$15. These special premiums are offered only on compliance with the following conditions:—1. That the sires and dams of the animals competing for said premiums shall be recorded in the American Southdown Record at the time of entry for the exhibition, and that the party making the entry furnish the Secretary of the American Southdown Association, at the time of entry, a copy of same so far as concerns competition for these premiums. 2. That the premiums will be paid on the presentation of certificate from the proper officer of the World's Columbian Exposition.

Messrs. Smith Bros., Churchville, Ont., write us as follows:—"Our sales continue good, and inquiries are on the increase. The Deaf and Dumb Institute, Mile End, Quebec (who have for sale a very good butter-worker), bought the handsome young bull Peel Queen's Slepke Prince, and express themselves well pleased with him. He comes from Peel Queen, who gave 69 lbs. of milk in a day, and Slepke Prince, who is half-brother of Slepke 3rd, who gave 16 lbs. of butter in a week, and also of Slepke 4th, who, as a two-year-old, gave 134 lbs. of butter in a week. Mr. C. C. Castle, of Stonewall, Manitoba, got the richly-bred young bull Onetta's Mink Mercedes Count. His dam, Onetta, gave 10,607 lbs. of milk in ten months, and 144 lbs. of butter in a week, her test taking place 5 months and a week after calving. She is a handsome cow, a prize taker, and keeps up the quantity of milk remarkably well. The sire of the young bull is our Mink's Mercedes Baron, whose six half sisters averaged 16 lbs. 5 ozs. of butter in a week at two years old, and his grand dam gave 99 lbs. 6 1/2 ozs. of butter in thirty days in a public test. Mr. Samuel McGee, of Fenelon Falls, got two excellent heifers, Young Wiebien and Emma Peel. These are splendid breeders, and are richly bred. The former comes from advanced registry stock, the latter is rich in the Violet blood. Mr. Irwin, of Rosemont, got Riverside Sheik, and S. E. Smith, of Dundas, got Mink Mercedes Count. Our heifers and calves look very well, and we are offering some choice ones at very close prices."

Mrs. E. M. Jones, Brockville, gives the following notes concerning her well-known herd of Jerseys:—"I have made sales of some of the progeny of my great cow Massena—654 lbs. of butter and over 8,000 lbs. of milk in her 16th year. What cow but a Jersey could do this, and does one complain because of not turning such an animal into a few pounds of beef? And the old cow is in calf again, hale and hearty. The stock I sold are sired by the great prize-winning son, Massena's Son, whose sire was pure St. Lambert. To N. N. Vincent, St. Armand Centre, P.Q., bull calf, Massena's St. Lambert, out of Charming of St. Lambert, 154 lbs. butter per week at only two years old, and grand daughter of Charity of St. Lambert. Mr. Vincent has done the right thing this time. To M. S. Gardner, Evan's Mills, N.Y., bull calf, Massena's Rioter, out of Sybele's Lass, over 14 lbs. a week after losing one teat. This is a bull of rare beauty and breeding, and I predict for him a great success. To A. Dionne, Ste. Therese, P.Q., yearling bull, Massena's Combination, 1st prize at Toronto, 2nd at Montreal and 1st at Ottawa. This is a magnificent animal. Last but not least, to Mrs. Isa. Bayler, Washington, Illinois, heifer calf, Massena of Jersey Lawn, dropped this year by old Massena, and sired by her own son. This is without a doubt, one of the gems of the Jersey breed, and Mrs. Bayler writes me:—"I have seen great many calves, but I never yet saw one with such marked development at so early an age." If Mrs. Bayler has laid the foundation for a great herd it is not for nothing of buying the right stock."

MANITOBA FARM LANDS FOR SALE

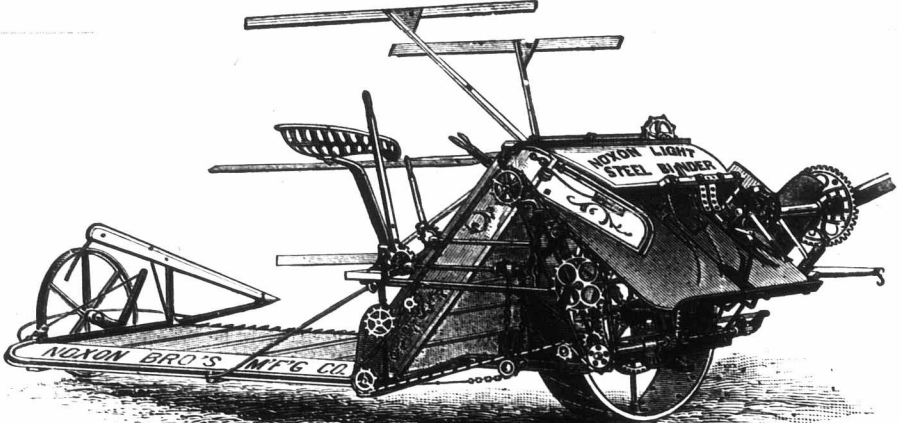
w 1/2	13,	8,	21,	\$10 00	n. w. 1/4 24 and	9,	5, w.	\$ 5.00
n 1/2	13,	7,	21,	8 00	1/4 n. e. 1/4 23	6,	23,	10 00
s 1/2	24,	7,	21,	8 00	All	5,	24,	10 00
s e 1/4	19,	13,	21,	4 00	All	19,	5,	24,
All	3,	7,	22,	10 00	w 1/2	21,	5,	24,
n 1/4	13,	6,	22,	10 00	n 1/2	3,	9,	26,
n 1/2	23,	6,	22,	10 00	w 1/2	1,	10,	26,
e 1/2	33,	6,	22,	10 00	n w 1/4	35,	10,	26,
s e 1/4	17,	6,	23,	15 00	e 1/2	3,	12,	27,
w 1/2	26,	4,	4, w.	10.00	n e 1/4	36,	18,	27,
w 1/2	30,	25,	3, w. 2nd.	6.50	All	12,	17,	6 00
e 1/2	25,	1,	10, w.	7.00	n 1/2	10,	1,	13, w.

(Fine farm, near Yorkton.)

320 acres, house, stabling, etc.; 75 acres in crop now; 100 more broken and backset. A first-class farm, four miles from Alexander, Manitoba, \$5,440; only \$1,500 cash. A gentleman's residence, with thirty acres adjoining City of St. Thomas, Ontario, with fine buildings, for sale, or exchange for Manitoba farm. House, ten rooms. \$7,000. Easy terms if sold. We have a large list of Manitoba land beside the above. We also have a list of Ontario Farm and City property, either of which we will forward to any address. Parties wishing to exchange Manitoba lands for Ontario property should send us particulars. We have some choice property to exchange. Ranches in Calgary district wanted.

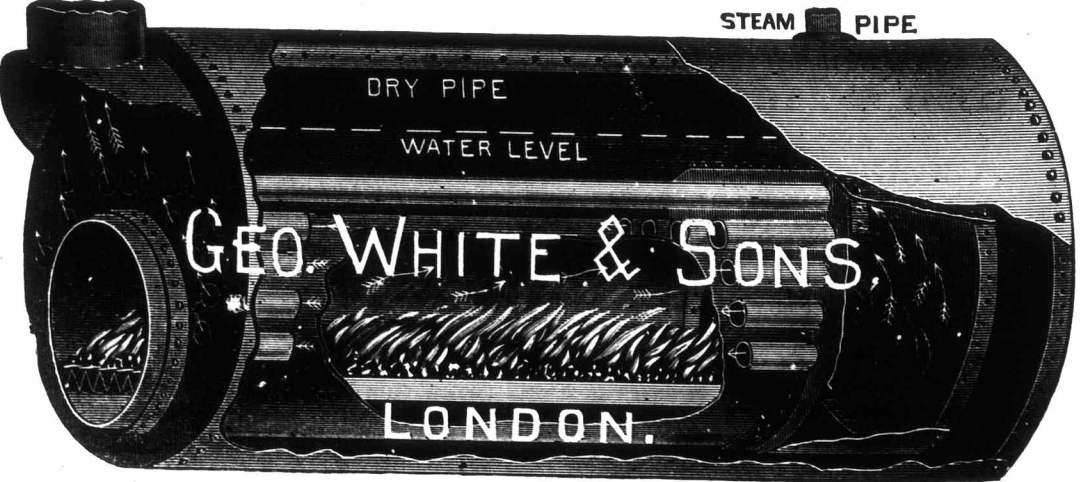
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Near Stonewall.—S e ¼ and s ¼ n e ¼ 24, 14, 1, east;
s e ¼ and e ¼ s w ¼ 5, 14, 2, east. Rosser.—N w ¼ and
w ¼ n e ¼ 20; s e ¼ and e ¼ s w ¼ 14; all in 12, 1, east;
s w ¼ and s ¼ n w ¼ 10, 12, 1, west. Terms—10 per
cent. cash, balance in five annual instalments, with in-
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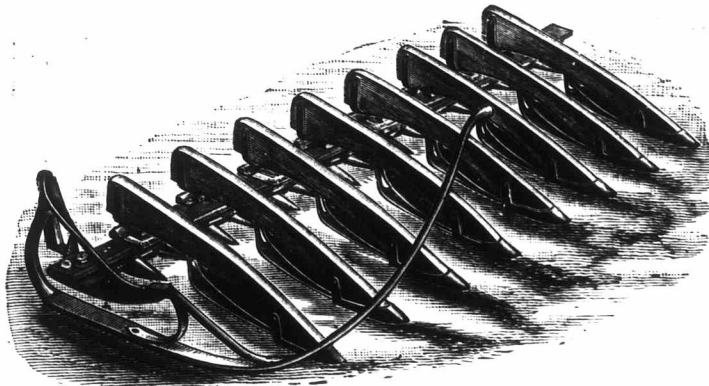
Mr. Wm. Martin, "Hope Farm", reports the sale of another fine young Galloway bull, and the last for this season, viz., Marathon 8519, calved Nov. 17th, 1890; sire, Chester (4472), dam Marjara 5935. He was secured by Mr. Geo. Clubb, of Morris.

Mr. S. C. Stevenson, Secretary Montreal Fair Board, under date of June 22nd, writes:—"I beg to say that our exhibition will be held in Montreal from the 15th to 23rd September. The prospects for our exhibition this year are most encouraging. Many letters have already been received from breeders residing in various parts of the Dominion, each of whom have signified their intention of exhibiting with us this year. The classes for live stock last year were fully represented and the arrangement of the prize list this year, using last year's results as a basis for revision, will undoubtedly give still greater encouragement to that important section of the exhibition. In the Ayrshire class the display was the finest ever seen in Quebec, and probably in the Dominion. We have extended the largely increased exhibits which have been promised for this year. It is expected that the electric railways, which are at present engrossing the attention of the whole population of Montreal, will be completed before the exhibition is held, and that several lines will be running to the grounds by that time. Our prize list will be ready for distribution in about two weeks, and a copy of it will be mailed all who apply."

Mr. Joseph Beck, of Thorndale, importer and breeder of Suffolk Punch and Hackney horses, writes us that he has recently sold the following valuable animals:—"To Mr. M. F. Reynolds, of Rochester, N. Y., the Suffolk stallion Venture, No. 1883 in S. S. B. This grand stallion was imported in Sept., 1891, by myself. He was a great prize-winner in England before being imported, and took first prize and silver medal at the Industrial, Toronto, and first prize and diploma at Western Fair, London, immediately after being imported. I will give his measurements, taken from the Stud Book:—Weight, 18 cwt., 2 qts., 14 lbs.; girth, 9 ft., 10 in.; below the knee, 10 ¼ in.; below the hock, 12 in.; height, 16-3. The Suffolk mare Vanity, No. 1630 in the S. S. B., I imported July, 1888. This mare has been a great prize-winner in Canada, having an unbeaten record in the show ring, having four silver medals and seven diplomas to her credit. The Suffolk mare Patch, No. 1536 in the S. S. B., was also imported in 1888 by myself. This is a very useful mare, always taking second place to her stable companion, Vanity, when shown in the same ring. The Hackney stallion Perfection, No. 2777 in H. S. B., I imported in 1889. This horse being rarely well bred will be sure to leave his stamp on his produce. He is in color dark brown, stands 15-2 ¼ hands, and weighs about 1,400 lbs. He has left very many beautiful colts during his two seasons at the stud. Canada's loss in these highly bred horses will be the State of New York's gain. They will be sure to make their mark where they have gone. Thus it is that all our best horses leave Canada and we are left to breed to the scrubs which call at every farm house six days in the week, and will serve mares at any price offered, which no man that imports good horses can compete against without sure ruin to the importer. Thus we are left to mourn this deplorable condition of affairs."

Mr. J. G. Davidson, Manager of Kinnoul Park Stock Farm, writes:—"After an interval of some three years we have again much pleasure in placing our stock in the columns of your valuable journal. We were sold so low down in the spring of '89 that we then decided to withdraw our advertisements from the papers, and begin afresh with new and strong materials to build up our undefeated herd. With this end in view, we had in the fall of '88 purchased from the Messrs. Walker & Sons, of Walkerville, the imported, royally-bred Ruth bull Runnymede 2nd 3217-5220-6. We had been for years (almost) waiting to introduce this fine animal into our herd, and females to match his true "Doddle" character had been carefully selected and reserved from our heavy sales of 1889. The result has more than justified our choice, and we have now a larger and better herd than we ever had on this farm before. We have been fortunate in being able to breed from this superb bull and our show cow, Flower of Knockmill, one of the best of living bulls. He has been named after his sire, and we can truthfully say that he is the best animal we have ever bred. He is a show bull fit to stand in any company, low-down and blocky, rounded from three points of view, with a double coat of silken hair and mellow skin, easy-minded, with no trace of 'Flichtersomeness' in his bearing or movements. With all our skill and care in breeding, it is only once in a lifetime that such a fine specimen of the Doddle crops up, and his breeding on both sides is of best and most fashionable type. We have not exhibited anything for three years. We had our day of it, and we would not be honest if we said we were not satisfied with our record. We had experienced nothing but kindness from fair managers, judges and our brother exhibitors, and there is nothing to prevent us (when the time comes) taking our place again in the struggle for supremacy. We believe we have never been in better shape to meet the wants of our old customers (and new ones, also), and we shall be delighted to hear from them, as we are in a position to supply their demands at more reasonable prices than we have as yet been able to offer. Send postal card for private sale list, and come and see us, whether on business or pleasure."

RICHMOND PEA HARVESTER!



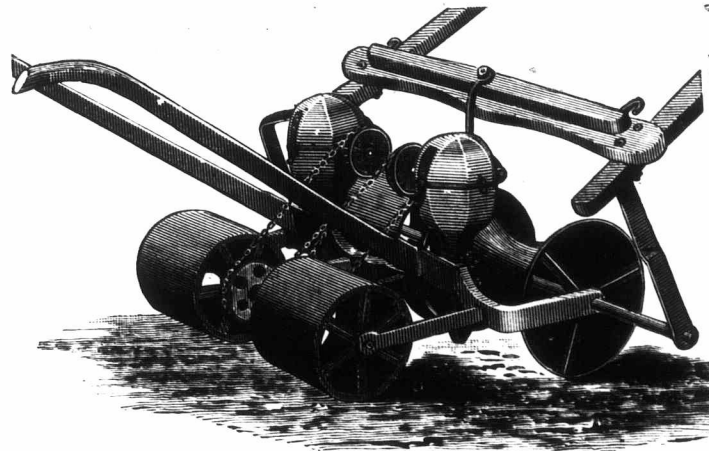
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1st—We commenced in a field in which there had been no improvement for fifteen years, and none has yet been shown except in feeble imitation of our inventors. 2nd—Before commencing to manufacture, we exhaustive experiments were made with iron and wooden lifters in all conditions of soil and grain. We found that a wooden lifter would work best, allowing the peas to slide more easily than on iron lifters. 3rd.—Every farmer knows, who has had any experience with pea harvesters, that the want of a spring to hold the lifters down to their work has been the great reason of so many failures with pea harvesters, and that is the reason why our Harvester has become so popular in so short a time. Our Harvester is the only one in the market at the present time which uses a spring lifter.

Write for testimonials and price list. Address, JOHN RICHMOND & SON, Blyth P.O., Ontario. 318 c-o

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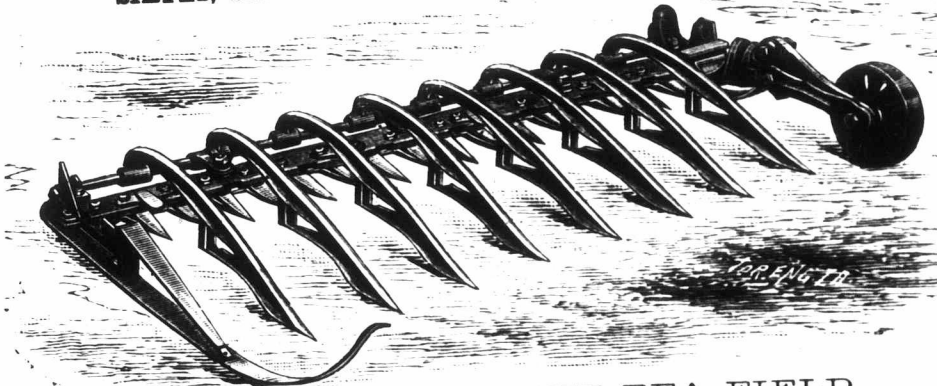


Sows two rows at once, follows course of drills and drops seed always in the centre; sows also CARROT, BEET and MAN-GOLD-WURTZEL SEEDS.

We also manufacture DIAMOND HARROWS OF ALL SIZES, SINGLE & TWO-FURROW PLOWS, SCUFFLERS, MOWERS, PEA HARVESTERS, ETC.

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Increase, - - - - 686,017 acres.

These figures are more eloquent than words, and indicate clearly the wonderful development taking place. NOT A BOOM, but certain and healthy growth

HORSES, CATTLE AND SHEEP

Thrive wonderfully on the nutritious grasses of the prairie, and MIXED FARMING is now engaged in all over the Province. There are still

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Minister of Agriculture and Immigration,
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Or to

THE MANITOBA IMMIGRATION AGENCY,
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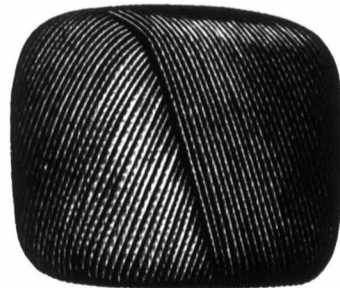
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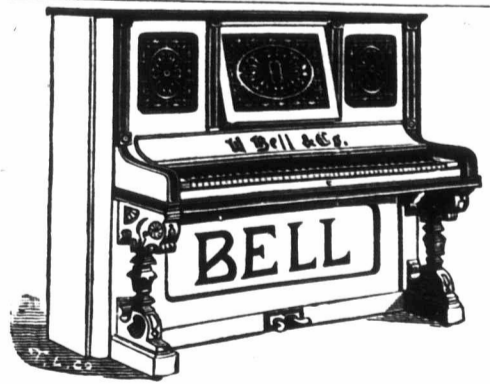
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M. & L. SAMUEL, BENJAMIN & CO., Toronto.



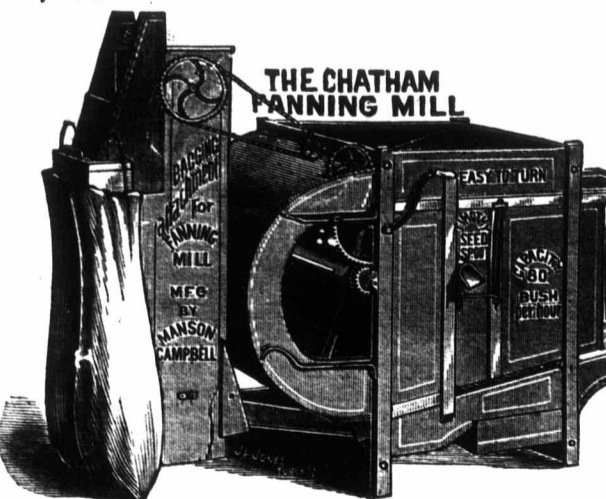
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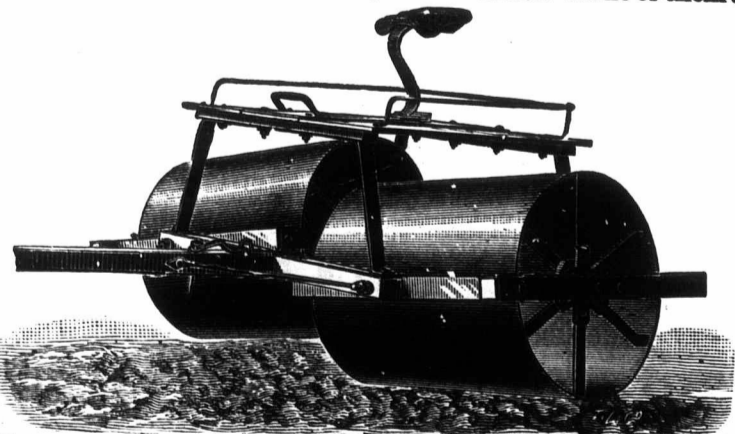
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THE DALE PIVOTED LAND ROLLER

(Patented.)
A STEEL ROLLER, THE DRUMS OF WHICH OSCILLATE ON PIVOTS AND ADAPT THEMSELVES TO THE UNEVENNESS OF THE GROUND.

Its points of advantage are too many to enumerate. Some of them are:



The bearings are the only wearing parts and are guaranteed to last from Ten to Fifteen Years, and can be replaced at a nominal cost.

It rolls all the ground, no matter how rough. There is no axle shaft, no strain, and consequently no wear. It is easily rolled between the drums.

THE DEMAND IS STEADILY INCREASING. IT IS UNANIMOUSLY RECOMMENDED BY THOSE FARMERS WHO HAVE USED IT. Orders are now being booked for the fall trade. Description and price furnished on application to.

T. T. COLEMAN, SOLE MANUFACTURER, SEAFORTH.
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