

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE SUCCEED

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

J. H. Grisdale
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Dec 15, 99

Vol. XXXIV. LONDON, ONTARIO. JUNE 1, 1899. WINNIPEG, MANITOBA. No. 479

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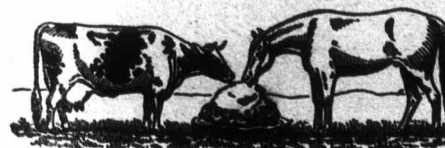
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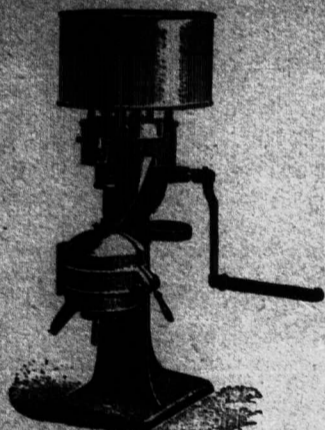
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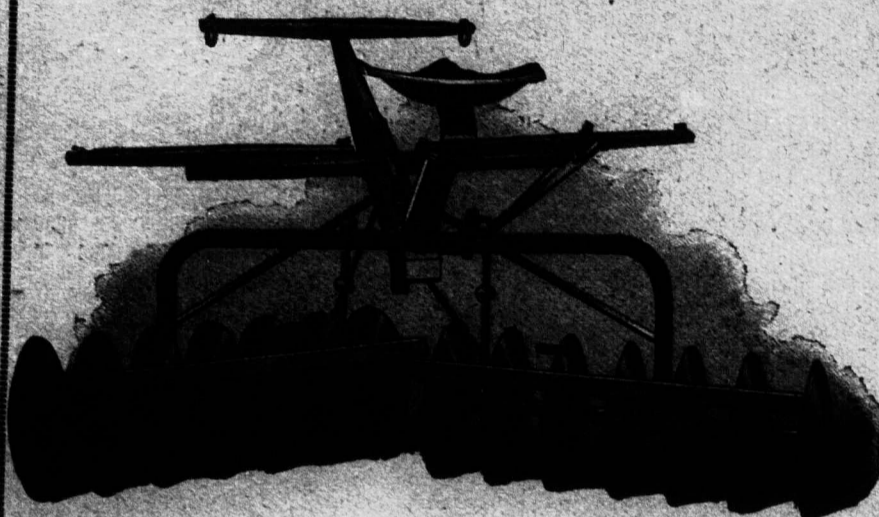
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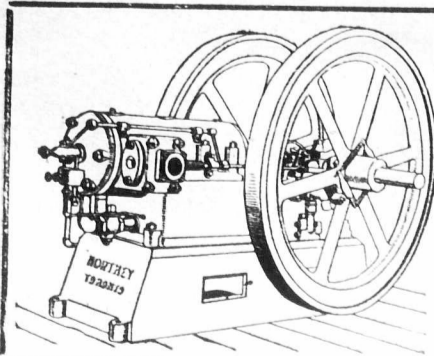
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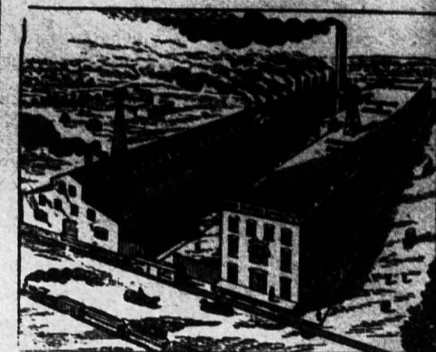
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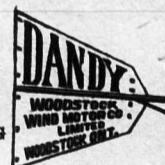
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* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE. *

VOL. XXXIV.

LONDON, ONT., AND WINNIPEG, MAN., JUNE 1, 1899.

No. 479

EDITORIAL.

The Proposed Nova Scotia Agricultural College.

According to the Act passed at the recent session of the Nova Scotia Legislature, the Government is authorized to purchase a site for an agricultural college and experimental farm and for ordinary farming operations, and to erect the necessary buildings, at a cost not to exceed \$20,000. It is to be equipped and conducted so as to impart a theoretical and practical education in agriculture, horticulture, and arboriculture. Power is conferred to appoint not less than two professors, one of whom shall be principal, who in turn will have power to appoint a farm instructor and manager, under the direction of the Provincial Secretary for Agriculture (now Mr. Chipman), and employ such further assistants as may be necessary for properly carrying on the farm operations and experiments. With the establishment of this institution the grant towards the Provincial School of Horticulture will cease. The location of the college is left to the discretion of the Government, and up to the present time, we understand, no steps have been taken.

The Demand for Agricultural Education.

Throughout all English-speaking countries a reviving of intelligent public interest in agriculture is apparent. This has manifested itself in various ways, particularly in the last few years, in the demand for agricultural education. Recognizing the trend of events, we find the authorities in Ontario, Manitoba and the Maritime Provinces of Canada introducing the subject of agriculture in the public school course, while in some of the States, such as New York and Indiana, it is being dealt with in the form of what is called "nature teaching."

The United States Secretary of Agriculture, Hon. James Wilson, however, points out in his annual report, a copy of which we have just received, that there is still nothing being done in most of the common schools of the States to cultivate a taste for and lead the mind to enquire into and store up facts regarding nature so that the young farmer may be directed into the path that leads to education concerning his future life work. He points out that the great prerequisite is the education of the teacher, and he suggests the special training of teachers at the State Teachers Institutes and normal schools. He points out that the greatest difficulties in the way will be to overcome the conservatism of local boards managing country schools, and the securing of competent teachers. But we are satisfied that once the need for and advantage of such teaching in the public schools is fully realized by the people generally, as it already is by those who have taken careful stock of the educational signs and tendencies of the times, these obstacles will gradually pass away.

We notice by the *Otago Witness*, one of the leading journals of New Zealand, that the question of agricultural education is coming to the front in that distant part of the British Empire, the demand being made for a really good and practical text-book on agriculture, to be made a compulsory item in the syllabus of all the country schools. The writer, however, insists that it be intelligently taught, as a mere perfunctory cramming of technical terms would be of little use and would put it on the same footing with many subjects already taught. He argues that it is the duty of the State to give the rising generation of farmers the opportunity to acquire such knowledge of the principles of agriculture as will improve their chances of success.

We are glad to observe that Ireland, long distracted with a variety of troublesome questions, is now devoting more attention to the means necessary to raise the standard of Irish agriculture to a

higher plane. The following from the *Farmer's Gazette*, which is itself doing a grand work in spreading agricultural knowledge, fairly represents what is taking shape in the minds of the more intelligent men of that country on the subject:

"It is to the rising generations in our schools that we look for the great changes which we foresee as possible in our Irish agricultural systems. The foundations upon which the improved agricultural practices of the future must be built up can only be laid in our schools, and in order to enable these foundations to be properly laid, our teachers must be properly trained. It is, to a large extent, because of the lack of proper training under which the majority of our teachers have labored in the past that agricultural education has come to be regarded with so much disfavor in many parts of the country. For this, of course, the teachers are not to blame—the fault is not theirs so much as that of the system under which they are obliged to work. Will it be believed that in the great Central Training College in Dublin, at which such a large percentage of our young teachers are trained from year to year, the "Professor" responsible for the agricultural portion of the College curriculum is a gentleman who has been for years a teacher in the City of Belfast, and who has had absolutely no practical experience of the subject which he teaches! This sort of thing must be done away with, and an up-to-date system of agricultural education adopted, if we are to have any 'alteration' in the 'spirit' with which offers of instruction by the Board of National Education are received by practical farmers throughout the country."

We must congratulate the *Farmer's Gazette*, which is one of the most progressive of Irish periodicals, upon the fact that it has thus resolutely taken up the cudgels in so good a cause, and we trust it will not lay them down until the great reform for which it is battling has been brought about.

Do Sheep Degenerate in Canada?

The discussion on another page in this issue, by a valued contributor, of the alleged deterioration of sheep in this country, and the necessity and possibility of originating and fixing the type of a Canadian breed of sheep more suitable to the country and its climate than the English breeds, opens a subject which admits of difference of opinion at least, if not total disagreement. If we admit the premises of our correspondent that the English breeds of sheep do degenerate in Canada, that the necessity and the fact of repeated importations is proof of this and is the main object of importation, then there is little room for argument; but, for our own part, we are not by any means prepared to admit that proposition, and are of the opinion that importations are made so largely as they are more especially as an enterprise and an advertisement, knowing as we all do the undue importance that is attached to the fact of importation as a means of improvement of our flocks as compared with selection from the best of home-bred animals. While many of the best that can be bought, and many of the prizewinners at the leading shows, are imported, it is also true that many are imported which are not qualified to improve the flocks of this country, and of which it can truly be said, "They left their country for their country's good."

The statement that "the immediate effects of our climate on imported animals are reduced vigor and failing flesh" can only apply in the case of those animals which have been forced by high feeding and the use of artificial food into an abnormal state of fatness for show purposes and are turned out to shift for themselves on arrival in this country, on scanty fare and without any grain feeding to supplement, it may be, a bare pasture. On the other hand, we have seen field-kept English sheep imported in thin condition improve rapidly on short fresh pasture when landed here, and continue to improve and develop as long as they were afforded reasonably good fare.

The success which Canadian-bred sheep, in the hands of skillful handlers, have met with in the

showing in competition with imported sheep is a pretty good answer to the question of degeneration, not infrequently winning as they have the highest honors. In the great competition at the World's Columbian Exhibition, in several of the classes of long-wools, and middle-wools as well, the most and the best of the prizes were won by Canadian-bred sheep.

The writer has known cases of long-wool rams bred in Canada being forced by high feeding to weigh 400 pounds and up to 450 pounds each, ewes to 350 to 375 pounds at maturity, and yearling rams at eighteen months to 350 pounds. Of course, it may be said that these had the benefit of the blood of immediate imported ancestors. True, they had on the sire's side, but their maternal ancestry traced through many generations of Canadian-bred animals—in some cases for thirty to forty years; and while they proved a great success from the point of view of show sheep, there is no evident reason why they might not have reached as good results if they had been bred from selected Canadian-bred sires of the same breed. Take the Leicesters, the first of the English breeds imported to Canada, as an example. It is the deliberate opinion of competent judges that sheep of this breed, forty years from the original importation, shown at our exhibitions are superior to those shown at the leading English shows. The best prizes in this class at the Toronto Industrial last year went to sheep tracing to importations forty years back, and in the first prize pen was a ewe which weighed 385 pounds, on the word of her owner, a reliable man, and the same ewe, though fitted for show purposes for four years, had in the last three years produced nine lambs. In the breeding of this ewe, none but Canadian-bred sires had been used directly. It would be difficult in this case to find evidence of degeneration. The fact of importation amounts to little in the building up of an ideal flock if the imported animals used are not characterized by individual excellence in constitution, quality, and conformation. As a matter of fact, many inferior rams have been imported, and high prices have been paid for them simply because they were imported, and with the hope that the fact of having used an imported sire would enhance the value of the offspring and improve the character of the flock; but in many such cases the result has proved very disappointing, and the breeder has been convinced that it would have been wiser to have made a suitable selection from a home-bred flock.

It appears to us that Mr. McCaig makes entirely too much of the effects produced by the difference in climatic conditions, to the disadvantage of Canada. We are fully persuaded, from personal observation, that as a rule sheep suffer vastly more from exposure to cold and wet in England than in Canada, from the fact that here they are almost invariably provided with shelter from storms during the winter season, while in England the great bulk of the sheep have to lie out in all sorts of weather without any shelter, which means at times drenched skins and a wet blanket of wool in winter for weeks at a stretch; and when folded on turnips, standing in mud nearly knee deep, without a dry place to lie down, and subject to changes of temperature occasionally so sharp that sometimes long-wooled sheep have been found by the shepherd in the morning fastened to the ground by the frost, requiring to be released by chopping them out with an axe; and who has not read harrowing tales of snow storms so violent in Scotland and in parts of England as to cover whole flocks completely out of sight, so that they have only been discovered by the instinct of the faithful collie. On the other hand, we have experienced summer weather in England nearly as hot as that of some of our most extreme July days.

It seems to us a stretch of imagination to assume that sheep under average conditions suffer in

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN
THE DOMINION.

PUBLISHED BY
THE WILLIAM WELD COMPANY (LIMITED),
LONDON, ONTARIO, AND WINNIPEG, MANITOBA.

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JOHN WELD, MANAGER.

1. THE FARMER'S ADVOCATE is published on the first and fifteenth of each month.
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Canada from cold in winter or from heat in summer. With the warm covering provided for them in their coat of all wool they need only the common shelter afforded by a roof and a single-boarded shed to keep them in perfect comfort in the coldest weather we ever have, provided the sheep are fed a decent allowance of hay and either roots or a light feed of grain. The experience of sheep owners is that sheep thrive better in our driest and hottest than in wet summers, notwithstanding that grass is more plentiful in the latter case.

Although the growing of roots successfully for winter may not be as uniformly possible in this country as in England, yet it is a fact that the leading breeders of pedigree stock, and very many farmers engaged in feeding beef cattle and in dairying in all the Provinces, rarely fail to secure good crops of turnips or mangels; and with a fair supply of roots it is easily possible to keep our sheep in thriving condition throughout our winter.

The only advantage England has over Canada in raising sheep is that her shepherds have had long experience in the care of sheep, and their whole time is devoted to that special line of work. Besides this, in many sections green crops are sown at different periods, on which the sheep are huddled, fresh portions being enclosed every few days, while the ground on which they have fed and which has been manured by their droppings is plowed for some other crop.

For winter feed in England turnips are largely grown, and are fed off upon the land, while dry feed—as hay and grain—is fed in racks and troughs in the fields. There is little doubt that if the same attention were given to feeding and providing a constant supply of green food, sheep would hold their own quite as well in this country as in England; and there is no doubt in our mind that by the cultivation of vetches, peas, corn, rape and roots a regular and constant supply of succulent food may be provided the year round. The labor involved in such a course may be said to practically prohibit it here, but it is certainly not accomplished without labor in England, and while labor may not

cost as much there, yet the amount of it that is put upon the land and the slowness of the movements of the average farm hand there makes the expense as much or more than it would be here.

With regard to the question of the evolution of a distinctively Canadian breed of sheep, while we see no necessity for it, believing that the British breeds we have are well suited to our climate and conditions, and will give us as good results here as in any country under reasonably good care, yet we would not discourage those who think differently from making the experiment, and to one having the taste for that sort of work and the necessary perseverance and persistence there is an open field, though it is about certain than in any such experiment the English breeds would necessarily play an important part, but to the great majority the wise course will be to improve the stock they have by the steady use of pure-bred sires of the one breed of their choice, and by selection of the best for breeding to grade up and hold the improvement they attain in this way, which is a safe rule to follow.

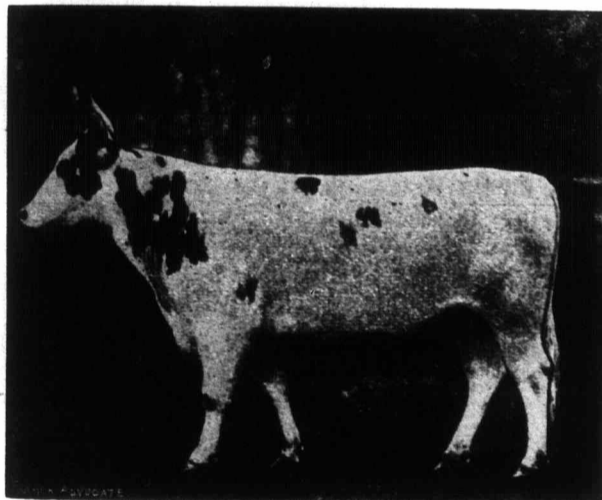
In conclusion, we have no hesitation in affirming that there is no country under the sun where sheep thrive better or are more free from diseases and disabilities than in Canada, and no stock on our farms, taking the years as they come, and considering the cost of production, more profitable.

STOCK.

Our Scottish Letter.

THE CLYDESDALE AND AYRSHIRE SHOWS.

During the past few weeks the agricultural community here have been chiefly interested in shows. The four great Western shows have been held at Castle Douglas, Kilmarnock, Glasgow, and Ayr, and an opportunity has been afforded for estimating the quality of Clydesdale horses and Ayrshire cattle. With reference to Clydesdales, nothing much that is new can be said. The fea-



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Champion at Glasgow, Kilmarnock, and Ayr, in 1899.
BRED BY AND THE PROPERTY OF MR. J. HOWIE,
HILL HOUSE, GALSTON.

ture at all shows has been the success of the produce of Messrs. A. & W. Montgomery's stallion Baron's Pride (9122). He has secured first prizes with his stock in almost all possible classes. He won the family prize at Kilmarnock. As an illustration of the success which has attended the use of this sire, we may mention the female championship at Castle Douglas and Ayr went to his daughter Empress. At Kilmarnock his son Elator secured the male championship, and his daughter, the two-year-old filly Jeannie Deans, won the female championship. At Glasgow the champion in all was his son Casabianca, and the champion female his daughter Lady Victoria. The produce of Baron's Pride have gained all the championships but one at the spring shows, and this by no means exhausts the tale of his successful stock. At Ayr, in competition for Ayr cup, the first prize females all paraded, and of five, four were daughters of Baron's Pride, viz., Mr. Webster's Lady Pride, Mr. Thos. Smith's Empress and Jeannie Deans, and Mr. Guild's Topsy Pride. One of the best of yearlings got by him was exhibited at Glasgow. She is owned by Mr. Henry B. Marshall, and is a typical Clydesdale, standing on short legs, with the best of quality. Another grand yearling is Mr. Guild's Topsy Pride—of a different type, more upstanding, with beautiful action, and there are others after him too numerous to mention. Then a half-sister of Baron's Pride named Lady Raffan, whose sire was the well-known Sir Everard, was first in the brood mare class at Glasgow. She was bred in the north of Scotland, and is undoubtedly one of the best Clydesdales bred in the part of the country for many years. Baron's Pride himself was bred by Messrs. R. & J. Findlay, Springhill, near Glasgow, and gained first prize at the H. & A. S. Show at Aberdeen in 1894. He is a horse with wonderfully

good quality of legs, in this particular being practically invincible.

One of the most interesting ties of the year is between his two daughters, Empress and Lady Victoria. Both were bred by Mr. Wm. Nicholson, Bombie, Kirkcudbright, and the dams are respectively mother and daughter. An interesting fact regarding the dam of Empress is that she was purchased as one of a large number of fillies intended for exportation to Germany. The committee of German experts who came over to select the animals rejected her because she was not rough enough, or, as they expressed it, strong enough for them. The Messrs. Montgomery, who had the contract, were by no means sorry the Germans refused to take this particular filly, and they sold her almost forthwith to Mr. Nicholson. In due time she produced a filly foal by MacGregor, and while the old mare is dam of Empress, the champion at Castle Douglas and Ayr, the younger mare is dam of Lady Victoria, the champion at Glasgow. It is an interesting fact that the most successful exhibitors of Clydesdale females this year are two English gentlemen. The owner of Empress is Mr. Thomas Smith, Blacon Point, Chester. In the final at Ayr, this gentleman owned three of the competitors, viz.: the first prize brood mare, Belle of Fashion; the first prize three-year-old mare, Empress; and the first prize two-year-old filly, Jeannie Deans. The other English gentleman who has been very successful is Mr. Herbert Webster, Morton House, Fencehouses, the owner of Lady Victoria, and also of Lady Pride, the first-prize yeld mare at Ayr. Lady Pride is a great handsome four-year-old dark brown mare, with capital hind legs and great substance. With some she was a favorite for champion honors, but on the whole I think the award made in favor of Empress the more defensible. Lady Pride is perhaps less feminine-like than is popular. She is certainly a magnificent mare, but is just rather masculine in appearance in front, being possibly more like a gelding than a mare. All the same, her kind are exceedingly scarce, and she deserves her victories. Mr. Crawford's Casabianca, the Glasgow premium horse, and the champion at the Glasgow show, is perhaps the weightiest and most powerful looking of all the produce of Baron's Pride. He is a horse of great weight and strength, and we anticipate for him a distinguished career at the stud.

AYRSHIRES AT THE SHOWS.

Amongst the Ayrshires this year, first place has to be given to Mr. Hugh Duncan, Langalchorad, Bute. A few years ago, Mr. Alex. Cross, of Knockdon, who owns one of the finest herds of Ayrshire cattle in the country, won the championship at the Highland with a cow named Beauty of Holehouse. This cow was bred by Mr. Robert Woodburn, Holehouse, Galston, and was a beautiful brown, with very little white intermingled. Mr. Hugh Duncan, who is an enthusiast, was determined to have a bull calf from her, and paid Mr. Cross a stiff price for her bull calf of that year. This bull calf has bred very well indeed for Mr. Duncan; and this year, for a group of cows we question if he could have been beaten. At Bute Show, which was held this week, and where there is keen competition in the three-year-old class, Dr. Duncan simply swept the boards with gets of the Knockdon bull. At Glasgow and Ayr he was also well forward with three-year-old queys after him, and we doubt if any breeder this year could touch Mr. Duncan for a group of that age. Amongst milk cows of an older race, Mr. Robert Sillars, Whiteside, Monkton, secured the championship at Glasgow with Juniper 4th, a cow which won the Ayr Derby last year; and Mr. Hugh Todd, Harperland, Dundonald, exhibited a first-class cow named Nelly IV. in aged class at Ayr, where she beat the Glasgow champion. The Ayr Derby for three-year-old queys is the great event in the Ayrshire world; and this year first prize, and also the championship of the Ayrshire section, were secured by Dr. Wm. Howie, Burnhouses, Galston, with a cow named Drummy II. Mr. Howie inherited a splendid herd from his father, but it appears to us that it has in no way suffered in his hands; indeed, during the past few years the Burnhouses herd, which for a time was not heard much about in the showyards, has recovered itself, and for the past two or three seasons has practically been leading the Ayrshire classes. A brother of Mr. Howie's, Mr. Jas. Howie, of Hillhouse, Kilmarnock, is this year leading in the bull section with a white bull named Kohinoor. This bull secured the championship of the section, both at Glasgow, Kilmarnock, and Ayr. He is a very straight animal, with fine lines, and showing a lot of breeding. Mr. Andrew Mitchell, Barcheskie, Kirkcudbright, as usual is very hard to beat in the female section, especially in queys and stirks. He has several particularly good animals not likely to be excelled in their age. For its area, possibly the Island of Bute contains a larger number of high-class Ayrshires than any other district in Scotland. At the show which was held this week there was an excellent display of dairy stock. Mr. Hugh Duncan, already referred to, was, of course, practically invincible, but several other breeders made for themselves an excellent position. This applies particularly to the Mid-Ascog herd of Messrs. R. & J. McAlister; the Meikle Kilmory herd of their brother, Mr. Jas. McAlister; and the Little Kilmory herd of Mr. Chas. Duncan, brother of Mr. Hugh Duncan. Visitors in search of Ayrshire cattle from the Dominion cannot do better than spend a day on the Island of Bute. Mr. Wylie,

from Montreal, has recently been here, and in company with Mr. Ness has made a prolonged tour. He has shipped a number of good cattle during the past ten days, and I trust they will do something to maintain the reputation of Ayrshires in Canada. I suppose you will shortly be sending back produce of these cattle to us in the shape of cheese and butter, but so long as you buy the cattle we cannot grumble.

Mr. Ness is one of the oldest shippers of Clydesdales from this side. He has taken with him three superior horses, specially well bred and up to good weights. Mr. Ness was born in this country, but emigrated when very young, and has been long settled in Howick, in the Province of Quebec. He appears to be on excellent terms with his French neighbors, and is one of the best judges of Clydesdale horses who comes from Canada.

"SCOTLAND YET."

The Brothers Colling.

The early history of Shorthorn cattle has recently received considerable attention in England, and several contributions on the subject have appeared in the agricultural journals. The publication in the current volume of the Journal of the Royal Agricultural Society of an ably written article on this subject, by Mr. Cadwallader J. Bates, of Langley Castle, Northumberland, a relative of the late Thos. Bates, of Kirklevington, has led to an animated discussion of the part played in the development and fixing of the type of the improved Shorthorn by the Colling Brothers, in the latter part of the last century. In this connection we reproduce the following review and criticism by Mr. John Downing, in a letter to the London *Live Stock Journal*:

"I must say that I felt greatly disappointed on reading the memoir of Charles and Robert Colling which has been contributed by Mr. Cadwallader Bates to the Journal of the Royal Agricultural Society. I know that this feeling is shared by many breeders of Shorthorns.

"Ever since we became at all versed in Shorthorn lore we have regarded the Brothers Colling not only as persons gifted with a high order of intellect as applied to the breeding of Shorthorns, but beyond that we have considered that they, more particularly Charles, were invested with genius in that pursuit. We are now told by Mr. Bates that those elevated views of ours as to these noted breeders are erroneous, and that we must dismiss them from our minds, inasmuch as he thinks that the Collings were merely 'the collectors and preservers of the best remaining specimens of an ancient breed that would otherwise have disappeared.' This, taken strictly, means that the Collings left Shorthorns as they found them, and surely this is a grave injustice to their memory. Against this we hold that their labors and their genius entitle them to be regarded as great benefactors, not only of this nation but of the whole civilized world. It is true that they did not actually found a new breed, but what like were cattle of this breed when Charles Colling began his work, and in what condition were they when he left them? When a pupil with Bakewell he found that Shorthorns were despised by that high authority on breeding.

"Mr. C. J. Bates says that he 'collected and preserved,' a remark that would fitly apply to a man who would collect specimens of china which were not at the period very much appreciated.

"Now, we hold that when Charles Colling proceeded to breed Shorthorns he adopted a system which no other breeder of those cattle had ever embraced; that he held views and put them into practice as to size, quality and method of breeding which had never previously been held by any breeder of Shorthorns; that he, accordingly, stood alone; and that by the results of his system he was lifted head and shoulders above any breeder who had hitherto appeared.

"Robert Colling's private opinion was, Mr. Bates tells us, that the best breed of cattle might be produced by crossing good Kyloes with Shorthorn bulls, but his Kyloe cows were not good, and Shorthorns were found more profitable. The same authority says that Robert Colling's idea of the merits of cattle when he began breeding depended entirely on their size. He afterwards altered his views and followed the example set by Charles, and used his sires. Of the celebrated White Heifer that traveled, it must be remembered that Favourite was both her sire and her grandsire. Again, Robert's noted bulls Phenomenon and Wellington were got, the one by Favourite and the other by Comet. It seems beyond doubt that the verdict of breeders who examined the two herds was that the Bampton herd was never so good as that at Ketton. At the same time, it is beyond dispute that Robert, when he settled down to work on the lines laid down by Charles, showed fine judgment and bred a herd of very great merit.

"And now, reverting to the reference made above to Charles Colling's proceedings, we ask, what were the early Shorthorns?"

"At the period when Charles Colling was forming his herd, size was regarded as the great desideratum, but he never held that opinion of its value.

"It appears, however, to be a settled fact, supported by the highest contemporary authority, that Charles Colling's success was mainly owing to his love for good handling and his firm belief in quality. In this matter his position was unique, and Mr. C. Bates tells us that 'the idea (that is,

Charles Colling's idea) that the merit of cattle did not depend so much on size as on compactness of frame, smallness of bone, and a readiness to feed, came as a revelation even to a near neighbor of that veteran stickler for pedigree, William Was-tell."

"From all this, as well as from the unusual system of inbreeding which he pursued, it would appear clear enough to most people that Charles Colling, instead of being a mere collector and preserver of specimens, was a revolutionist and a very extraordinary person among the breeders of his day. He bought Hubback for £8, and sold Comet for £1,050. He showed an ox and a heifer at Darlington in 1798, and Mr. C. Bates informs us that 'no animals had ever before been seen so good at that age.' It was twelve years afterwards, in 1810, that the great sale of Shorthorns at Ketton surprised the world with its amazing average of £151 8s. 5d. for 47 head.

"Who will venture to say that when Charles Colling began to breed Shorthorns that any such bulls as Favourite and Comet had ever been seen? Were such prices as those realized at Ketton ever previously thought of? They were not.

"When Charles Colling began his operations, the breed was one of varied styles, of rough points, and of useless size. It was known only in a very limited district, and even in that district some people preferred the Holderness. But when Charles Colling had made all these wonderful improvements in Shorthorns, at which his neighbors were so much astonished, he was wise enough not to 'let his light lie under a bushel.' On the contrary, he sold the Durham Ox to be sent through the country—the famous steer went even to London and educated the public, until his career was ended at ten years old. In this way he compelled, as it were, public attention to direct itself to the wonderful value of the cattle he had succeeded in producing. Hence the large attendance at, and the widespread interest in, the sale which was advertised to be held at Ketton on October 11th, 1810—a red-letter day in the history of Shorthorns.

"Mr. Cadwallader Bates refers to the inscription upon the testimonial, the silver-gilt cup which



CHARLES AND ROBERT COLLING.

was presented to Charles Colling by a large number of eminent breeders from three counties. He objects to the inscription approved and adopted by those breeders, who in it expressed their opinion that Charles Colling was the great improver of the Shorthorn breed of cattle. He seems to think that Robert was as well entitled as Charles to such a compliment, that Robert might properly have resented the language of the inscription, but that the nobility of his nature prevented his doing so. Robert did not, however, hesitate to sign the testimonial, thereby admitting that Charles was the great improver whose example he had so successfully followed.

"In regard to this, it seems well to bear in mind one fact, and that is that although Robert Colling had Hubback for one year in his possession he was quite unable to see any merit in the bull, and that he sold him to Charles for £8. When Hubback arrived at Ketton, Charles told his wife that he was 'better than any bull he had ever seen.' Charles used Hubback for four years.

"Furthermore, it is interesting, in relation to the opinions held by contemporary breeders of the claims of the Brothers Colling respectively to fame, to quote Mr. Thomas Bates, the distinguished relative of the author of the article in the Royal Journal. 'The Druid' writes: 'Mr. Bates considered Mr. Charles Colling to have been the most sided judge of cattle of his day, and, in fact, the originator of the improved Shorthorn. He thought that his brother Robert's fame as a breeder was entirely due to the superior judgment of Charles, whose bull Favourite was the undoubted fountain-head of pedigrees and the source of their distinction, being the sire of Comet, Ketton, etc., etc., as well as of the famous old cow Princess and her daughter, the favorite cow the dam of the first Duchess.'

"I trust that these few particulars of fact will help to maintain the position of Charles Colling safe on the high pedestal which has been assigned to him by several generations of Shorthorn breeders, who have always looked back with pleasure upon the luminous example set by him who dwelt upon the rising ground at Ketton."

The Evolution of a Canadian Sheep.

BY J. M'CAIG, PETERBORO, ONT.

The practice of constant importation of breeding sheep from the old land is considered a mark of enterprise on the part of breeders who improve or add to their stock in this way. The fact of importation indicates its necessity. British sheep deteriorate in Canada, and importations are made to arrest this deterioration. It is gratifying to see home-bred sheep take the honors from the imported animals in the showing, as they occasionally do, and it is sometimes held on this account that the home-bred sheep are the equals, if not the superiors, of the imported animals. The exhibitions are an unsafe guide. The condition of show sheep is not a true reflection of the condition of the sheep of the country. The fitting of them is largely by artificial foods, which is not the rule with the feeding of the great part of the stock of the country. Generally, too, Canadian importers do not get the best English sheep, even for show purposes. Suppose it were the case that our home-bred sheep generally win, the larger fact and more conclusive one remains that we draw from the old land and they do not draw from us.

A study of conditions in both countries will lead to an understanding of the reasons of deterioration. There are three important differences between Canada and England that are wholly favorable to the sheep of the latter place, and these are: Differences in climate, differences in foods and vegetation, and differences in the skill of the breeders of sheep. England and Canada are both in the temperate zone, and have the excesses of heat and cold that are the mark of that zone, but they have these excesses in vastly different degrees. The insular position of England and its comparatively small area makes the climate much more moderate than that of Canada, except British Columbia. England, therefore, never has the extreme cold of the Canadian winter, nor the intense heat of its summer. Extreme cold is opposed to the attainment of large size, and extreme heat to fleshiness of carcass.

With regard to foods and vegetation, we have a parallel condition to that of climate.

Constant moisture, close, intensive culture, the feeding of much stock on the land, and the use of commercial fertilizers, have made England the most productive country in the world. Her flocks feed outside, as a rule, the year round. Vegetable growth is never sealed up for any considerable time. She has no violent transitions from one kind of feeding to another, no long periods of keeping stock on artificial stored foods, as we have to do for five or six months in the year.

Combined with the climate and vegetation is the skill of the breeder. The large manufacturing industries of England give the greatest encouragement to food production, the climate and vegetation give suitable conditions, while the wealth and influence of the landed proprietors make improvement from experiment possible. The equipment of both master and shepherd in the old land is professional. The work of the one is directed by a fixed and definite ideal, which gives the flock the individuality which is so frequently commented on; the work of the other is the result of early training in every detail of flock management, backed up usually by hereditary fitness, for nearly every shepherd is a shepherd's son.

Apart from the original improvement of the Leicester and Southdown by Bakewell and Ellman, observe the improvement of some of the other breeds, as the Cotswold, Lincoln, Hampshire, and Suffolk, and the virtual creation of the Shrop and Oxford.

The deteriorations spoken of at the beginning of this article in the case of the English sheep in Canada, and the improvement of the English sheep in England being considered, gives rise to surmise as to the future development of sheep-breeding in Canada. Is it the case that the acclimatization of the British breeds will ultimately come, and their weight of carcass and fleece be retained? Is it likely that the knowledge and practice of breeding will grow to the extent that it will successfully combat tendencies to deterioration? Is it probable that a cross-bred sheep derived from the present English families will be evolved suitable to the country?

The food difficulty is the chief one we have to meet, for not only is the natural supply less, but the system of artificially providing food not so well established. The necessity is an uninterrupted series of green foods in summer and a larger variety of succulent foods to help the dry stored foods of winter.

The immediate effects of our climate on imported animals are reduced vigor and failing flesh. There are a few points that the breeder should keep in mind if he is handling imported sheep. It would not be considered wise to mate an imported ewe with an imported ram if both have been previously forced into high condition for show purposes, as both are suffering a reduction in vigor from meeting the rigors of a new climate and a less generous feeding. The ram would be better to have overcome the shock of changed conditions than to be put to breeding immediately after importation. He would, for example, be better to be bought as a lamb and not used until a shearling. Field rams and ewes, and not animals fitted for show, should be imported for breeding purposes, as choosing overfed animals is simply adding difficulty to the

task of accustoming the sheep to harder conditions. There may be, perhaps, a preference of breeds. It is obvious that hardiness and ability to subsist on scantly pasture would be desirable qualities, and these the upland breeds are generally conceded to possess. On the other hand, most of our holdings, in Eastern Canada, at least, are under careful cultivation and subject to a rotation of crops, which indicates their suitability to the heavier or farm breeds.

With regard to the probable progress of the shepherd's art in Canada and the likelihood of its being able to greatly raise the type of mutton sheep or hold it against deterioration, there is good prospect of improvement. Though we are young, we are more likely to learn quickly on that account, and may perhaps make greater progress in a given time than the mother country. It is true that mixed farming prevents the development of the art of shepherding exclusive of other duties by the same person, but there is certainly a steady growth in interest in pure-bred sheep, and a very rapid increase during the past ten years in the number of pure-bred flocks kept. The good reputation that Canadian mutton has enjoyed in the American meat markets has given rise to a demand for stock animals, and the large number of stock rams of the Cotswold, Lincoln, Shropshire, Oxford, Southdown and other breeds taken out during last fall and winter from Canada, principally from Ontario, has given much encouragement and impetus to the industry. Under such a spur there can hardly fail to be a very marked improvement in the breeder's art.

As to the probability of the establishment of new families with distinctive Canadian qualities and fitness it is unsafe to prophesy. If it is true that deterioration has been the rule with us so far, then the necessity for some new family is obvious. Importation is an expensive way of keeping up the standard of our flocks or of fighting deterioration. *The sheep industry cannot be considered to be in a satisfactory state until such breed or breeds as we cultivate improve under our hand.* This condition must be the constant and final test of suitability. Such a sheep will be a very cosmopolitan animal. He will be ready to appropriate to himself the luxuriance of June and to be content on the brownness of July and August. He will be indifferent to November rains, and content with 20° below zero in February. Perhaps it is too early in the history of the country to talk about a Canadian sheep, and it may be thought, on the other hand, that there is no need for a different family from the existing British families—that the work of acclimatization is going on nicely. In any case, it may be argued that we have no native sheep to improve or cross with the English breeds for the establishment of a harder breed, that we are limited to the English breeds in any case. This is true. At the same time, the most prominent breeders of the country are not doing the work of acclimatization. Those who stand as the prominent breeders are largely dealers. Their stock is a shifting one, and not permanent in quality. The progress made by them in acclimatization is not held against a present speculative and commercial advantage. They are not to be blamed for running their business at a profit to themselves. While they are doing this, a less pretentious class of breeders may unconsciously hold the key of the future sheep situation. The majority of the sheep of the Dominion, even of Ontario, are not registered sheep. They go under what we have already learned to call "the common stock of the country." They consist of what are, or were once, at least, long-wools, Leicester predominating, with a dash of Cotswold grafted in at spasmodic and intermittent intervals. If you study them on the roadsides you will find they haven't kept the fleshy top of the sheep of the British showing. Their back is, indeed, slightly peaked; they have a pretty roomy abdomen (pot-bellied, some might say); and their fleece is short, compared with the modern Leicester, and comparatively dense. But if their back is peaked it is straight, and they cannot be taxed for not carrying the flesh of a British progenitor who knows nothing of our extremes of weather. The front legs are not very far apart, but the animal is not less able on this account to do the necessary traveling for food. The wool being shorter and denser is simply meeting the demands of cold weather by such shortening and thickening. But do our best for the common stock of the country by way of apology, it is not in the race with English types which have been adopted *holus bolus* as the Canadian type. If it falls short by points, however, it represents work done—done unconsciously, but work, nevertheless. That term "common stock of the country" means nothing more or less than that the country has evolved or naturalized a sheep. In the common stock of the country the work of acclimatization has been brought to its highest point. The work of selection has, perhaps, not gone on concurrently, but there is no telling the possibilities of improvement ahead under careful selection and good feeding in the future. The sheep that Bakewell started with well answers the description of the common stock of the country, and though his operations were kept dark, it is generally supposed that he did not go far from his own neighborhood for his materials. After his type was fairly established, he bred wholly within his own flock, and hence it was by selection that his improvements were made. It is a question whether there is not as profitable a future before the man who takes hold of what we have that is most our own and breeds up as there is before the

man who holds to the practice of trying to keep up the standard of his flock or improve it by the infusion of English blood. On account of the length of the above discussion, the question of the part the English breeds might play in the establishment of families is not touched upon; neither are the differences that may exist among the common stock in different localities dealt with. It is the aim of the writer simply to suggest that the hardiness of the most common of Canadian sheep may prove in skillful hands to be a substantial asset to the country.

Irish Agriculture.

In the British Parliament Mr. Gerald Balfour has introduced a bill for the establishment of a Department of Agriculture and Technical Instruction in Ireland. He explained that the measure would concentrate in one department the functions now performed by the Government in Ireland. It provides machinery and funds for work similar to that of the Congested Districts Board, and machinery for technical instruction and the development of agriculture and other industries. An income between £160,000 and £170,000 a year would be provided for the department, in addition to certain sums annually provided by Parliament. Out of this income £55,000 would be devoted to technical instruction of an urban character, £10,000 to sea fisheries, and the rest to rural industries. The Department was to be assisted by an Agricultural Board and a Board of Technical Instruction. The bill was read a first time.

A Trial in Fattening Steers Loose.

THE SYSTEM DECIDED TO BE SATISFACTORY — NINETEEN HEAD AVERAGED 1,345 POUNDS.

Mr. Thos. Baty, of Middlesex Co., Ont., always fattens a good stable of cattle, and having heard such favorable reports of loose feeding, he determined to give the plan a trial last autumn, and to that end removed the stalls from his feeding stable and divided it into three compartments. His bunch of steers consisted of nineteen head coming three years old, weighed November 1st from 900 to 1,300 pounds, most of them being purchased in the neighborhood. The steers were each given about 55 square feet of ground space, or, in other words, six steers occupied a pen 22 x 15 feet, exclusive of mangers. The mangers were arranged along the feeding passage, each 2 feet 4 inches wide, and fitted with stanchions. When the cattle were fed any sort of feed that one might steal from another, or get too much for its good, which consisted of all they got except hay, the stanchions were closed, holding them securely until the feed was eaten, which was usually less than an hour. The mangers were only some two and a half feet high in the passage, so that the feed was easily given to them.

When housed in the fall this feed consisted of well-matured and well-saved corn in the sheaf, and run through a cutting box, and turnips. The quantity of corn given was a bushel to each beast morning and night. They also received a noon meal of hay, which in former years usually consisted of straw, except when Mr. Baty had a good supply of hay. This composed the ration till March 1st, when about 1½ pounds per day of shorts were added to the cut corn. By the 1st of April the corn, which had been kept in fine condition in small round stacks, was finished, and hay and mixed chop were substituted. The roots were fed at the rate of one bushel per head per day for the first two months, and gradually reduced to about one peck per day as the supply became exhausted, which was on May 12th, the cattle going away ten days later, weighing from 1,100 to 1,690 pounds, averaging 1,345.

The grain used was peas, barley, corn and shorts, and was given mixed with sufficient cut hay to cause it to be well masticated. It was commenced on April 1st at the rate of about nine pounds per head per day in three feeds, increased to twelve pounds as the finishing period approached. While a full supply of turnips was given the steers required and received no water, but when the root supply was reduced the cattle were turned out to water once a day, and later on twice a day. It is Mr. Baty's purpose to put water into the stables before next winter in order that the cattle may drink at their pleasure.

During the early part of the loose feeding period Mr. Baty was not at all sanguine over the prospects, but soon the cattle commenced to thrive well and show such evidences of contentment that the loose system from that time grew in favor until the cattle went away, when he was fully convinced of its superiority over the old plan of keeping the cattle tied. A striking advantage was evident in the eagerness with which the animals always came for their meals. They were always contented, and even when the doors to the yard were thrown open they never showed a disposition to go out, except for water, or at least until the warm weather arrived. In previous winters Mr. Baty has occasionally found the cattle to go off their feed a little at times, especially when being heavily fed during the finishing period, but the loose feeding has been found almost a complete remedy for that trouble, as on only one or two occasions during the whole winter did animals refuse their feed, and that only for one meal. The cattle were not put on the weigh scales during the winter, but it was evident to Mr. Baty that their gain was continuous. The

cattle were pronounced by the shippers to be of uniformly high quality, and in fine condition to stand the shipping. An objection that has been raised to the loose feeding of steers is that much more bedding is required to keep them clean, but Mr. Baty's got no more than he usually gave his tied cattle, and they went away in clean condition.

Oxfordshire County Show, England.

[SPECIAL.]

This important County Show was held on May 16th and 17th last, at Blenheim Park, Oxon. The greater interest to your readers will doubtless be in regard to the sheep and beef cattle classes, and, therefore, the following are the brief particulars of a most successful exhibition in respect to these classes:

Oxford Down classes were stronger, of greater merit and better quality than has been the case during the past two or three years. The yearling ram class was headed by a ram of fine masculine character, big, upstanding and wide, but a wee bit weak in touch and wool, from Mr. W. A. Treweeke's flock, two others of this flock being respectively R. N. and H. C. Mr. J. C. Eady's flock secured second honors with a ram of rare merit, type and color, having first-class flesh and wool. Mr. H. W. Stilfoe came in for third honors with a meritorious sheep with capital back and good loin; whilst Mr. J. T. Hobbs, with two entries, both sons of Mr. J. Treadwell's Jumbo, who cost \$500—excellent sheep, of good conformation and type—secured two H.C.'s; similar honors falling to both Mr. J. Treadwell and Mr. G. Street for capital sheep. Yearling ewes were a small class, but of great quality, Mr. J. C. Eady securing, as last year, both first and second awards, and Mr. W. A. Treweeke the R. N. Ram and ewe lambs were capital classes, Messrs. Hugh W. Stilfoe, J. P. W. Reading, W. A. Treweeke being principal winners, whilst for flock ewes Mr. H. W. Stilfoe went first with a grand pen of ewe lambs, and Mr. A. H. Wilsdon took both first and second for ewe tegs in the wool.

*Hampshire Down*s were both largely and strongly shown, and Lord Rothschild's champion pen of ewe lambs were of grand merit and quality, such that all breeders would desire to breed, but which few succeed in doing. Yearling rams were headed by as grand a yearling ram as one would wish, of first-class type, and with splendid flesh, back and loin, from Earl Carnarvon's flock; a second sheep from the same flock being third; whilst two from Lord Rothschild's flock, with good fleeces and conformation, came in for second prize and the R. N. Yearling ewes were headed by a pen of Mr. De Mornay's breeding, exhibited by Mr. R. W. Hudson, whose second pen secured the R. N.; whilst a grand pen of Mr. W. T. Twidell's came in for second honors. In the excellent class for ram lambs Mr. A. C. Scott Murray took premier place, the Earl of Carnarvon being a very close second, with Mr. L. H. Baxendale third; whilst in ewe lambs Lord Rothschild's grand pen easily led the way, followed by a meritorious pen from Mr. Alex. Henderson's rapidly rising flock, with Mr. R. W. Hudson's exhibit third. For flock ewes and lambs and for ewe tegs in the wool the exhibits of Earl Carnarvon's flock took easily the premier places, these exhibits being of great merit and quality.

*Southdown*s.—The entry of this breed was disappointing in respect to numbers, but little or no fault could be found with their quality. In the yearling rams Mr. C. R. W. Adeane and the Pagham Harbor Co. had a sharp tussel for first place, resulting in the order above, both being rams of excellent type, good wool, flesh and skin; Sir J. Blyth being third with a deep-fleshed sheep. In the yearling ewes Sir James Blyth's deep-fleshed and excellent pen went first, the Pagham Harbor Co.'s pen being very close second, their character and quality being excellent; whilst a first-class pen from Lord Bathurst went R. N.

Shropshires made a very excellent entry, Mr. A. Bradburne being to the fore in the yearling ram class, with Mr. R. P. Cooper and A. S. Berry close up, whilst in the ram lamb class Mr. G. L. Foster-Harter led the way, as he did also in the class for yearling ewes, being first and second, but a pen of Mr. R. P. Cooper's ran these very close indeed.

Cotswolds had but one exhibitor, Mr. Russell Swanwick, Cirencester, who deservedly secured the first prize for yearling rams, ram lambs and ewe lambs with typical sheep of first-class merit.

The *Shorthorns* made a first-class show. The old bulls who won were J. Handley's Prince of the North and J. Deane Willis' Prince of Sanquhar. Two-year-old bulls: G. Harrison's Count Beauty, J. Thorley's Ringdale Rover, and J. Handley's Helmsman. Yearling bulls—a large and strong class found its winners as follows: Leopold de Rothschild's White President, J. Deane Willis' Bapton Emperor, and Miss Alice de Rothschild's Bashful Youth. The female classes were well filled, the following being some of the principal winning owners: Miss Alice de Rothschild, L. de Rothschild, J. Deane Willis, J. Thorley, and R. & W. T. Garne. Mr. J. Handley's Prince of the North was champion bull, and Miss Alice de Rothschild's Miss Belladonna 6th champion cow.

Berkshire Pigs made a first-class entry, the most prominent winners being Mr. Russell Swanwick, E. Hayter, J. Jefferson, Earl Carnarvon, J. A. Fricker, J. Pittman King, etc.; whilst any pure-bred, large, middle and small whites were well represented from the herds of S. Spencer, F. Allmand, and Hon. P. D. Bowverie.

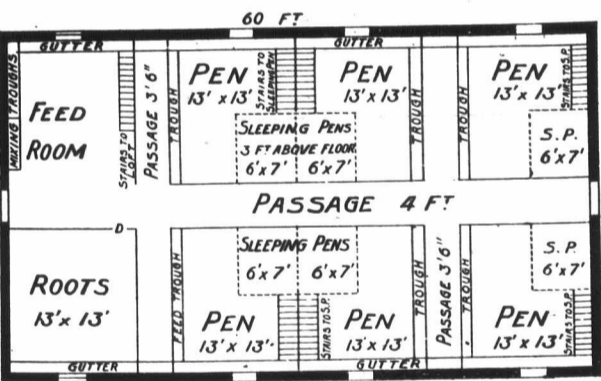
Live Pork Produced for Two and a Half Cents per Pound.

A YEAR'S TRANSACTIONS BY A SKILLFUL HOG FEEDER—A MODEL PIGGERY.

A great many hog-feeders who have not made much money out of their swine, even by careful and intelligent effort, will be anxious to learn how pork can be profitably made when it sells at moderate prices. One great hindrance to many pork-raisers is the lack of detailed business management, with the aid of weigh scales, pencil and paper. A good business man in any line does not continue to drop money in any particular branch of his operations without an effort to locate the leak and seek to repair it. There is, perhaps, no other branch of agriculture so susceptible of unprofitable conduct as that of hog-feeding, since so much expensive food is usually considered necessary to at least finish the pigs for the market.

While in the south-western portion of the county of Oxford we took occasion to visit the farm of Mr. W. J. Whaley, where porkmaking is conducted on business principles. We found, upon investigation, how bacon pigs were raised throughout the year 1898 at about two and one-half cents per pound; and with conditions which Mr. Whaley is working towards he considers he can still further reduce the cost when the prices of feed and pork are at all favorable. Mr. Whaley raises his own pigs from pure-bred and grade Tamworth sows, and until recently from a Berkshire boar. He is so well pleased with the way Tamworths feed and suit the bacon trade that he is now putting away his Berkshire boar and replacing him with a pure-bred Tamworth hog. We found most of his sows running in a grass plot, on a high location and with a southern slope. Next in importance to good stock is a favorable pen for winter feeding, and in this Mr. Whaley is well equipped.

The Plan of Piggery herewith published is almost self-explaining. It is 60 ft. long, 33 ft. wide, and divided into six pens about 13x13 ft., a feed room, and a place for roots. The root house can be used as a pen if desired. The floor of the pens requires description. The building is of stone, and stands north and south. The floor at the south end is two feet lower than at the north. This gain in height is secured by each pen being raised six inches higher than the one south of it, in terrace form. The floor of each pen is therefore level north and south, but it slopes two and one-half inches from the passage to the gutter. The gutter is a continuous sloping trench from one end of the 60-



GROUND PLAN OF W. J. WHALEY'S PIGGERY.

ft. pen to the other, being six inches deep at the south end of each 13-ft. pen, and coming to the surface at the north end. This gives thorough and quick drainage by two feet fall in sixty. The floors and troughs are of cement, and as the bedding is kept in the sleeping-bed or platform, three feet up from the floor, only sufficient litter is used on the floor and in the gutters to absorb the liquid manure. The sleeping-beds, 6x7 ft., are of plank and surrounded by a board one foot high. The pigs seem to spend considerable of their time in these dry, comfortable quarters, which they reach by means of cleated walks, called stairs in the cut. Each pen is furnished with a door connected with a yard outside, and above each door is a good-sized window, which swings in from the top, giving ventilation without direct draft on the pigs. The ceiling is 9½ ft. from the floor at the south end and 7½ at the north, and above is a 6-ft. loft for bedding, feed, etc. The pen throughout is worthy of imitation, but more especially in its sleeping quarters, floors, and drainage system.

Winter Feeding of hogs is considerable of a problem, but Mr. Whaley has solved it to his own satisfaction. Having the dry and warm pen, the next consideration is to secure proper food in the cheapest way. The chief grain food is shorts, but sometimes a proportion of corn, peas and bran are also given. These are supplemented with pulped mangels and slops, such as whey, milk, and water when the other liquids are short. The pulped roots, shorts or chop and slop are mixed (about one bushel of shorts to two and a half of mangels) twenty-four hours before feeding, and given cold twice a day, except in very cold weather, when the mangels are boiled in a boiler standing in the feed room. The feed is not given very sloppy, except skim milk can be used, as too much water is injurious to the pigs. Mr. Whaley considers the only advantage of boiling is in having the feed warm in severe weather. At noon, pulped mangels are fed alone—just what is eaten readily. A change of feed is considered by Mr. Whaley very beneficial.

A few ears of corn occasionally, and once or twice a week dry shorts, are given with pulped mangels. A quantity of ashes, charcoal and sulphur are mixed in the regular feed about once a week. The litters are weaned when about seven weeks old, and are given shorts, mixed fairly thick with milk, twice a day for about a month. Mangels or sugar beets are then gradually added, and a few mangels are always given at noon.

Summer Feeding is usually done in pasture lots, and Mr. Whaley is aiming to use clover for this purpose, especially for the growing pigs. Bran and shorts, mixed twenty-four hours ahead with whey, etc., is given in the form of a slop. The pigs are given full feeds of this twice a day, and the way they thrive is remarkable, not in putting on fat, but in growing the desirable strip of fat and strip of lean bacon. When the market is down and expected to rise, the pigs are held back by less strong food, while their growth goes on apace. Mr. Whaley watches the feed market, and purchases his shorts and bran by the carload when the price is down.

The following is a statement of Mr. Whaley's pig-feeding transactions in 1898:

ON HAND JAN. 1ST, 1898.	
7 sows at \$15.....	\$ 105
1 boar at \$15.....	15
8 shoats.....	65
10 ".....	58
11 ".....	45
13 ".....	30
10 ".....	15
Total.....	\$ 333

Feed consumed in 1898:	
21 tons 399 lbs. shorts.....	\$278.85
500 lbs. pea chop.....	5.50
1,861 lbs. corn chop.....	16.75
5 tons 1,372 lbs. bran.....	65.41
800 bus. mangels.....	40.00
350 bushels corn in ear.....	55.00
Total value of feed.....	\$461.51
Breeding stock purchased during year.....	23.50
Stock Jan. 1, 1898, as above.....	333.00
Total outlay.....	\$818.01

Stock on hand Jan. 1, 1899:	
7 sows.....	\$105.00
1 boar.....	14.00
4 shoats.....	40.00
10 shoats.....	68.00
23 ".....	92.00
11 ".....	33.00
11 ".....	27.50
10 ".....	15.00
Total value of stock Jan. 1, '99.....	\$394.50

Live pork sold in 1898, 17,360 lbs.....	\$05.38
Total assets.....	\$1,199.88
Total outlay.....	818.01
Profit.....	\$381.87

In concluding our interview, Mr. Whaley said, "There are four chief requirements in raising hogs for profit:

- "1st—A good, high, convenient, well-ventilated, comfortable pen.
- "2nd—Good stock of one or other of the popular breeds. The dams must be roomy and good mothers.
- "3rd—Perhaps the most important is to keep the pigs clean, dry, and warm. We always clean all our pens every day throughout the winter, and let the pigs out into adjoining yards.
- "4th—Give good attention, regular feeding with good food, and there will be found good profit in raising hogs."

Anent the Honor Roll.

To the Editor FARMER'S ADVOCATE:
SIR,—You have certainly made a mistake in the note to the Windsor meeting of 1889, in the continued report of the "Royal Honor Roll," or I must have written what was not intended and not true. The note reads: "1888 and 1889 were two remarkable years, as Mr. Thompson in the former year won five first prizes with animals sired by one bull, Beau Benedict, bred by Mr. Linton, of Sheriff Hutton, an unparalleled achievement in the history of the Society, and the same pair won each year in the aged class," etc., etc.

I will in this case give you the full list of winners:

Mario (51713) wins championship for best male, also first in aged class. *Ruckby* (50398) won second; exhibited by Mr. C. W. Brierley. *Pilot* (51837), bred and exhibited by Mr. R. Stratton, third; and *Aristocrat* (50766), exhibited by Mr. Brierley, reserve.

BULLS CALVED IN 1885.

Master Shapely (53292), by Beau Benedict (42769), won first; exhibited by Mr. R. Thompson. *MacBeath* (54676), exhibited by Mr. J. Handley, second. *Melton* (53310), exhibited by Sir H. De Trafford, third.

BULLS CALVED IN 1886.

Self Conceit (55026), exhibited by Mr. J. Handley, first. *Royal Saxon* (56498), exhibited by Mr. J. Maskill, second. *Fylde Ingram* (54333), exhibited by Mr. J. Thompson, third. *Golden Treasure 2nd* (54378), exhibited by Mr. J. Handley, reserve.

BULLS CALVED IN 1887.

Royal Fieldshian (56469), exhibited by Mr. R. Pinder, first. *Ironclad* 55913, exhibited by Lord

Polwarth, second. *Roseberry*, exhibited by Mr. J. Handley, third. *Dauntless* (55552), exhibited by H. R. H. the Prince of Wales, reserve.

COW, IN MILK OR IN CALF, CALVED PREVIOUSLY TO 1884.

Molly Millicent (sire Beau Benedict), exhibited by Mr. R. Thompson, first. *Alexandria 9th*, exhibited by Messrs. Hosken & Son, second. *Lady Leodine*, exhibited by Mr. A. E. W. Darly, third. *Lady Worsley*, exhibited by C. W. Brierley, reserve.

COW OR HEIFER CALVED IN 1885.

Inglewood Gem (sire Royal Baron), exhibited by Mr. R. Thompson, first. *Ancient Fashion*, exhibited by Mr. C. W. Brierley, second. *Victoria*, exhibited by Mr. C. W. Brierley, third. *Waterloo Cherry*, exhibited by Mr. C. W. Brierley, reserve.

HEIFER CALVED IN 1886.

Belle Madeline (by Beau Benedict), bred and exhibited by Mr. R. Thompson, first. *Fairy Duchess*, exhibited by Mr. Barron, second. *Roan Lady 16th*, exhibited by H. M. the Queen, third. *Rosedale Grace*, exhibited by C. W. Brierley, reserve.

HEIFER CALVED IN 1887.

Pearl Bangle (sire Royal Baron), exhibited by Mr. R. Thompson, first. *Gladys Rose*, exhibited by Mr. T. Stokes, second. *Georgiana 7th*, exhibited by the Duke of Portland, third. *Rosedale Graceful*, exhibited by Mr. C. W. Brierley, reserve.

By this list you will note that Mr. R. Thompson wins five first prizes, three of which were sired by Beau Benedict. Mr. Brierley was also noticed eight times, and Mr. Handley four times. If making a record for 1888, I imagine Mr. Brierley is entitled to it with eight wins.

I note for 1889 the remark: "Mr. Thompson broke the record by winning every first prize in the female classes." Which is not correct, and I can't imagine how I made such a loose statement. The following is the official list:

COWS, IN CALF OR IN MILK, CALVED PREVIOUSLY TO OR IN 1885.

Molly Millicent, bred by Mr. R. Thompson, first. **COW OR HEIFER, IN MILK OR IN CALF, CALVED IN 1886.**

Belle Madeline, bred and exhibited by Mr. R. Thompson, first.

HEIFERS CALVED IN 1887—FORTY-ONE ENTRIES.

Gladys Rose, bred and exhibited by Mr. T. Stokes, first. *Lord Polwarth* was second, and my brother Arthur, third.

HEIFER CALVED IN 1888.

Fairy Rosebud, exhibited by the Duke of Northumberland, first.

I would not have troubled you to make the correction, only that I deem the matter sufficiently important to request same. I have no doubt there are some mistakes, and if so, I should be glad to have them pointed out and corrected; but I cannot allow such a palpable misconception to pass unheeded, as it is a matter of history and should be absolutely correct.

RICHARD GIBSON.

[NOTE.—Mr. Thompson is entitled to more honors in 1889 than Mr. Gibson places to his credit in the above list, inasmuch as he won with *Belle Madeline*, in addition to those mentioned, the £50 championship as the best female in the class, the £50 championship given by the Shorthorn Society to the breeder, and also the Queen's gold medal for the best Shorthorn in the show, which gives Mr. Thompson practically five first prizes of the highest order in the female section—*Belle Madeline's* winnings amounting in all to £120, or \$900 in cash, besides the gold medal, won by one animal at one show.—ED. F. A.]

The Ideal Bacon Hog Again.

To the Editor FARMER'S ADVOCATE:

SIR,—We received the copy of the May 1st issue of the FARMER'S ADVOCATE, and noticed an article headed "How Shall we Produce the Ideal Bacon Hog." This article seems to be in answer to our letter giving our experience in a truthful manner, as far as we have gone, with raising and feeding the many different breeds of hogs that we made mention of.

We are not breeders of hogs for sale as breeding stock, but are raising pork for profit. In our letter of March 1st we did not herald the good qualities of any breed, only to the extent that we had found them beneficial.

Now, Mr. Sanders Spencer, this gentleman of St. Ives, comes out in your issue of May 1st with a tidal wave of abuse of us bordering on insanity. He quotes Solomon or some other wise man, but it is quite evident none of that biblical gentleman's wisdom went his way. He also says something about "fools and angels," but Mr. S. must not think that he will find angels hovering around a Yorkshire pen, although it is quite evident he has been in close communion with the fool.

We said in our letter that the Yorks were a large, coarse breed, and we say so still, and the gen.

tleman of St. Ives must know that my statement is a true one. However, he admits he had been indulging in "old port," which may account for his raving.

What surprises us most is, that Mr. S. could not get some Englishmen farmers to say a word in recommendation of his pet York, but he refers us back five or six years to prizes won by some friend or relative of his in Sweden, where, possibly, there was little or no competition, and who was complimented by the king, who probably knew as much about hogs as the hogs knew about a king. Who knows but he will next refer us to some friend or relative of his in the center of Africa or Van Diemen's Land.

This gentleman thinks that we have had no experience in Yorks. Nor have we in a direct way, but indirectly we have. Two of our neighbors have had Yorks for the last five years, and they tell us they are a coarse, hard-feeding breed, and are now crossing the York sow with the Duroc boar. The offspring from this cross, they say, mature from six weeks to two months earlier, and take a third less feed than the pure-bred York. These men are truthful men, and live in Canada, not in Sweden.

This gentleman in St. Ives must be the same man who wrote the long letter to the clown in Barnum's circus. The clown said he received a long letter from a man in England, and when asked what was in it, he replied, "Nothing." On again being asked the contents of the letter, he again replied, "Nothing."

Mr. Sanders Spencer must refer in his letter to the small York when he says they are not a coarse and hard-feeding breed. But "old port" evidently had the better of his judgment, if judgment he ever had.

R. L. JARVIS & BRO.

Harwich, Ont.

FARM.

Two Experiments Suggested.

We would remind our readers of two practical experiments that may easily be tried this season, to which reference has been made in these columns. One refers to the use of salt on mangels, and the other to the killing of wild mustard, where the weed pest has obtained a foothold, by spraying with sulphate of copper or iron.

1st—Salt for mangels: Not more than four or five cwt. per acre, sown broadcast before thinning. One of our readers secured good results by applying 250 lbs. per acre last season. (See FARMER'S ADVOCATE for April 1st, page 171.) Apply over certain number of rows, leaving an equal area untreated. Compare the respective yields by weight or measure.

2nd—Sulphate of iron or copper on mustard: Spray when the leaves are most conspicuous, before the plant begins to flower and when the grain has not grown above it. Both chemicals appear to have been tried successfully in England. Sulphate of iron (copperas) is much cheaper than sulphate of copper (bluestone). Good results are reported from spraying at the rate of 50 gallons per acre, of a 7 1/2 per cent. solution of the former and a 2 per cent. solution of the latter. A 2 per cent. solution means, for example, 2 pounds dissolved in 98 lbs. of water, making 100 gallons solution. Spray one land and leave an adjoining one, where the weed is equally bad, untreated.

Lucerne an Early Soiling Crop.

On May 13th, Mr. Richard Gibson, Delaware, Ont., left at our office a bunch of fresh lucerne clover 27 inches high. The field from which it was taken was commenced to be cut for soiling on the previous day, and the cutting will be continued during the entire season. The crop is in its fourth year, and shows no indication of exhaustion. We were informed that it grew on well-drained, rather lightish loam in good heart. It was seeded with about half a seeding of barley, but Mr. Gibson considers that where land is very clear of weeds it is preferable to sow the lucerne seed alone; that is, without a nurse crop. It then makes good growth the first season. Mr. Gibson considers the chief uses of lucerne are soiling for housed stock and working horses and as pasture for hogs. It makes good hay when cut just as soon as the bloom appears, if cured without rain, over-bleaching, or loss of leaves. When left too late before cutting the hay becomes very fibrous, and therefore indigestible to stock eating it. A field that grows lucerne for a number of years requires occasional dressings of manure.

The Egg Trade.

Usually at this date the price of eggs has about reached rock bottom, at from 8c. to 9c. per dozen, which is considered about as high as they can be put in pickle to ship to the British market. At these prices, together with the expense of pickling, etc., they can be sold in Britain at a profit. The price at present in Toronto and London markets is about 11 cents. In order to learn the cause of the holding up of the prices when few eggs are going into pickle, we interviewed the two largest dealers in Western Ontario, Messrs. B. Higgins and Chas. Abbott, of London, both of whom expressed their confidence in the present prices being maintained throughout the entire season, or at least until the hot weather of July and August arrives.

We learned there is not a falling off in the supply from that of former years, for the fact is more eggs are brought to market now than at the same time in 1898. The difference is simply due to the opening up of a new market in mining districts of Western Canada. We learned that in twelve days of May Mr. Abbot shipped eight carloads, averaging about 13,000 dozen to the car, to the Kootenay district. He also sent a number of shipments to Vancouver, to be transhipped to Dawson, in the Yukon country. Last year Mr. Abbot did considerable trade with British Columbia, but so far this year he is sending about six cars for every one sent in 1898. He is also putting a small quantity in pickle at 10 1/2c. per dozen, but the Kootenay and Klondyke demand seems to warrant the attention of shippers in that direction.

Farm Seeds.

CONTINUOUS CROPPING OF FORTY VARIETIES ON THE SAME FARM WITHOUT CHANGE OF SEED—IMPORTANCE OF VARIETY IN FARM CROPS.

To the Editor FARMER'S ADVOCATE:

SIR,—That man is truly wise who uses the best seed he can possibly get for sowing in his fields, for it is certain that good seed is at the very foundation of good farming. There is far more value in seed of the highest quality than many people believe or even imagine. The quality of the very best seed obtainable can be improved by continually making use of those methods of improvement best suited to the seed under the particular conditions in which it is grown. It should be the aim of every crop-producer to gain as much information as possible regarding the proper methods of securing the best seed for his own soil.

Prof. J. W. Robertson, Agricultural Commissioner for Canada, made some important statements regarding the improvement of seed when he addressed the Agricultural Committee of the Dominion House on the 9th inst., and as the report of this address appeared in the last issue of the FARMER'S ADVOCATE, it will now be in the possession of many farmers who will therefore have an opportunity to study it carefully. As we have obtained some interesting results of field experiments conducted at the Ontario Agricultural College, bearing on the subjects dealt with by Prof. Robertson, a concise statement of some of them might be here presented for study in connection with Prof. Robertson's statements. For the results of a number of special experiments on "seed selection," the reader is referred to pages 17-30 of the Report of Farmers' Institutes for Ontario for 1897-8. There are some lines of field experiments which require many years of carefully repeated tests in order to obtain serviceable results, and the longer they are carried on the more valuable do the results become. The two lines of investigations to be here referred to belong to this class, and, as the experiments have now been conducted for ten years, the results should be of considerable value.

CONTINUOUS CROPPING WITHOUT CHANGE OF SEED.

In the variety tests conducted with farm crops, our plan is to grow all varieties for at least five years, and then to discard the poorest and to continue with the best kinds. Fresh seed of all root and corn crops is purchased annually, but in the case of grain and potatoes the seed used each season is secured from the crop produced on the plots in the previous year. Following this plan, we now have the record of forty varieties of grain and potatoes grown for ten years in succession without using seed from outside sources since the spring of 1889. In averaging the yields for the first five years (1889-93), and also for the second five years (1894-98), we have the following record in bushels per acre:

CROPS.	FIRST 5 YEARS. (1889-93)		SECOND 5 YEARS. (1894-98)	
	Yield	Yield	Yield	Yield
Oats (17 varieties).....	70.7	78.1	bush.	bush.
Barley (6 varieties).....	50.8	58.8	"	"
Spring wheat (6 varieties).....	23.9	27.6	"	"
Potatoes (9 varieties).....	145.4	199.6	"	"

The average increase of yield in each crop for the second period as compared with the first is, therefore, as follows: Oats, 10.5%; barley, 15.8%; spring wheat, 15.5%; and potatoes, 37.3%. These figures show that in the second period there was an average of about one-fifth greater yield per acre than in the first period.

The soil used for these crops was a clay loam and was fairly uniform throughout. The cultivation and seeding was about similar in each of the ten years. Farnyard manure was applied once each four years at the rate of about fourteen loads (20 tons) per acre. The manure was applied on the land for roots and potatoes which preceded the grain. Clover was not grown and the land received no advantage from the droppings of animals, as it was not pastured. No commercial fertilizers whatever were used. This treatment of the soil was rather severe and would likely tend to decrease rather than increase the fertility. The seasons in the two periods undoubtedly had some influence, as the reports of the Bureau of Industries for Ontario show the average yield of oats, barley, spring wheat, winter wheat, and potatoes for the five years from 1894 to 1898, inclusive, to be about five per cent. greater than the average for the five years from 1889 to 1893, inclusive. The increase of the forty varieties in the second five years was, however, about 20 per cent. greater than in the five years previous, which still leaves an increase of about 15 per cent. in favor of the second period. It is, therefore, quite likely that the careful way in which the seed was selected each year had considerable to do with the increase, as much pains was taken every season to use nothing but the large, plump, true seed of each variety.

Our experiments have now reached that point at which the results of each coming year should give information of increasing value on this question regarding which there is such a difference of opinion. From the foregoing results, however, we have already seen that four different classes of farm crops have been grown on similar soil for ten years in succession without change of seed and with an increase in yield per acre.

IMPORTANCE OF VARIETY IN FARM CROPS.

A large number of varieties of farm crops are grown annually in the experimental grounds. The records of the different characteristics of each kind are carefully kept and the yield and the quality of each variety are accurately determined every season. After the varieties have been thus care-

fully tested for five years in succession, a few of those giving the highest results in yield and in quality and which possess different characteristics are selected for co-operative experiments throughout Ontario. The object in this is to enable the farmers to determine for themselves which of the leading varieties will be best suited for their own particular soils and localities. The demand for these varieties is increasing annually; 11,941 packages were sent to 3,480 experimenters within the past year. Not only are the best varieties used each year, but the seed is carefully sifted and is then picked over by hand. This requires much labor, but we believe it is work done in the right direction, and that much good is resulting therefrom. The past results show that nearly all the varieties which have been sent out have made excellent records for themselves, and some of them are now grown extensively.

As this line of work has been going on for some time, we have a good opportunity to study the comparative value of one variety with another, and thus to ascertain whether variety in itself is a matter of much importance. We now have the records of a few varieties which we have grown at this place, and also in connection with the co-operative experiments for several years in succession, and the results are very interesting and suggestive. The accompanying table gives the average yield in bushels per acre of each of two varieties of oats, of barley, and also of spring wheat, for the first and for the second five years at the College and for five years over Ontario. It also gives the average yield per acre of each of two varieties of winter wheat, and also of potatoes, for the first five years at the College, and for the two following years both at the College and over Ontario:—

PERIODS.	OATS.		BARLEY.		SPRING WHEAT.		WINTER WHEAT.		POTATOES.	
	Yield	Yield	Yield	Yield	Yield	Yield	Yield	Yield	Yield	Yield
First Period at O. A. C.—Average, five years.....	76.7	70.9	56.8	51.3	26.9	24.9	49.9	46.2	187.6	180.7
Second Period at O. A. C.—Average, five years.....	79.3	75.1	73.3	62.9	29.1	25.8	51.3	49.2	242.7	234.2
Co-operative Experiments throughout Ontario—Average, five years.....	52.5	51.0	34.4	30.1	16.9	14.9	32.3	29.1	214.9	194.4

* Average for two instead of for five years.

The figures given for the co-operative experiments represent the average yields of tests made with oats on 481 farms; with barley on 128 farms; with spring wheat on 149 farms; with winter wheat on 422 farms; and with potatoes on 53 farms. As the results of none but complete reports of successfully conducted tests were used for the summaries, the average yields should be very valuable in this comparison.

Knowing as we do the treatment of the seed of the two varieties was practically the same in every instance, we can clearly see that variety showed itself in a marked degree. Without an exception, those varieties which gave the highest average yields in the first five years' test at the College also gave the highest average yield in the after tests at the College and in the co-operative tests over Ontario. From the reports which have appeared

in the public press regarding the remarks made by Prof. Robertson before the Committee on Agriculture when discussing the great variations in the yields of the same varieties in the tests of the five Dominion Experimental Farms, I fear the impression will be made that he places but little importance upon *variety* in farm crops. It must be remembered that the conditions of the soil and climate of those parts of Canada in which the Experimental Farms are situated are widely different.

In Ontario we have found that the results of the co-operative experiments with varieties of farm crops have been in close harmony with those obtained at the Agricultural College, and that the influence of variety has been an important factor in relation to productiveness. The results of our extensive experimental work with varieties and with selections of seed give strong evidence that one of the best plans possible for securing the best results from the general cultivation of grain and potatoes in Ontario is for each crop producer *first to search and find the best variety* by experimenting on his own farm with carefully selected seed of a few of the leading kinds of each class and *then to follow up the variety thus obtained by systematic and continued selection* of both plants and seeds. The Agricultural College is assisting the farmers in this work by means of object lessons, reports, bulletins, newspaper articles, addresses, correspondence, etc., and by means of a systematic distribution of good seed of a few of the best varieties of farm crops for co-operative experiments on their own farms.

C. A. ZAVITZ.
Agricultural College, Guelph, Ont., May 25th, '99.

Millet as a Catch Crop.

The destruction of much of the clover during the past winter will render it necessary to provide a substitute fodder crop upon many farms. While millet is largely grown as a general crop in some of the warmer climates for forage for live stock, it is also cultivated for its seed for human food as well. In Canada, however, its use is chiefly confined to supplying a substitute for a regular pasture or fodder crop that has failed to grow or has been destroyed. It also finds a place on land infested with weeds, as it can be sown late in the season, after a month's fallowing, and by its rapid growth does effective work in smothering out weeds, and, as the crop has a short period of growth, any weeds that do survive are cut down in their green state along with the crop, and receive a further shock in the later autumn cultivation.

There are many varieties of millet, but for Canadian agriculture it is safe to be guided by the results of comparative tests made in connection with the Ontario Agricultural and Experimental Union, where Japanese Panic, Japanese Barnyard, and Japanese common gave the highest yields when grown on various Ontario farms. In plots these gave, in 1898, average yields of 8.4, 8 and 7.9 tons of green crop per acre. This was lower than usual, as the season proved to be quite unfavorable to this crop. While millet, like many other crops, does best in warm, rich, mellow soil, it will do fairly well on any land where a grain crop would be expected to yield well, provided a mellow seed-bed is prepared. The crop will, like corn, do best in hot weather, and make rapid growth, particularly if the moisture is not too limited. Under favorable conditions the crop is usually ready to be cut for hay in from 50 to 60 days from date of sowing, and maturing seed about 15 days later.

The preparation of the land for millet should be about the same as for corn, but the crop may be sown somewhat later. The plant is a shallow feeder, hence if manure is applied it should be kept near the surface. When sown late in the season after a crop of hay or rye has been taken, or a grain crop has been hauled out, to get it sown as quickly as the land can be plowed and harrowed smoothly should be the object. Early in June is a preferable time to sow the seed, but if put in six weeks later there should be no fear of failure to get a fair crop. The seed may be sown broadcast or with a grain drill, and ordinarily with little preference, except that the drilled seed gives an even stand, and a little less seed is required. For soiling or ensilage, drilling will generally give better results. From two to three pecks of seed per acre for soiling or hay, and somewhat less for seed, is commonly sown on rich, well-prepared land, and a little more on soil that is poor and thin. Thin seeding is liable to result in coarse-strawed plants, and is, therefore, suitable for soiling, silage or seed, but it is well to aim at finer stalks when the crop is to be cured for hay.

Cutting millet for hay should never be delayed until the seed has begun to ripen, particularly if it is to be fed to horses. On the other hand, too early cutting should be avoided, as the hay is liable to have a more or less laxative effect upon animals eating it. However, it is better to cut it early than late. The hay may be safely cut any time after the heads have shot until the seeds commence to fill. The best time is when the majority of the heads have distinctly appeared. The tough, fibrous nature of the stems that have been allowed to approach maturity detract much from the palatability of the hay. Moreover, the earlier cut hay is much safer food for all kinds of stock. On account of the succulence of the stems and leaves, the curing takes place rather slowly, and the seeds may make considerable development after the plants are cut. Cutting for soiling or for the silo may be delayed a little later than for hay, but it should not be delayed until the

seed has begun to ripen, as it becomes less palatable and more liable to derange the digestive system of stock eating it. On one occasion the writer fed a number of cows suckling calves on millet that was nearly ripe, with the result that both the cows and their calves, especially the latter, suffered severe purging.

Clover Haying.

LUCERNE AND RED CLOVER—DISCUSSION INVITED FROM OUR FRIENDS.

In the earlier sections of Canada, and wherever the earlier grasses and clovers, such as orchard grass and lucerne, are grown, haying operations will soon be under way. While the cool weather of May held growth somewhat in check, the summer temperature of the latter half of April gave the crop such a push forward that the season will not be much, if any, later than usual. It is to be regretted, however, that the yield per acre will not be heavy, since much of the clover received such a check and thinning-out by reason of the severe winter. For that reason it looks as though hay will be hay next fall and winter, and special care should be taken to secure every forkful in as good condition as possible, as really good clover hay, cut in good time and well cured, is, when fed with an equal bulk of oat straw, of more value than over-ripe or badly-cured hay fed alone. The effect of overripening is to increase the indigestible fiber and decrease the palatability of the hay, while repeated wettings of hay, especially in the advanced stages of curing, washes away valuable soluble matter, destroys the appetizing aroma, and renders the crop unpalatable and of little value.

Regarding the making of hay, the FARMER'S ADVOCATE has little that is new to suggest, since we have for years been pegging away in an endeavor to point out the advantages of early cutting, tedding and cocking in quick succession. Lucerne especially should be mown just as it is coming into head. It is at that stage very sappy, and should be cut, if possible, when the sun is shining warmly and a drying breeze is blowing. When one has these favorable conditions, clover cut in the morning will be sufficiently wilted by evening to be fit to cock. This condition can be hastened by the use of the tedder set a-going soon after noon. Ordinarily, lucerne will require to lie on the ground over one night, but soon after the dew is off the next day the tedder should be set to work and the hay raked up and snugly cocked before evening. One should not wait longer than the leaves and stems have become wilted before putting up, as dry lucerne loses its leaves with very little handling, and this is a serious loss. On account of the stalks of lucerne being somewhat coarse, it is well to use cotton hay caps to cover the cocks, as it should stand out for several days, and a soaking rain will do incalculable damage. It is not well to haul lucerne hay until it is well cured, as it is quite liable to must and mould if put together damp.

The value of red clover hay is becoming more and more appreciated year by year. As a supplement to be fed with ensilage it is highly favored, as it adds to the fodder the constituents that are needed to balance the ration. It is also being more generally used for horse fodder, as it is found to keep them in better condition than timothy, even when a less quantity is fed. For sheep and calves it is unsurpassed, and pigs are benefited by having a little of it mixed with their grain ration. The curing of red clover should be as carefully undertaken as that of lucerne, as it is almost as perishable, and quite as useless when over-exposed or rained upon. It is well to cut down at once only as much as can be handled at the proper time and in the best way. Usually in hot weather, clover cut in the morning can be put in cock in the evening, but where it is not sufficiently wilted for this it is better to rake into windrows than leave it flat on the ground, as then the dew will moisten a much less surface. It can then be shaken out in the morning and put up as soon as fit. By the following day this should be fit to haul if free of external moisture, as a little sap in clover does not cause it to overheat. A warming-up in the mow is a natural consequence, but if the hay has been brought in without rain or dew upon it, no fear need be entertained for its safety, and when it comes to be fed out next winter the stock receiving it should laugh, grow fat, and return to its owner a neat profit.

In this age of investigation and advancement, doubtless many of our readers have discovered some short cuts or better methods in haying than are usually practiced in saving the crop in good condition. We therefore invite a discussion upon this subject for June 15th issue, and trust there will be a ready response for the benefit of our readers; from our friends, whom we are ever anxious to help.

Peat Moss Fiber.

It is reported that the lately-perfected Austrian process of converting the moss that grows upon peat bogs into fiber suitable for making wrapping paper, matting, blankets, rope twine and anti-septic bandages is to be introduced into Canada. A large factory is said to be successfully operating in Vienna, Austria, and another in Dublin, Ireland, where the moss is abundant. There is a considerable area of peat land in some sections of Canada, and Toronto capitalists have the enterprise in hand. Durability and cheapness are claimed to be the chief characteristics of the various products manufactured from peat moss.

Rape for Sheep.

To the Editor FARMER'S ADVOCATE:

DEAR SIR,—I feel it my duty to say that I am very much pleased with the really good agricultural paper that you are turning out. I think it is getting better right along. I noticed particularly your remarks re rape for sheep, and I would like to give my experience on this line. After we cleared the field of fall wheat last harvest, we turned in and plowed the ground lightly, harrowed it up good, then rolled, and then sowed rape seed broadcast at the rate of about three pounds to the acre. I first put the seed in the grass-seed box of the grain drill, but the seeds were too large and they would not come out, so I just sowed it by hand and got it on pretty evenly and had a good crop which kept our sheep and lambs until the snow came, or nearly so. Two of the flock died: I think likely from the rape being too strong, but am not sure. In Scotland we used to sow a little white mustard with the rape seed, which the farmers there believed to be a good thing to counteract any evil effects from the feeding of rape. The sowing of rape after fall wheat only succeeds when the ground is damp, as in a very dry season it is of little use. Neither cows or beef cattle should be put on a rape field to pasture, as it gives a bad flavor to the milk of the former, and also has been known to spoil the meat of cattle which were taken off it and killed for beef. When not required for feed I think rape would be a good thing to grow to plow down for green manure. Wishing the ADVOCATE the great success to which it is justly entitled, I am,

Oxford Co., Ont.

D. LAWRENCE.

DAIRY.

A Practical Suggestion in the Interest of Factory Patrons.

To the Editor FARMER'S ADVOCATE:

SIR,—The State Dairymen's Association of Maine has recently established a testing station at which the testing of the samples of milk from creameries shall be done at one place, and thus tend to do away with the suspicion that now arises in the minds of patrons relative to the accuracy of testing as done at present. The station will also act as a safeguard to the interests of patrons, because it stands between them and the manufacturers.

Since a number of Canadian creameries have adopted the combination plan of charging a certain rate and taking a portion of the product as pay for manufacturing, it is more important than ever that the interests of patrons should be guarded. By a systematic reading of the tests a "little low," it is quite possible to make a very large "overrun," and those creameries which manufacture on the combination principle of "one cent and the overrun" can very easily make a large overrun, and thus get high rates for making. Some American creameries, I am told, make for the overrun alone.

If this system of allowing the manufacturers to take the overrun is to become general, I am strongly in favor of a central testing station, one east and one west, where all the samples of milk may be sent, by express or otherwise, monthly, and the samples tested and the per cent. of fat determined by disinterested parties who would do the work thoroughly and accurately. In fact, I would go farther and say that if the creameries and cheese factories would agree to send the weights of milk along with the samples, that much of the clerical work now done at creameries and cheese factories could be done cheaper and better at a central bureau, and it would in many cases be to the advantage of all parties.

This is a line of work that might be profitably taken up by our butter and cheese associations.

O. A. C., May 16, '99.

H. H. DEAN.

Aerate Milk Before Cooling It.

To the Editor FARMER'S ADVOCATE:

SIR,—Your paper of May 15th contains some valuable suggestions on the important subject of keeping milk in summer, in regard to which I would say: In order to keep milk pure and sweet would not advise placing can in water or use of ice until thoroughly aerated by dipping and pouring, as I think if chilled too quickly it is very difficult to get rid of any flavors that may be in the milk. Have had best results from patrons straining milk into can, giving it an occasional stir during the evening, and leaving can sitting on grass where surrounding air is pure. If a warm night, think a few pails of cold water thrown on grass around can a great benefit. Do not think night's milk should be cooled below 60 degrees, unless in case of those sending Saturday night's or Sunday morning's, then it is necessary to use water or ice, but milk should be well aerated before placing can in water. I think it very important that the morning's milk should be well aired and cooled in the pails before emptying into can with night's milk, that all milk should be properly strained, and all dairy utensils kept clean and sweet.

J. S. ISARD.
Bruce Co., Ont.

[NOTE.—Mr. Isard has repeatedly taken good prizes in Cheddar cheese classes at the Toronto Industrial and in other competitions, so that his advice on the care of milk for cheesemaking is worthy of more than passing notice.—Ed.]

Cost of Raising Dairy Calves.

A SKILLFUL SYSTEM OF FEEDING REVIEWED—MILK SUBSTITUTES OF NO VALUE TO CALVES OVER FIVE MONTHS OLD.

In order to get at an approximate estimate of the cost of raising dairy heifer calves to the age of sixteen months, the New Hampshire Experiment Station kept careful records of the food consumed by several calves and yearlings, and have dealt with the subject in bulletin 58. The treatment was as follows:

The calf was taken from the cow as soon as the latter's milk was fit for creamery use. It was first fed with whole milk, which was gradually replaced by skim milk, until by the end of the second week of growth it received only milk that had been run through the separator and was almost completely free from fat. To replace the fat, a mixture of ground flaxseed, cooked in water, was added to the milk. The proportions in this mixture were one pound of flaxseed to four quarts of water, making a thick mucilaginous jelly, which could be readily mixed with the milk. The calves were fed from seven to ten quarts of skim milk and one or two quarts of flaxseed jelly, daily, in two feeds. During part of the time middlings were cooked instead of flaxseed. As soon as possible the animals were encouraged to eat grain and hay, and the increase in food made necessary by gain in size and weight consisted of these materials, while the skim milk and flaxseed remained nearly constant in amount as long as they were used, which was up to the age of six to eight months, or until the animal's first season in the pasture.

Careful watch was maintained to note any indigestion; therefore diarrhoea or "scouring" was quickly stopped by reducing the quantity of food and adding limewater to the milk. Little difficulty was experienced in keeping up a steady growth in size and gain in weight. Differences were always noticeable between individual animals in the rate of growth and amount of food consumed. Large animals invariably require more food to maintain their condition than small ones.

The quantities of food consumed, and cost of the same, together with the breeds, ages, weights, and weekly gains, are given in tables, which we summarize as follows:

Eight calves under 5 weeks old. Average weekly gain 7.6 pounds. Average weekly cost 40.6 cents.

Eight calves from 5 to 9 weeks old. Average weekly gain 9.1 pounds. Average weekly cost 36.7 cents.

Eight calves from 9 to 13 weeks old. Average weekly gain 11.8 pounds. Average weekly cost 43.1 cents.

Eight calves from 13 to 20 weeks old. Average weekly gain 10 pounds. Average weekly cost 52.9 cents.

Six calves from 4 to 8 months old. Average weekly gain 11.1 pounds. Average weekly cost 63.7 cents.

Two calves from 8 to 13 months old. Average weekly gain 5.25 pounds. Average weekly cost 58.3 cents.

Four heifers from 13 to 16 months old. Average weekly gain 6.12 pounds. Average weekly cost 65.1 cents.

Four heifers were maintained on pasturage from July 24 until October 26, 1887, a period of 13 weeks and 2 days. The total gain in weight of the four animals was 313 pounds, or an average weekly gain of 5.9 pounds per head.

During the feeding periods comparisons were made between cooked, ground flaxseed, and cooked middlings as a substitute for the fat in milk, and also between rations including the cooked food and those without it.

In the first trial the calves were between 5 and 8 months old, and the middlings proved to be a satisfactory substitute for the ground flaxseed, the cost being less and the gain in weight large enough for the purpose, though a little smaller than on the flaxseed.

The calves in the second trial were also over five months old. The substitution of the dry grain lessened the cost, and the gain was sufficiently large, although smaller than in the previous period.

These trials show that for calves at the age of those described there is no object in using anything but dry grain and hay along with the skim milk, unless the greatest possible amount of growth is desired.

The total cost for the food consumed by the heifer during the 16 months would then be \$28.81, and she would weigh from 600 to 700 lbs.

In conclusion, a study of the tables shows that high-priced foods, viz., whole milk, flaxseed, linseed meal, and oats, will cause the cost of the weekly ration to increase out of proportion to the gain, if fed freely. Flaxseed cannot be used with economy except in the earliest stages of growth, the first two or three months, and whole milk should be discontinued as soon as possible, consistent with a fair start for the youngster.

Keeping Milk Pure.

In regard to keeping milk: 1st. Have the cow give pure milk by having healthy animals, proper food and water, clean and healthy surroundings. 2nd. Kind treatment; we must keep the cow happy. Then, clean handling of the milk in every particular is necessary, as well as a thorough aerating of the milk while it is warm with clean air. Then cool down to about 50° Fahr., and keep it as steady as possible, either by changing the water or using ice.

Perth Co., Ont.

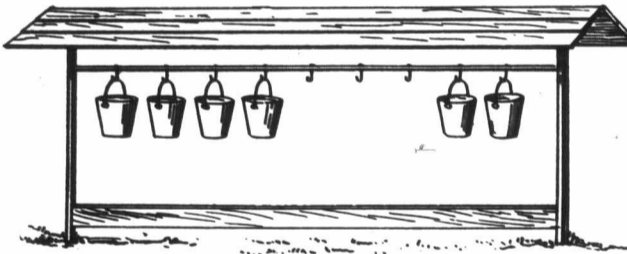
JACOB BRAY.

Milk Free of Germs.

Prof. E. H. Farrington, of the Wisconsin Dairy School, says regarding his investigations on the question of germs in milk: "The rapid advance in the study of germ life showing that bacteria are omnipresent leads a bewildered mind to wonder if there is such a thing as germ-free milk. Dairymen are told that the unclean tinware, strainer cloth, milk pail, feed, dust and even the air that surrounds his dairy and barn are full of myriads of bacteria that are conspiring against his milk to sour it. The question is often asked if milk in the cow's udder is germ-free. Investigations have proved that germ-free milk can be obtained from the udder of a healthy animal, although the first milk drawn does contain many bacteria. They come from the air and lodging on the moist end of the teats, work their way into the larger milk channels of the udder, where they are found in considerable quantity, but in the finer tributaries they gradually decrease in number until in the very minute passage they are entirely absent. It has been found that the first stream of milk drawn from each teat contained as many as 80,000 bacteria per cubic centimeter (l. c. c.—about 1-1,000 of a quart), while the latter portions of the milking were entirely free from bacteria. This shows that the purest and most healthy milk is to be obtained by taking that which is drawn from the udder after the milk passages have been rinsed by discarding the first portions of milk drawn from each teat. After this rinsing, one may expect to get germ-free milk from a healthy cow. The purity of such milk is much more desirable than that obtained by pasteurization. By the latter process the bacteria are not removed, but their growth is checked or destroyed by heat. Although healthy people are not usually seriously affected by the germ life in ordinary milk, it is often desirable to obtain germ-free milk for infants and invalids, and what has been said shows how this is possible. All efforts to get pure milk are lost, however, unless the milk is drawn into and preserved in thoroughly sterilized vessels."

Pole for Hanging Milk over Night.

Mr. John Brodie, Mapleton, in writing us for May 15th issue regarding the care of milk in summer, enclosed the accompanying sketch of a covered pole or scantling, with hooks attached, for keeping the evening's milk in pails over night. The milk is aerated by pouring from pail to pail a number of



times, in which operation it loses the animal heat and gaseous odors. Where the herd does not exceed about twenty cows this is perhaps the best way of treating milk to be sent to cheese factory.

Raising Spring Calves in a Cheese Section.

To the Editor FARMER'S ADVOCATE:

SIR,—For late spring calves I have found the best results by feeding new milk as it comes from the cow for about two weeks, then gradually decrease the new milk and add a little flax seed and oats, ground together in the proportion of one of flax seed to two of oats, by taking scalding water and mixing the flax seed and oat chop twelve hours before feeding. When the calf is three or four weeks old the milk may be stopped by continually increasing the other feed, and by placing a little hay, or, better still, some green grass in one corner of the manger and a little whole oats in another corner. This brings us to a point where many farmers disagree as to whether it is best to put the calf out in a field so as to be handily fed, or to continue feeding in the stable. I would recommend that if you have the time you can have a better calf, with no more cost of feed, by feeding in the stable, and if the calf is of good breeding, by this method of feeding you will in the end have an animal that you need not be ashamed of.

Perth Co., Ont.

GEO. LOCHHEAD.

More About Summer Care of Milk.

To the Editor FARMER'S ADVOCATE:

SIR,—In order to have milk arrive at factory in good condition, to start with, there must be healthy cows, good, wholesome feed, pure water at the farm, perfect cleanliness in milking and handling milk. Milk should be thoroughly aerated before it is cooled, but in all cases have it cooled. Temperature should be lowered to 55° or 60° Fahr. Use cold water or ice or both. Milk may be aerated by pouring from one pail into another for some time, or using a patent aerator. But putting milk through an aerator once is not sufficient; it should be put through three or four times in thin sheets, allowing pure air to pass through and carry off the animal odors. After milk has been cooled, keep it stirred quite often. Have some kind of roof over milk cans, and leave lids off.

Brant Co., Ont.

J. F. MILLAR.

Airing Milk and Low Temperature.

To the Editor FARMER'S ADVOCATE:

SIR,—I am very much pleased that you have taken up the question of caring for milk in summer weather, as it is one of vital concern to every dairy farmer from Prince Edward Island to British Columbia. The various plans suggested are all more or less helpful, and if intelligently carried out will effect a very great improvement in the character of the milk supplied Canadian factories this season. Usually there is not much trouble keeping the evening milk sweet till morning, and if the numerous suggestions made are adopted it will be kept free from taints as well. My own plan is, after straining, to first thoroughly air the milk by pouring with a long-handled dipper, and by using the inverted pan aerator described in the ADVOCATE. In very sultry weather, I next set a deep, smooth, shotgun creamer can, made for the purpose, filled with cold water, in the can of warm milk. In about half an hour the water will be quite warm and should be removed and the milk stirred again, after which it will keep till morning all right. To keep Saturday night's and Sunday morning's milk till morning, it is first given a thorough airing, and then cooled down by the use of cold water and ice, if necessary. In the most sultry times I set the can in a tub of cold water in a good clean cellar. On a few occasions last season I had to use a little ice in the water to keep the temperature down to a safe point. I have frequently kept Saturday night's milk till Monday morning by putting it in creamer cans, airing it by pouring and setting the cans in a tank of cold water. Be sure to leave the lids off the creamer cans till the heat has ceased rising from the can, otherwise the cream will become heated and soon sour.

Cow Boy.

Caring for Milk in Summer.

To the Editor FARMER'S ADVOCATE:

SIR,—We are pleased to give our experience in caring for milk. In using the large cans, we have a tube about six inches wide and about the same depth as the can. We fill it with water or ice and place in the can, with about five or six pails of milk, at the same time bailing it frequently till the natural heat is gone. We also use pails for cooling by bailing. We strain all the new milk, and have all the pails and cans perfectly clean, as we consider this a very important point to keep the milk pure.

To keep the milk over from Saturday night till Monday morning requires a little more care. In very warm weather we have the cans and pails placed in a cellar or any cool place where the air is pure. We consider bailing of much importance, as the milk that is bailed has a richer flavor than that which was not bailed.

Perth Co., Ont.

JOHN BAIN.

Keeping Milk Pure and Sweet.

Milk or cream, to be pure and sweet, should be thoroughly aerated, so as to take off all animal odor. If this is not done it will have a taint which is peculiar to all smothered milk or cream. Then it should be chilled and held at as low a temperature as possible. This temperature should be steady, also. Milk or cream must not be mixed at uneven temperature, and never until thoroughly aired and chilled, as nothing will make it go sour quicker than to do so. Special care is needed in sultry weather at or before time of thunder storms. At such times use ice freely and you will have no trouble.

Peel Co., Ont.

R. McCULLOCH.

POULTRY.

Raising Young Turkeys.

BY MRS. JOSEPH YULL, CARLETON PLACE, ONT.

Some years ago I tried raising turkeys, but had very poor success, so gave it up for a time. Three years ago I made another effort by purchasing a few turkeys in autumn and feeding them extra well during the winter, thus obtaining the desired effect—that of getting them to lay early in the spring, before the snow was off the ground, making it necessary for them to lay in the house they occupied during the winter. I find that when a turkey makes her nest it is difficult to move her with satisfaction, and if they get to the fields before laying they are very apt to hide their nests, and should the season be cold the eggs are liable to become chilled, which is almost sure to prevent them hatching. If a turkey is well fed, she should lay from twenty to twenty-two eggs, which should be gathered as soon as possible after being laid, placed on wool, and turned over every day.

When she becomes broody, provide her with a box two feet square and ten inches deep; cover the bottom of the box with a sod which had been dug last fall and kept in a dry place; over this spread a few handfuls of cut straw or chaff. Give her a few china eggs for two days. By this time she will have the nest prepared and warmed. I give each turkey sixteen eggs. Set the remainder under a hen at same time as setting turkey; then when the young ones are hatched give them all to the old turkey, as I find they thrive better with their own than with a foster mother.

About two days after the turkey becomes settled on her nest, dust the nest and turkey all over

with sulphur. This should be repeated three times while she is sitting. When the young turkeys are hatched, allow them to remain in the nest twenty-four hours, then give each one one grain of unground black pepper. Then feed with a scon made of the following ingredients: Equal parts each of oatmeal, wheat meal, corn meal, and shorts; to every quart of this mixture add one teaspoonful of soda and one of salt; damp with buttermilk; bake in a moderately hot oven. When cold, crumble fine and feed them all they will eat of it. To every twenty turkeys give one tablespoonful ground meat per day; also all the sweet skim milk and clean cold water they can drink.

The old turkey should be enclosed in a large, airy coop, not less than four feet square and three feet high, placed, if possible, on a fresh plot of grass. In this coop there should be a muslin bag of sulphur, hung so that the old turkey will touch the bag with her head, thus dusting the sulphur on herself and young. I keep the old turkey confined during the first week, but always allow the young ones their liberty.

When the young turkeys are one week old, repeat the dose of black pepper, and allow the old turkey her liberty one hour in the heat of the day. When the young turkeys are two weeks old, give two grains black pepper, and when three weeks old give three grains. At four weeks repeat last dose. During this time lengthen the time of the old turkey's liberty so that she may have perfect liberty when her young are three weeks old. To encourage them to come home at night, I feed them in their coop until they are six weeks old. By that time they have formed the habit of coming home at night, and we have no trouble with them staying away. Do not shut them in at night, but allow them to catch the early worm. I do not feed any more until the middle of October, when I commence fattening them for Thanksgiving.

Since adopting this method I have not lost one turkey.

Egg Preservatives.

INTERESTING EXPERIMENTS — "WATER GLASS" VS. LIME WATER.

To the Editor FARMER'S ADVOCATE:

SIR,—Having received numerous enquiries from farmers during the past two months respecting the merits of "water glass" as a medium in which to keep eggs, we are led to think that certain conclusions drawn from an experiment, lately brought to a close, with this and other preservatives will be of interest to your readers.

The investigation was commenced last September, perfectly fresh eggs from the farm poultry house being used for the test, which consisted in immersing the eggs for varying lengths of time, from a few hours to six months, in (a) lime water, and (b) 10 per cent. solution of "water glass." Those eggs which were treated for a few hours, days or weeks, as the case might be, were subsequently placed, together with the untreated eggs to be used as a check, in a rack within a drawer in the laboratory till the close of the experiment, March 30th., 1890. All the eggs were at a temperature from 65° to 72° Fahr. throughout the trial.

The testing consisted in breaking the eggs into a glass and noting the appearance of the "white" and yolk, whether the yolk was stuck to the shell, size of air-space, odor, etc. The eggs were then poached, and again the odor, appearance, etc., noted. Without giving in detail the results of the various trials, it may suffice for present purposes to summarize the conclusions reached, as follows:

CONCLUSIONS.

1. In no instance, either of treated or untreated eggs, were any "bad" eggs found.
2. In all cases where the eggs were not kept covered throughout the period of the test with the preservative solution, shrinkage of the contents had taken place, as shown by the larger air-space, the less globular form of the yolk, and in many instances by the adherence of the yolk to the shell. The eggs treated for seven days and less with lime water showed somewhat less shrinkage than those treated a similar length of time with silicate of soda.
3. It would appear that lime water and "water glass" used continuously are equally efficacious in preventing shrinkage. They may also be said to give practically the same results as regards both external and internal appearances, flavor, etc., of the eggs preserved. Since "water glass" (silicate of soda) is more costly and more disagreeable to use than lime water, we could not from the present results recommend the former as the better preservative.
4. The albumen or "white" in all the preserved eggs was very faintly yellow (though not to the same degree in all the eggs), the tint becoming deeper on boiling.
5. No offensive odor was to be perceived from any of the eggs when broken, but in all instances a faint but peculiar musty or stale odor and flavor developed on poaching.
6. It is probable that no preservative will prevent the loss of flavor possessed by the fresh egg, but those which wholly exclude the air (and thus at the same time prevent shrinkage from evaporation) will be the most successful. Continuous submergence is evidently better than treatment for a few days.

"Water glass," known as silicate of soda, is a

fluid quoted at 60c. per gallon. It is highly caustic, due to excess of soda, and consequently is more disagreeable to use than lime water.

The lime water may be made by putting two or three pounds of good fresh lime in five gallons of water, stirring well at intervals for a few hours, and then allowed to settle. The clear supernatant fluid can then be poured over the eggs, which have been previously placed in a crock or water-tight barrel. Some authorities recommend the addition of a pound or so of salt to the lime water, but the writers are of the opinion that this is unnecessary and probably leads to the imparting of a limy flavor to the eggs by inducing an interchange of the fluids within and without the egg.

The all-essential points to be remembered are: (1) that the eggs to be preserved shall be perfectly fresh, and (2) that they shall be covered with the preservative fluid.

FRANK T. SHUTT,
Chemist, Dom. Expl. Farms.
A. G. GILBERT,
Poultry Man., Expl. Farm.

Ottawa, May 19.

One Month with Hens.

In a couple of recent issues of the FARMER'S ADVOCATE I noticed the records of two lots of hens, one from G. C., Queen's Co., P. E. I., and the other from Mr. Adam McKay, of Milton, Ont. Apparently, these records were considered fair, if not good, but neither of the reports mentioned the variety of hens nor the manner by which the results were obtained. That some readers of this journal may derive some benefit therefrom, I will give an account of my experience with our hens during the month of March, 1890.

At the outset, I wish it understood that I do not consider my way the correct one, for I never attended poultry before, another member of the family having previously looked after that work. So the results are not from long experience, but from carefully following what I could gather from poultry journals and by exercising a little common "hen sense," and anyone with the desire may do that.

The hens were twenty-eight in number. Of these, five were old mongrels, nine were two-year-old B. P. Rocks, and the remainder were pullets, some of them having been hatched in August and September of 1898. From this it may be ascertained that my "subjects" were not the best.

These fowls had been giving from five to eight eggs per day previous to my taking them over. At the middle of February I determined to see what I could make them do, and after getting them in laying condition kept count of eggs produced during March. In the thirty-one days they produced 496 eggs, a daily average of sixteen eggs. This will compare favorably with the two reports mentioned.

It is astonishing how little feed will keep hens in laying condition. They must have a variety, however. During the test the feed was as follows: For morning, a medium-sized turnip or a few small potatoes were boiled, the water drained off; then a little meal of oats and corn (ground) was mixed in—just enough to make the feed thick enough. This was given as warm as the fowls would eat it. Between that time and 4 p. m., a quart of mixed hard grain (oats, corn, barley, rye, and sunflower seeds) was scattered in litter on the floor, at which they worked continually. At 4 p. m. or 4.30 they were given one quart of whole wheat. Each day they had one medium-sized mangel as green food. They had plenty of water, grit, and a dusting-box, and these were all well used. They had what meat scraps were left from the table, which amounted to very little. Account was kept of all food given, and \$1.50 fed these fowls the whole month.

The house is 12x14. It is concrete, four inches thick, with inch boards outside. It has two small windows, one in east and one in south. During the month there was a great deal of cold, rough weather, with high, piercing winds. The fowls were allowed out every afternoon unless it was stormy.

During the month the interior of the house was refitted with nest boxes, etc. Such an act would be strongly condemned by a practical poultryman, but the action was necessary, and therefore was done. For four or five days after, the daily egg yield was not as high.

The droppings were cleaned out twice or three times each week as appeared necessary, and as a result the fowls were clean and healthy.

Throughout the month eggs were selling at from 13c. to 25c. per dozen, and would average 18c. or 20c. per dozen.

As a result of my experiment I am convinced that there is no other farm stock that will give as large profits as will poultry when given reasonable care and proper food supplied regularly. As a rule, hens are either overfed and kept too fat, or the direct opposite—starved and frozen. Had the hens in the above experiment been supplied with ground bone, oyster shells, meat, and many other things recommended by practical poultrymen, the result would have been more pleasing, no doubt. And it must be remembered that these were not of a "famous laying strain," nor of a strain famous on account of prizes won in the showing. And, besides, they were in the hands of a "greenhorn."

JOHN B. PETTIT.
Wentworth Co., Ont.

Toronto Markets.

Our report of Toronto markets was received after most of the forms of the paper had gone to press and too late to appear on the usual market page, but will be found in the Gossip columns on page 326.

Eggs to be Sold by Weight.

An act to further amend the Weights and Measures Act of Canada has been introduced in the House of Commons by Mr. John McMillan, M. P. for South Huron, which is designed to fix the weights at which eggs shall be sold. The bill reads as follows: "Unless otherwise specially agreed upon between the buyer and seller, eggs shall be sold by weight, and the weight equivalent to a dozen shall be one pound and one half."

This is the weight demanded by the British market, which is equal to 15 pounds to the "long hundred," which is ten dozens. At present, eggs are usually bought by dozens as they come to hand, and only those which are up to the demand of the British market in size are sent there, which leaves the smaller eggs to be used at home or be sent to the mining or other Canadian markets. While an act of Parliament cannot be expected to enlarge a hen's egg mould, it will, if carried out, induce poultry-keepers to do away with the hens and breeds of hens that lay small eggs, and keep only those for egg production which shell out the proper sized hen fruit. The author of the bill, referring to it in a letter to the office, said: "The bill is not intended to interfere with the sale of eggs by the farmers to the egg dealers, but to regulate the sale of eggs bought at a distance, as there is often difficulty in deciding what a standard dozen of eggs means. This bill defines the standard as between local dealers and dealers at a distance in this country, but principally in the British market."

APIARY.

June Work in the Bee Yard.

Towards the latter part of May, in order to see the work in a well-conducted apiary in operation, we visited the 200-colony bee yard of Mr. F. J. Miller, Vauxhall Apiary, London, Ont., and found the proprietor busy preparing the colonies for increase of brood, to be ready for the clover flow, which commences early in June. Mr. Miller uses the Heddon hive, the brood chamber of which consists of two cases 5½ inches deep, each case containing eight closed-end frames spaced 1½ inches from center to center, and held in position by two set screws passing through one side of the case. Mr. Miller also clips his queens, which, to some extent, influences his system of management. He wintered part of his bees in the cellar and part outdoors, and it was these latter that he was busy with when we called upon him. The winter cases, which had been packed with chaff waste from the flax mill, were all removed, and the hives were set some distance apart, back to back. The work in hand was examining the colonies, clipping the young queens, scraping the comb from the tops of the frames, and exchanging the upper case to the position of the lower. This has the effect of facilitating brood-rearing. When this is done extracting supers are put on with queen excluders beneath them. Mr. Miller prefers full combs, but when he runs short of these he uses full sheets of foundation or starters, or both alternately on the strong colonies. When one gets these latter on during fruit bloom it furnishes a good opportunity to get combs built. The bees then usually require very little attention until more room is needed, or until just before clover honey commences to come in. They are then extracted of all fruit honey in order to keep the grades separate. The weather and honey flow determines the attention that is needed from this time forward. If the weather turns cold or continuously wet, stimulative feeding is necessary, because if the bees fear a shortage of stores they will destroy the young brood and carry it out of the hive. Mr. Miller stimulated during the cold spell in May by depositing thick syrup on the bottom board. Another plan is to uncap some of the combs. When the supers become from one-half to two-thirds full, empty supers are added below the ones already on, and by the time the combs are three-quarters at least well sealed they should be extracted. This is a fair guide to follow throughout the season. If so desired, instead of extracting every time a case or super is filled more cases or supers may be added at the bottom, which will serve to allow the bees plenty of room to keep on working.

Another line of work that will require attention during June is the hiving of swarms that are sure to come off. Mr. Miller calculates upon about a 50 per cent. increase, which he gets only from the strongest colonies. Those that come off from the weaker swarms are replaced in the hive from which they came, when the old queen or the queen cell is destroyed, as preferred. As Mr. Miller's queens are clipped, she falls on the ground when a swarm emerges, and has to be hunted up and captured. This is done by using a glass tumbler with a piece of cloth attached. When the cloth is spread before her she walks up it, and the glass is placed over her. She is then placed on a hive in a shady position until the old hive is replaced by an empty one. The bees, unable to find their queen, soon commence to enter the new hive on the old stand, when the queen is liberated at the mouth of the hive, which she enters, and the remainder of swarm follows as rapidly as possible. Mr. Miller is recognized as one of our most successful beekeepers, which makes his system worthy of imitation.

GARDEN AND ORCHARD.

Standard Sizes of Fruit Packages.

A bill introduced by Mr. Penny to define the sizes of small-fruit packages was given its first reading in the House of Commons on April 13th. The object is to arrive at a standard measure of quart, pint and half-pint baskets, used in buying and selling strawberries, raspberries, blackberries, currants, and other small fruits. The bill demands that the standard quart when even full shall contain sixty-seven cubic inches. The standard quart basket shall be 5½ inches on each side at the top, and 4½ inches on each side at the bottom, and 2½ inches deep. The standard pint basket shall be oblong, and the inside measurement at the top shall be 5½ inches by 3½ inches, and at the bottom 4½ inches by 2½ inches, and it shall be 2½ inches deep. The dimensions of half-pint baskets are also defined as 3½ inches on each side at the top, and 2½ inches on each side at the bottom, by 1½ inches deep, all inside measurements. The Bill also enacts that makers of baskets of less size or capacity, shall mark the word "short" on the outside in letters not less than one-half inch in height. The penalty for selling "short" baskets of fruit not so marked will, upon summary conviction, be a fine of not less than five dollars and not more than twenty-five dollars. The act is not to come into force until May 1st, 1900.

In order to arrive at the probable effect of such an act, we interviewed a number of fruit dealers who claim that such a provision, if it can be properly carried out, will do away with much dissatisfaction to both dealers and consumers, as many of the so-called twelve-quart baskets contain not more than from ten to eleven quarts, and smaller packages in the same proportion. While the dealers interviewed could see considerable difficulty in having such a regulation carried out, they were of opinion that it is just what is needed, especially with Canadian fruit. The greatest difficulty, however, was observed in the way such regulations would affect foreign fruit, such as strawberries, of which we get great quantities during the early season, as the cases from the various States differ widely in form if not in size. It was claimed that there is little to complain of in the matter of shortage in the American cases—in fact, far less than in Canadian—but as the bill demands cases of certain dimensions, an effort to compel the use of a regular form of box in place of those of a different form now in use for the shipment of fruit from foreign countries, and which are already large enough, would be to little purpose and well-nigh impossible of enforcement without seriously interfering with the trade.

Thinning Fruit for Quality.

Every fruit-grower—in fact, every person with an observing eye, whether fruit-grower or not—has noticed while passing through any orchard at harvesting time, that on certain trees throughout the plantation there are but a few specimens of fruit, and that these are of a size out of and far exceeding the ordinary. Upon partaking of these particular specimens, it is also ascertained that the quality is far superior to that of fruit of the same variety from surrounding trees being heavily loaded, the difference being sometimes so marked that many would doubt the two being the same kind. It is quite customary for a grower on such an occasion to be very careful in the picking and packing of these few specimens, as he knows just where he "can place" them at a "big" price. Very well! Keep this in mind until later on.

Now, there is a cause for these extremely fine specimens. They are not the result of "chance," as many are too apt to say. Neither are they the consequence of extra cultivation and fertilization, nor is the pureness of the "blood" of the tree the cause, for the trees may all be budded from the same scion; but it is simply explained by the fact that the tree, on account of the lightness of its yield, is able to bring the specimens to a state of proper maturity. When we see such results come from what might be termed a process of nature's thinning, will it not be conceded by every progressive fruit-grower that all fruits would be greatly benefited if a process of artificial thinning were carried on along systematic principles?

It is a lamentable fact, however, that very few fruit-growers, men who have been in the business for years and are considered up-to-date orchardists, practice this part of the horticultural art, and often as a result of such negligence their productions have not been of the highest quality. It is the same in fruit-growing as it is in every other business,—it takes a long time for those engaged therein to get the scales lifted from their eyes along certain lines. Even when a truth is clear to all, it appears that a mere demonstration of that truth is not sufficient, but it must needs be hammered in, so to speak.

What we need in this country is fruit of high quality, and the grower that has not this end in view may as well quit the business at once, for only too soon will he find that his low-grade fruit will not command a price that will give him proper remuneration for time spent and capital expended, and that in competition with men of "get-up-and-get" he will be weighed in the balance and found more than wanting; and if he does not attend to his orchards so as to make them profitable, they will soon pass into someone's hands who probably

will. Now, I am going to try to prove that any man growing fruit, whether he has large plantations or small, can afford to spend the time to carry on this process of thinning for quality, and that it is money out of his pocket in more ways than one every time he neglects to carry on the work.

We will first deal with the immediate and direct gains, and in doing so will give the results of a couple of practical tests, for if such were not given many would say after reading this article,—“Oh yes, the theory is all right, but the practice is a far different thing.”

The first was an experiment with peaches. In 1897, when the Niagara Peninsula was glutted with peaches, and good Crawfords—specimens that would, as a rule, pass as first-class—sold as low as thirty cents per twelve-quart basket, this trial gave a splendid demonstration of what may be gained from thinning. In an orchard that gave every evidence of bringing forth an extremely heavy crop, a tree of each variety was selected appearing to have as much fruit set as any other of that kind. These trees were taken in hand and went through their successive thinnings. The result was far beyond expectations. The trees, although they were severely thinned, in every single instance not only gave a greater amount in number of baskets than those trees that were not thinned, but the fruit was of such a fine quality that it commanded a much higher price, in some instances bringing more than twice as much. In this same season a grower near the town of Grimsby thinned his whole orchard, and when the harvesting season came around his peaches were in demand and were eagerly bought up by the leading shippers of that section at from 65 cents to 80 cents per basket, while many others were glad to get sale for theirs at any price from 35 cents up. So we see that the practice is good as well as the theory, and that as a result we at any rate get larger size and in the end as great a quantity. And the size is not only increased, but the flavor is much better, the specimens become more highly colored, and, as a consequence, their market value is much enhanced.

Then another direct gain is derived from the absence of "rot." We all know how some varieties of peaches and plums are given to this disease, and in many instances the whole crop, or nearly so, is lost thereby. This could often be checked, if not entirely overcome, by a judicious thinning, if done at the proper time.

Now let us take up some of the benefits derived from the thinning process that may be termed indirect. It is only a law of nature that every time a tree overbears it weakens its vitality to an extent that the shock can never be overcome, and some trees are so persistent in bearing that they become exhausted and die when but young, and really when they should just begin to bring the grower his returns. The Lombard plum is a splendid example of such. It is an opinion held by many men that it is the nature of the Lombard, and some other varieties of fruits, to bear but once in two years. Of course every experienced fruit-grower knows that such is not the case, but the fact is that the tree is allowed to bear so much the one year that its vitality is so exhausted that it can merely live the next. The belief that the Lombard will bear but every alternate year has been exploded by experiment, for in one instance when a heavy crop was the rule, a grower stripped all his trees, leaving only enough for his own use. The next year he had a heavy crop at high prices, while his neighbors had comparatively none, their trees having exhausted themselves the previous year, with "glut" prices.

Some will say, "What is the difference to the vitality of a tree, whether it bears a bushel of fruit made up of a certain number of specimens, or a bushel made up of just half that number? The quantity is there just the same." True, but it is the production of the seed of the fruit that saps the vitality of the tree, and not the covering of the seed, and the more covering or pulp we can produce, the better for the health of the tree and our pocket-books. The production of a large crop of seed is a severe tax on the vitality of a tree, and this is the cause of a crop being produced only once in two years. The other year the tree must take to recuperate and get ready for the next.

Hence, if we keep the vital organism of a tree strong, we are going to have a healthy tree, one less subject to disease, and the benefit derived is not merely annual. An unhealthy tree is just the same as any other stock out of health,—it is an unprofitable asset.

Another way in which orchards suffer from overbearing, is the great number of limbs that are annually broken off, and in many instances trees are ruined completely. Often on entering a peach orchard we see trees of large size, and apparently in good health and vigor, loaded with such a crop that the trunk is split from top to root. These trees with proper thinning could have been made to produce just as many baskets of fruit, and of better quality and greater value, and still at the end of the season be in such a state of health and vigor as to go on bearing for years. But, instead of such being the case, they are carted to the brush heap. Thousands of trees are lost in this manner annually. Then, when trees are allowed to bear so that the limbs must of necessity be propped up, these props of every description are constantly in the way of regular and thorough cultivation, and often the trees are wrenched so out of shape that a respectable appearance is hard to be obtained thereafter.

So beneficial have been the results of experi-

ments along the line of thinning fruits, that many of the largest and most experienced growers in the United States carry it on in all their plantations. Some of them do not think of leaving peaches less than from six to eight inches apart, and in some instances even a greater distance. It has been estimated that thinning can be carried on at an expense of 2½ cents to 10 cents per tree, and at that rate would be very profitable work.

Early thinning has proved to be most beneficial and profitable. Of course, it should be left until all danger of frosts is past and loss from lack of fertilization and other natural causes is over. Plums should be thinned before the pits harden, and peaches when like small hickory nuts. The exact date for doing this work, of course, cannot be given, on account of the difference in seasons, but, as a rule, the time would be about the last of June or first week in July. At least one-half should be taken off, as far as possible discarding the smallest ones. The work should be done by hand, and done carefully.

In the above I have referred to peaches and plums. These I took as examples, but pears, apples and other fruits can be, and should be, handled in the same manner. Many varieties of grapes have a tendency to overbear. This should be overcome by cutting out small and poorly-formed clusters.

We said in the outset that the grower when he chanced to find a few beautiful specimens takes great care in picking and packing the same, for he knows where he "can place" them at a "big" price. Why not so manage our orchards that the entire crop may "be placed" at "big" prices?

When orchardists wake up to the fact that thinning is as important as pruning and cultivation, then will they be able to supply our markets with perfect fruit of a superior quality. By so doing they will increase the demand, make greater the value, the consumer will be better pleased, and the grower's remuneration will be increased greatly, and the health of his plantation promoted.

Wentworth, Co., Ont. JOHN B. PETTIT.

Destroy the Caterpillars.

For the past two or three years the tent caterpillar has made havoc of fruit trees, and ornamental trees as well, where it has been allowed to work its will. It is a sickening sight to see an orchard covered with the webs of these destroyers, which if left alone will strip the leaves off the trees and ruin the fruit crop for the year, and weaken, if not permanently injure, the tree. A little labor and a few minutes of time will suffice to keep them in check in the average orchard if attended to in proper time. Where spraying is adopted, the usual preparations for that purpose will effectively destroy them, but where spraying is not done they may be easily destroyed, either with a gloved hand (or the bare hand, for that matter) or by the use of a coal oil torch or a swab tied to a pole and dipped in a solution of one of the prepared sheep dips or diluted carbolic acid. Where there's a will there's a way, and we trust that no reader of the FARMER'S ADVOCATE will be found so careless and indifferent as to neglect the prompt and effectual discharge of this manifest duty to himself, his family, and his country. Look over the orchard the second time and finish any which may have escaped your notice or have developed later, and if any webs are seen on shade trees by the roadside or fences, dispatch them also. You will rest better and feel more happy and respectable for having done this duty.

QUESTIONS AND ANSWERS.

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

Miscellaneous.

PICKLE FOR EGGS.

C. M., Oxford Co., Ont.:—"Will you be kind enough to give me the best recipe for pickling down eggs on a large scale so that they will keep for a whole year if necessary without spoiling or becoming damaged in any way?"

[In a test of different preparations for preserving eggs, made at the Ontario Experimental Farm last year, it was found that one part water glass (sodium silicate) to twenty parts of water kept eggs perfectly for several months. Eggs taken from this preparation require to have their shells punctured with a pin before placing them in hot water in order to prevent them from cracking. This solution is only suitable for domestic use. For pickling eggs in large quantities the following is a reliable preservative: One and one-half bushels of lime (two-thirds gray and one-third white), half pound each of cream tartar, borax, alum and saltpetre. To these is added sufficient water to cover 1,000 dozens of eggs. It is thoroughly mixed, allowed to settle, and the clear liquid is used on the eggs. Another pickle largely used is 150 pounds of lime, 10 pounds of salt, and 8 pounds of saltpetre, to enough water to cover 1,000 dozens eggs. Cover the tank with cotton and spread the lime sediment over it. It is very important when putting eggs into pickle to see that all are sound in shell and newly laid, and a great advantage would be gained if all the eggs used were infertile.]

A THOROUGHLY INSULATED ICE HOUSE.

POSA, Victoria Co., Ont.:—"Can a house be built for storing ice for farmhouse use with the sawdust packed not in contact with ice, but enclosed between outer and inner walls? If so, will you, or some ADVOCATE reader who has had successful experience, kindly state what space should be between walls, size and height, etc., required to keep safely a sufficient quantity for an average farm? Would the setting of building on a low stone wall be an advantage?"

[An ice house so thoroughly insulated as not to require packing in contact with the ice can be built, but we think not cheaply enough to warrant its being done for a farm supply. The only ice house of this description we have visited is situated at Calgary in connection with the large Government creamery there. It has a capacity for about 150 tons of ice, and cost about \$800. It is built beneath the creamery, inside of stone walls, so that it is well protected from the external temperature. It also has walls about two feet thick, which have several thoroughly insulated air spaces separated by lumber, building paper and asbestos. The floor above is also insulated, so that the ice-room is practically free from the influence of the outside temperature. In the middle of August the blocks of ice were very little wasted, and the lower layers were still frozen together. There are, we believe, small ice houses constructed on the plan desired by Posa, which we would like to have described by those who are familiar with them. We believe it is always economical to set a wooden building on a low stone wall to save it from premature decay.]

BARN PLAN FOR FEEDING 300 HEAD WANTED.

JOHN WALLACE, Cartwright:—"I am building a barn to feed cattle, capacity about 200 or 300 head. Foundation will be stone, with concrete walls. I want a plan for the inside; if you have anything new, it would be esteemed a favor—anything as to stalls and watering?"

[We have recently published quite a number of modern plans, but shall be glad to furnish more information along these lines. Can any of our readers help out Mr. Wallace.—ED. F. A.]

VITALITY OF YOUNG, BORN AT DIFFERENT SEASONS.

CHAS. DOLMAGE, Huron Co., Ont.:—"It strikes me forcibly that the young of farm stock, especially the males of cattle, that are born in spring have more vitality than those born in fall. I would like the opinions of others on this subject."

[We will leave this question to be dealt with by some of our stock breeders. We have seen a great many young animals born at all seasons of the year, and cannot say that any one season was more favorable than another to the vigor of the offspring.]

MANURE SCRAPER WANTED.

A subscriber of twenty-five years' standing, living in North Dakota, inquires for a scraper that can be used in cleaning out sheds where cattle have been fed loose, in which hay and straw is mixed with the manure. The sheds in which cattle are not fed any hay he cleans out with common railroad scrapers. Can any reader help him out?

SUMMER-FALLOWING AND SEEDING DOWN.

R. W. WHITLOCK, Charlotte Co., N. B.:—"I am clearing and properly draining five acres of what has been cut off my pasture by a railroad running through, leaving this piece without water. I intend summer-fallowing, as I will not be able to get any crop in early enough to cut early enough to seed down this fall, and as I am obliged to hire all work done on it, I wish to handle it as little as possible before putting it in grass. It is mostly light clay loam with heavy clay twelve or fifteen inches below, except through the swails, where the top is the usual black earth. I have the manure from a livery stable of fifteen horses and a private stable of two horses. These two stables use large quantities of straw for litter. I have a private stable of two horses, using sawdust litter, and a butcher's stable of one cow, three horses and from ten to twenty pigs, using sawdust and straw. All of these I have by the year from last February, and have bought last winter's manure of two or three cows. To prevent this from burning, I am hauling out about every two weeks and covering it with the town street scrapings, gutter cleanings and anything of the kind I can get. I have also about twenty barrels of hardwood ashes. I can buy fish pumice at about \$11 per ton. (1) Will you tell me the best way to use what I have, or combine it with other material, to the best advantage in order to sow the field to grass and clover some time during September? Also, if this is about the right way to do? (2) Would gas lime be any benefit in this compost or in any other way as a dressing in any farming, when same can be had conveniently at 25 cents per load of any size you wish to take?"

[1. When there is only five acres of land to deal with, and a portion of that black soil, which should not require manure, we would consider the stable manure and ashes on hand will furnish an ample dressing without purchasing fish manure. We are not personally familiar with the weather conditions of the district referred to, but do not consider it would be wise to seed down with clover in September. We would suggest spreading the ashes thinly over the knolls and spreading the compost of stable cleanings and street scrapings over the field, giving the higher portions the heavier dressing, and missing the black muck portions altogether. Have this done and the field plowed about five or

six inches deep as early as possible in June. Then harrow well and leave for two or three weeks. It would be well to have the ground harrowed twice over at intervals of three weeks till September or October, and then have the field plowed about eight inches deep and left in this condition till the following spring. Then cultivate down and seed with six pounds each of timothy and clover along with a very light seeding of short-strawed oats or barley. This crop may be cut as soon as headed out for hay, or it may be allowed to ripen and harvested in the regular way. A good catch of grass and clover should be secured in this way. If considered better, the ground could be worked down in the fall after plowing and seeded to timothy. The clover would then have to be sown early in the spring, without cultivation and without a grain crop. The former way would be our choice.

2. Gas lime contains poisonous properties and requires to be exposed to the atmosphere several months before it is fit to come in contact with growing crops. An application of twenty to thirty bushels per acre applied to the black muck portions of the field would serve to correct acidity and therefore be of service. It is also useful on heavy clay to mellow it and dissolve inert plant food. The ashes will do this equally well. Neither gas lime nor ashes should be used in a compost, as they serve to liberate manurial gases.]

MARKETS.

FARM GOSSIP.

Oxford Co., Ont.

The ground has not been easy to work this spring, mainly on account of there being no rain to take the frost out. After the frost was all out of the ground it did not work up good. We have had good weather for seeding and latterly have had some fine rains, and everything green is growing, although the weather has been rather cold. During the warm, I should, perhaps, say, hot spell, at the commencement of seeding, I heard of several farmers who were not as careful of their horses as they should have been and got them overheated, and three or four died. Horses should be very carefully handled in the spring when they are soft, especially in a season like the present when the ground is so hard to work. Most of the farmers here have their ground nearly ready for planting. It would have all been finished only for the continued season of wet weather which we have had. Cows are milking fairly well, and the first half of May cheese has been sold for 83c. We are going to pay for the milk by the result of the Babcock test, with two per cent. added, and the cheesemaker says he notices a marked improvement in the quality of the milk—in putting into the hoops the last few days. Potatoes are selling at 90 cents per bag. Hogs have taken a rise again and the last delivery was made at \$4, and I understand that the price has still an upward tendency. The last load I took to the pork factory were Berkshire-Tamworth cross and averaged a little over 200 lbs. at eight months, and the man who weighed them said, "These are just exactly what we want." Horses are keeping up in price and there is a good demand for heavy horses, and even common general-purpose horses are selling fairly well.

Kent Co., Ont.

We have had a very peculiar spring. April and May seemingly reversed positions. April was fine, warm, and dry, while May has been dry and cold until this last week, when the drought broke. The severity of the past winter and dry spring ruined hundred of acres of fall wheat and clover. This has been resown to spring grain, and the remainder will probably average half a crop under favorable conditions. A large acreage of oats and barley was sown, but the weather continues so cold that all vegetation is advancing slowly. The peach-growing industry has received a terrific blow. It was only discovered when the trees began to bloom that hundreds of acres were killed. It is variously estimated that from 75 per cent. to 90 per cent. of the trees are destroyed. Blackberries, strawberries and raspberries are also more or less winter-killed. It is estimated that the damage in our fruit belt alone will total up over \$1,000,000. The potato crop was not injured by frost quite as badly as expected, consequently the price has dropped from the top notch, \$1, to 80c. and \$1 per bag, which is still a paying price. A large acreage may be looked for the coming season. Another crop which seems totally destroyed is the crop of potato bugs. Early planters state that there is an entire absence of these pests. It is supposed and hoped the intense cold has annihilated them. There will be a very small bean acreage this year; with the tendency lower. The majority are going into stock-raising more extensively. Hogs and clover, or cattle, corn and silo seems to be the coming combinations. Live hogs are 4c. per lb. Butchers' cattle are scarce and command famine prices at present. Milch cows are more plentiful and cheaper, at from \$25 to \$40 each. Butter is firm—creamery, 20c.; choice dairy, 15c. and 16c. Eggs have advanced from 10c. to 12c. per dozen. We have two firms buying for the English market, which tends to keep the price up. No satisfactory way has been found to dispose of the tobacco crop at remunerative prices. A large portion of the '98 crop is still in the growers' hands. As a result the tobacco crop will be given a wide berth by the farmers in this section. W. A. M. May 23rd.

P. E. Island.

Cold, dry weather; very little rain the last two months. No grass for stock yet; very little grain showing above ground. Farmers busy putting in crops yet; wheat mostly sown; potato planting the order now. Feed for cattle plenty. A good many stall-fed cattle not marketed yet. Beef worth from 4c. to 4 1/2c. live weight, according to quality. Oats sell at 33c.; potatoes about 40c. Heavy horses and stylish drivers are in demand, and bring from \$100 to \$120. Some cheese factories have been working through most of the month, but most of them will open about June 1st. A dairy inspector has been appointed at a salary of \$100 per month. Mr. Morrow, of Ontario, is the man. He has been making cheese here for three or four years. T. J. Dillon, our largest cheese exporter, has removed from the Island, though he will still carry on business here. He will likely locate in Nova Scotia. The prospect of a heavy clover crop is not as good as last year, as the clover crop has been killed out in some places, but we expect heavy crops of grass off last year's clover ground. An orchardist selected by the Department of Agriculture is traveling around the Island giving object lessons on grafting, spraying and pruning. Some new orchards are being planted out, and old ones are receiving greater attention. Many this spring and old ones are receiving greater attention. Many of them will be top-grafted with winter-keeping varieties. A shipment of 300 cattle was made from here last week by Benjamin Hertz to his ranch in the Northwest. Shorthorns, Herefords, and Holsteins were the kinds sent. A good many of them were thoroughbreds. W. S. May 23rd, 1899.

Central Eastern Ontario.

In many sections there has been a shortage of coarse fodders and grain for carrying stock along until pasture had made good growth. Large quantities of hay were brought in by rail from further east, selling at the reasonable figure of \$10 to \$12 per ton. At many points it is just now practically impossible to buy millfeed in any quantity. Bran is quoted at \$16 and shorts at \$18 per ton. Despite the early spring opening, seeding operations are very backward. The ground, being thoroughly filled from heavy fall rains, is absorbing the spring surface water very slowly. This is not a winter-wheat section in the proper sense of the term. The small plots seen are practically all winter-killed. With wheat at its present low figure, our farmers will sow but small areas to it this spring. With us oats or barley is a more profitable crop. It now appears as if a small acreage of corn would be planted this season; many farmers complain of the heavy work involved in handling the crop. Clover has suffered severely, as have also old grass meadows. New meadows at this early date promise remarkably well. Just now there is a very positive dearth of butchers' cattle—in fact, of fat stock of any kind. Cows which are no more useful as milk machines sell for \$40 to \$45. Of beef cattle there are practically none in the country. A change of sentiment among our dairymen is evidenced by the strong enquiry for young bulls of beef strains. Many of our farmers have decided that the dual purpose cow is the right one for existing conditions in this section. There has been an unusually high death rate among spring-farrowed pigs, reaching probably fifty per cent. Very few fat hogs are moving forward. There is not the number in the country usually found at this time of year. A few days ago the village of Winchester voted upon a by-law granting \$10,000 to a port-packing concern to be started in that town. Only seven votes were recorded against it. Near Smith's Falls a model creamery has begun operations. It is something new in the sense that the motive power is electricity supplied from one of the many falls on the Rideau. It is an ideal plant, free from the dust and dirt which are necessary evils in steam-run outfits. J. J. F. Leeds Co., May 10.

Lanark Co., Ont.

Seeding is pretty well advanced and the ground is drying fast. There has been very little rain here this spring, but grass is farther ahead than at the same time last season, although the snow was much later going away. The grass has come through the winter much safer this season than last, and the prospects for hay are much better than last year. There was very little hay here last year and a good deal of pressed hay was bought by the farmers in this section; not much, however, by those who have silos. Only for the ensilage there would have been a fodder famine here.

Most farmers in this district seem to feel that times are improving, as prices for nearly everything is in advance of last year. Butter and cheese are the principal productions for export, along with some pork. Our cheese factory began working April 17th. In the winter some sent milk to a creamery that started last fall in the nearest town, about eight miles away.

There is not a large acreage of grain grown in this county; very little for sale. The varieties of wheat grown are Fyfe and some Colorado; oats—Banner, a little Siberian lately introduced which does very well. Of peas and barley we have quite a few varieties. The principal kinds of corn are: Compton's Early, Longfellow and North Dakota for flint varieties; Leaning and Yellow Dent for dent corns. I feel as though I could not get along right without your paper. I think it would be an improvement if advertisers of stock would give the name of their county as well as their post office, as the whereabouts of the post offices is not known by everybody. R. J. Lanark Co., Ont., May 9th.

Chatty Stock Letter from Chicago.

FROM OUR OWN CORRESPONDENT.

Following table shows current and comparative live stock prices:

	Extreme prices now.	Top Prices	
		Two weeks ago.	1898
Beef cattle.			
1500 lbs. up.....	\$4 90 to \$5 65	\$5 35	\$5 15
1350 to 1500 lbs.....	4 65 " 5 55	5 50	5 15
1200 to 1350 lbs.....	4 45 " 5 40	5 35	5 05
1050 to 1200 lbs.....	4 30 " 5 20	5 25	4 90
900 to 1050 lbs.....	4 10 " 5 10	5 00	4 85
Hogs.			
Mixed.....	3 60 " 3 95	3 97 1/2	4 70
Heavy.....	3 50 " 4 00	4 05	4 80
Light.....	3 60 " 3 90	3 95	4 65
Pigs.....	3 25 " 3 80	3 80	4 35
Sheep.			
Natives.....	4 00 " 5 60	5 55	4 50
Western.....	4 60 " 5 50	5 20	4 30
Yearlings.....	5 20 " 5 85	5 25	4 50
Lambs.....	4 50 " 7 00	6 20	5 45

The fat cattle market seems to be governed just now by an undertone of strength that is likely soon to develop into much higher prices. Comparatively liberal receipts have lately been taken in a way that showed very clearly that the demand is broadening and strengthening. The exporters have been doing good business, and the domestic meat business has shown considerable sign of improvement.

"When buyers get a taste of how the grass cattle kill a little later," said a cattleman, "they will be anxious to get the good-weight corn-fed cattle, such as have been comparatively neglected of late."

There is a general impression that good dry lot cattle are going to be comparatively scarce and higher priced this summer, though there are still many sections where large lots of cattle are still being held. The marketing of small bunches has been largely finished.

The cow supply was very small lately, and there is no prospect of an increase soon. One of the most extensive buyers declares that cow beef is costing them about as much as good steer beef.

Raising high-grade calves and marketing heaves as yearlings pays better (so Mr. J. S. Robinson, of Neponset, Ill., thinks) than buying feeding cattle at high prices or raising corn to sell. He marketed some 1,242-lb. yearling high-grade Galloways in March at \$5.50. He expects to put about twenty light heifers on pasture with his Galloway bull. J. S. is an advocate of feeders raising their own calves.

J. H. Artz, Wilsonville, Neb., one of western Nebraska's successful feeders, was in with 22 cars of stock, 18 cars of cattle and four cars of hogs. Three hundred cattle sold at \$5.25, averaging 1,332 lbs.

Hogs are so much lower than a year ago that the packers are having a harvest. Of course, they are protesting that prices are high in comparison with the product, but they are taking hold just as if they needed all the hogs that are coming, and more too.

The packers keep calling for more light-weight, bacon style of hogs, but they continue to pay a premium for the heavy-weights, and as long as they do so they need not expect the farmers not to market their corn in large packages at the hog market.

Lambs are the highest in a long time. Colorado lamb feeders who have shipped to Chicago are feeling very optimistic these days. Returns at present are very gratifying. W. A. Drake's shipments for three days recently show net results that were surprisingly good. There were six carloads (1,634 head), which netted \$8,634.00, or \$5.28 per head. Mr. Drake thinks this is about the best showing ever made by Colorado-fed lambs.



AN AFRICAN MILLIONAIRE.

EPISODES IN THE LIFE OF THE ILLUSTRIOUS COLONEL CLAY.

BY GRANT ALLEN.

(Continued from page 294.)

"Quite right," Sir Charles murmured. "Two days later a lady, Madame Picardet, who was a customer of ours, brought in a good cheque for three hundred pounds, signed by a first-rate name, and asked us to pay it in on her behalf to Darby, Drummond, and Rothenberg's, and to open a London account with them for her. We did so, and received in reply a cheque-book."

"From which this cheque was taken, as I learn from the number, by telegram from London," the Commissary put in. "Also, that on the same day on which your cheque was cashed, Madame Picardet, in London, withdrew her balance."

"But how did the fellow get me to sign the cheque?" Sir Charles cried. "How did he manage the card-trick?"

The Commissary produced a similar card from his pocket. "Was that the sort of thing?" he asked.

"Precisely! A facsimile."

"I thought so. Well, our Colonel, I find, bought a packet of such cards, intended for admission to a religious function, at a shop in the Quai Massena. He cut out the center, and see here—"

The Commissary turned it over and showed a piece of paper pasted neatly over the back; this he tore off, and there, concealed behind it, lay a folded cheque, with only the place where the signature should be written showing through on the face which the Seer had presented to us. "I call that a neat trick," the Commissary remarked, with professional enjoyment of a really good deception.

"But he burnt the envelope before my eyes," Sir Charles exclaimed.

"Pooh!" the Commissary answered. "What would he be worth as a conjurer, anyway, if he couldn't substitute one envelope for another between the table and the fireplace without your noticing it? And Colonel Clay, you must remember, is a prince among conjurers."

"Well, it's a comfort to know we've identified our man, and the woman who was with him," Sir Charles said, with a slight sigh of relief. "The next thing will be, of course, you'll follow them up on these clues in England and arrest them?"

The Commissary shrugged his shoulders. "Arrest them!" he exclaimed, much amused. "Ah, monsieur, but you are sanguine! No officer of justice has ever succeeded in arresting le Colonel Caoutchouc, as we call him in French. On the day when I arrest him, I assure you, monsieur, I shall consider myself the smartest police officer in Europe."

"Well, I shall catch him yet," Sir Charles answered, and relapsed into silence.

II.

THE EPISODE OF THE DIAMOND LINKS.

"Let us take a trip to Switzerland," said Lady Vandrift. And anyone who knows Amelia will not be surprised to learn that we did take a trip to Switzerland accordingly. Nobody can drive Sir Charles, except his wife. And nobody at all can drive Amelia.

There were difficulties at the outset, because we had not ordered rooms at the hotels beforehand, and it was well on in the season; but they were overcome at last by the usual application of a golden key, and we found ourselves in due time pleasantly quartered in Lucerne, at that most comfortable of European hostleries, the Schweizerhof.

As usual, at the hotel a great many miscellaneous people showed a burning desire to be specially nice to us. If you wish to see how friendly and charming humanity is, just try being a well-known millionaire for a week, and you'll learn a thing or two.

Ever since our little adventure with the Seer at Nice, Sir Charles, who is constitutionally cautious, had been even more careful than usual about possible sharpers. And, as chance would have it, there sat just opposite us at table d'hôte at the Schweizerhof (tis a fad of Amelia's to dine at table d'hôte; she says she can't bear to be boxed up all day in private rooms with "too much family" and a sinister-looking man with dark hair and eyes, conspicuous by his bushy, overhanging eyebrows. My attention was first called to the eyebrows in question by a nice little person who sat at our side, and who observed that they were made up of certain large and bristly hairs, which, he told us, had been traced by Darwin to our monkey ancestors. Very pleasant little fellow, this fresh-faced young parson, on his honeymoon tour with a nice wee wife, a bonny Scotch lassie with a charming accent.

I looked at the eyebrows close. Then a sudden thought struck me. "Do you believe they're his own?" I asked of the curate; "or are they only stuck on—a make-up disguise? They really almost look like it."

"You don't suppose—" Charles began, and checked himself suddenly.

"Yes, I do," I answered; "the Seer!" Then I recollected my blunder, and looked down sheepishly. For, to say the truth, Vandrift had straightly enjoined on me long before to say nothing of our painful little episode at Nice to Amelia; he was afraid if she once heard of it, he would hear of it for ever after.

"What Seer?" the little parson inquired, with parsonical curiosity.

I noticed the man with the overhanging eyebrows give a queer sort of start. Charles' glance was fixed upon me. I hardly knew what to answer.

"Oh, a man who was at Nice with us last year," I stammered out, trying hard to look unconcerned. "A fellow they talked about, that's all." And I turned the subject.

But the curate, like a donkey, wouldn't let me turn it. "Had he eyebrows like that?" he inquired, in an undertone. I was really angry. If this was Colonel Clay, the curate was obviously giving him the cue, and making it much more difficult for us to catch him, now we might possibly have lighted on the chance of doing so.

"No, he hadn't," I answered testily; "it was a passing expression. But this is not the man. I was mistaken, no doubt." And I nudged him gently.

The little curate was too innocent for anything. "Oh, I see," he replied, nodding hard and looking wise. Then he turned to his wife and made an obvious face, which the man with the eyebrows couldn't fail to notice.

Fortunately, a political discussion going on a few places farther down the table spread up to us and diverted attention for a moment. The magical name of Gladstone saved us. Sir Charles flared up. I was truly pleased, for I could see Amelia was boiling over with curiosity by this time.

After dinner, in the billiard-room, however, the man with the big eyebrows sidled up and began to talk to me. If he was

Colonel Clay, it was evident he bore us no grudge at all for the five thousand pounds he had done us out of. On the contrary, he seemed quite prepared to do us out of five thousand more when opportunity offered, for he introduced himself at once as Dr. Hector Macpherson, the exclusive grantee on the Upper Amazon concessions from the Brazil Government on the silver, the platinum, the actual rubies, the possible diamonds. If he knew of anybody, now, with money to invest, he could recommend him—nay, offer him—a unique opportunity of earning, say, 40 per cent. on his capital, on unimpeachable security.

The little curate, meanwhile, was playing billiards with Sir Charles. His glance followed mine as it rested for a moment on the monkey-like hairs.

"False, obviously false," he remarked with his lips; and I'm bound to confess I never saw any man speak so well by movement alone. You could follow every word, though not a sound escaped him.

During the rest of that evening Dr. Hector Macpherson stuck to me as close as a mustard plaster.

For the next three days, at intervals, he returned to the charge. He bored me to death with his platinum and his rubies. I listened and smiled, listened and yawned; I listened and was rude; I ceased to listen at all; but still he dived on with it. I fell asleep on the steamer one day, and woke up in ten minutes to hear him droning yet, "And the yield of platinum per ton was certified to be—" I forget how many pounds, or ounces, or pennyweights. These details of assays have ceased to interest me: like the man who "didn't believe in ghosts," I have seen too many of them.

The fresh-faced little curate and his wife, however, were quite different people. He was a cricketer Oxford man; she was a breezy Scotch lass, with a wholesome breath of the Highlands about her. I called her "White Heather." Their name was Brabazon. Millionaires are so accustomed to being beset by harpies of every description that when they come across a young couple who are simple and natural they delight in the purely human relation. We picnicked and went excursions a great deal with the honeymoons. They were so frank in their young love, and so proof against chaff, that we all really liked them.

The man with the fellow, that man Brabazon," Sir Charles said to me one day, as we lounged together along the quay; "never talks about advosons or next presentations. Doesn't seem to me to care two pins about promotion. Says he's quite content in his country curacy; enough to live upon, and needs no more; and his wife has a little, a very little, money. I asked him about his poor to-day, on purpose to test him—these parsons are always trying to screw something out of one for their poor. Men in my position know the truth of the saying that we are all that class of the population always with us. Would you believe it, he says he hasn't any poor at all in his parish! They're all well-to-do farmers or else able-bodied laborers, and his one terror is that somebody will come and try to pauperize them. There's a parson for you, Sey, my boy. Only wish we had one of his sort at Seldon."

"He certainly doesn't want to get anything out of you," I answered.

That evening at dinner a queer little episode happened. The man with the eyebrows began talking to me across the table in his usual fashion, full of his wearisome concession on the Upper Amazon. I was trying to squash him as politely as possible when I caught Amelia's eye. Her look amused me. She was engaged in making signals to Charles at her side to observe the little curate's curious sleeve links. They consisted each of a short gold bar for one arm of the link, fastened by a tiny chain of the same material to what seemed to my tolerably experienced eye a first-rate diamond. Pretty big diamonds, too, as you may well imagine, and brilliant, and cutting. In a moment I knew what Amelia meant. She owned a diamond riviere, said to be of Indian origin, but she owned a stone for the circumference of her tolerably ample neck. Now, she had long been wanting two diamonds like these to match her set, but owing to the unusual shape and antiquated cutting of her own gems she had never been able to complete the necklet, at least without removing an extravagant amount from a much larger stone of the first water.

The Scotch lassie's eyes caught Amelia's at the same time, and she broke into a pretty smile of good-humored amusement. "Taken in another person, Dick, dear!" she exclaimed, in her breezy way, turning to her husband. "Lady Vandrift is observing your diamond sleeve links."

"They're very fine gems," Amelia observed, incautiously. (A most unwise admission if she desired to buy them.)

But the pleasant little curate was too transparently simple a soul to take advantage of her slip of judgment. "They are good stones," he replied; "very good stones—considering. They're not diamonds at all, to tell you the truth. They're best old-fashioned Oriental paste. My great-grandfather bought them, after the siege of Seringapatam, for a few rupees from a Sepoy who had looted them from Tipoo Sultan's palace. He thought, like you, he had got a good thing. But it turned out, when they came to be examined by experts, they were only paste—very wonderful paste. It is supposed they had even imposed upon Tipoo himself, so fine is the imitation. But the stones, he really said, say withy shillings, at the utmost."

While he spoke Charles looked at Amelia, and Amelia looked at Charles. Their eyes spoke volumes. The riviere was also supposed to have come from Tipoo's collection. Both drew at once an identical conclusion. These were two of the same stones, very likely torn apart and disengaged from the rest in the melee at the capture of the Indian palace.

"Can you take them off?" Sir Charles asked blandly. He spoke in the tone that indicates business.

The Scotch lassie, the little curate, answered, smiling. "I'm accustomed to taking them off. The riviere's always noticed. They've been kept in the family ever since the siege of a sort of valueless heirloom, for the sake of the picturesqueness of the story, you know; and nobody ever sees them without asking, as you do, to examine them closely. They deceive even experts at first. But they're, paste, all the same; unmitigated Oriental paste, for all that."

He took them both off, and handed them to Charles. No man in England is a finer judge of gems than my brother-in-law. I watched him narrowly. He examined them close, first with the naked eye, then with the little pocket lens which he always carries. "Admirable imitation," he muttered, passing them on to Amelia. "I'm not surprised they should impose upon inexperienced observers."

But from the tone in which he said it I could see at once he had satisfied himself they were real gems of unusual value. The Scotch lassie laughed a merry laugh. "He sees would be a judge of diamonds," she cried. "I felt sure Sir Charles

They were beautiful diamonds. We found out afterwards the little curate's account was quite correct; these stones had come from the same necklet as Amelia's riviere, made for a favorite wife of Tipoo's, who had presumably as expansive personal charms as our beloved sister-in-law's. More perfect diamonds have seldom been seen. They have excited the universal admiration of thieves and connoisseurs. Amelia told me afterwards that, according to legend, a Sepoy stole the necklet at the sack of the palace, and then fought with another for it. It was believed that two stones got split in the scuffle, and were picked up and sold by a third person—a looker-on—who had no idea of the value of his booty. Amelia had been hunting for them for several years to complete her necklet.

"They are excellent paste," Sir Charles observed, handing them back. "It takes a first-rate judge to detect them from the reality. Lady Vandrift has a necklet much the same in character, but composed of genuine stones; and as these are so much like them, and would complete her set, to all outer appearance, I wouldn't mind giving you say £10 for the pair of them."

Mrs. Brabazon looked delighted. "Oh, sell them to him, Dick," she cried, "and buy me a brooch with the money! A pair of common links would do for you just as well. Ten pounds for two paste stones! It's quite a lot of money."

She said it so sweetly, with her pretty Scotch accent, that I

couldn't imagine how Dick had the heart to refuse her. But he did, all the same.

"No, Jess, darling," he answered. "They're worthless, I know, but they have for me a certain sentimental value, as I've often told you. My dear mother wore them, while she lived, as earrings, and as soon as she died I had them set as links, in order that I might always keep them about me. Besides, they have historical and family interest. Even a worthless heirloom, after all, is an heirloom."

Dr. Hector Macpherson looked across and intervened. "There is a part of my concession," he said, "where we have reason to believe a perfect new Kimberley will soon be discovered. If at any time you would care, Sir Charles, to look at my diamonds—when I get them—it would afford me the greatest pleasure in life to submit them to your consideration."

Sir Charles could stand it no longer. "Sir," he said, gazing across at him with his sternest air, "if your concessions were as full of diamonds as Sindbad the Sailor's valley, I would not care to turn my head to look at them. I am acquainted with the nature and practice of salting." And he glared at the man with the overhanging eyebrows as if he would devour him raw.

Who we went up to our salon that evening, Amelia flung herself on the sofa. "Charles," she broke out, in the voice of a tragedy queen, "those are real diamonds, and I shall never be happy again till I get them."

"They are real diamonds," Charles echoed. "And you shall have them, Amelia. They're worth not less than three thousand pounds. But I shall bid them up gently."

So, next day, Charles set to work to higgie with the curate. Brabazon, however, didn't care to part with them. He was no money-grubber, he said. He cared more for his mother's gift and a family tradition than for a hundred pounds, if Sir Charles were to offer it. Charles' eye gleamed. "But if I give you two hundred!" he said insinuatingly. "What opportunities for good! You could build a new wing to your village schoolhouse!"

"We have ample accommodation," the curate answered. "No, I don't think I'll sell them."

Still, his voice faltered somewhat, and he looked down at them inquiringly.

Charles was too precipitate. "A hundred pounds more or less matters little to me," he said; "and my wife has set her heart on them. It's every man's duty to please his wife, isn't it, Mrs. Brabazon? I offer you three hundred."

The little Scotch girl clasped her hands. "Three hundred pounds! Oh, Dick, just think what fun we could have, and what good we could do with it! Do let him have them."

Her accent was irresistible. But the curate shook his head. "Impossible," he answered. "My dear mother's earrings! Uncle Aubrey would be so angry if he knew I'd sold them. I daren't face Uncle Aubrey."

"Has he expectations from Uncle Aubrey?" Sir Charles asked of White Heather.

Mrs. Brabazon laughed. "Uncle Aubrey! Oh, dear, no. Poor dear old Uncle Aubrey! Why, the darling old soul hasn't a penny to bless himself with, except his pension. He's a retired post captain." And she laughed melodiously. She was a charming woman.

"Then I should disregard Uncle Aubrey's feelings," Sir Charles said decisively.

"No, no," the curate answered. "Poor dear old Uncle Aubrey! I wouldn't do anything for the world to annoy him. And he'd be sure to notice it."

We went back to Amelia. "Well, have you got them?" she asked.

"No," Sir Charles answered, "not yet. But he's coming round, I think. He's hesitating now. Would rather like to sell them himself, but is afraid what 'Uncle Aubrey' would say about the matter. His wife will talk him out of his needless consideration for Uncle Aubrey's feelings; and to-morrow we'll finally clench the bargain."

Next morning we stayed late in our salon, where we always breakfasted, and did not come down to the public rooms till just before déjeuner, Sir Charles being busy with me over arrears of correspondence. When we did come down the concierge stepped forward with a twisted little feminine note for Amelia. She took it and read it. Her countenance fell. "There, Charles," she cried, handing it to him, "you've let off the chance slip. I shall never be happy now! They've gone with the diamonds."

Charles seized the note and read it. Then he passed it on to me. It was short, but final:

"Thursday, 6 a. m.

"DEAR LADY VANDRIFT.—Will you kindly excuse our having gone off hurriedly without bidding you good-bye? We have just had a horrid telegram to say that Dick's favorite sister is dangerously ill of fever in Paris. I wanted to shake hands with you before we left—you have all been so sweet to us—but we go by the morning train, absurdly early, and I wouldn't for worlds disturb you. Perhaps some day we may meet again, though, buried as we are in a North Country village, it isn't likely;—but in any case you have secured the grateful recollection of— Yours very cordially,—

JESSIE BRABAZON.

"P. S.—Kindest regards to Sir Charles and those dear wentworths, and a kiss for yourself, if I may venture to send you one."

"She doesn't even mention where they've gone," Amelia exclaimed, in a very bad humor.

"The concierge may know," Isabel suggested, looking over my shoulder.

We asked at his office.

Yes, the gentleman's address was the Rev. Richard Peplow Brabazon, Holme Bush Cottage, Empingham, Northamptonshire.

Any address where letters might be sent at once, in Paris! For the next ten days, or till further notice, Hotel des Deux Mondes, Avenue de l'Opera.

Amelia's mind was made up at once.

"Strike while the iron's hot," she cried. "This sudden illness, coming at the end of their honeymoon, and involving ten days' more stay at an expensive hotel, will probably upset the curate's budget. He'll be glad to sell now. You'll get them for three hundred. It was absurd of Charles to offer so much at first; but, offered once, of course we must stick to it."

"What do you propose to do?" Charles asked. "Write, or telegraph?"

"Oh, how silly men are!" Amelia cried. "Is this the sort of business to be arranged by letter, still less by telegram! Paris; and the moment he gets there he must interview the curate or Mrs. Brabazon. Mrs. Brabazon's the best. She has none of this stupid, sentimental nonsense about Uncle Aubrey."

So the self-same evening saw me safe in the train on my way to Paris; and next morning I turned out of my comfortable sleeping-car at the Gare de Strasbourg. My orders were to bring back those diamonds—alive or dead, so to speak—in my pocket to Lucerne; and to offer any needful sum, up to two thousand five hundred pounds, for their immediate purchase.

When I arrived at the Deux Mondes I found the poor little curate and his wife both greatly agitated. They had sat up all night, they said, with their invalid sister; and the sleeplessness and suspense had certainly told upon them after their long railway journey. They were pale and tired, Mrs. Brabazon, in particular, looking ill and worried—too much like them about the diamonds at such a moment, but it occurred to me that Amelia was probably right—they would now have reached the end of the sum set apart for their Continental trip, and a little ready cash might be far from unwelcome.

[TO BE CONTINUED.]



Her Awful Dream.

EXAMINATION.

A little maid of tender years
Had such an awful dream!
She came to me almost in tears—
"I just was going to scream

"When both my eyes came open wide,
And oh, I was so glad
To find it was a dream," she cried,
"Because it was so bad!"

"What could it be, poor child?" I said:
"Were you pursued by bears?
Perhaps your dolly broke her head,
Or did you fall downstairs?"

"Oh dear! It's most too bad to tell!
You know in school our class
Are havin' zamination. Well,
I dreamt I didn't pass!"

Jack.

Jack was cross, and nothing pleased him. After giving him the choicest morsels for his breakfast, and providing for his wants with tender care, while he did nothing but fret and complain, his mother finally said:

"Jack, I want you now to go right up to your room and put on every garment wrong side out."

Jack stared. He thought his mother must be out of her wits.

"I mean it, Jack," she repeated. And she did mean it. Jack had to mind. He had to turn his stockings even; and when his mother came to him there he stood—a forlorn and funny-looking boy, all lining and seams and raveling—before the glass, wondering what his mother meant, but not quite clear in his conscience.

"Now this," said the mother, turning him round, "is what you have been doing all day. You have been determined to make the worst of everything. In other words, you would turn everything wrong side out. Do you really like your things this way so much, Jack?"

"No, mamma," answered Jack, shamefaced. "Can't I turn them right?"

"You may, if you will remember this: There is a right and a wrong side to whatever happens—I mean a pleasant part and a part you do not like as well, and you must do as you prefer to with your clothes, wear them right side out. Do not be so foolish any more, little man, as to persist in turning things wrong side out."

A True Story in Rhyme.

"Where is the baby, grandma?"
The sweet young mother calls
From her work in the cosy kitchen,
With its dainty, whitewashed walls.
And grandma leaves her knitting
And looks for her all around,
But not a trace of a baby dear
Can anywhere be found.

No sound of its merry prattle,
No gleam of its sunny hair,
No patter of tiny footsteps,
No sign of it any where.
All through the house and garden,
Far out into the field,
They search every nook and corner,
But nothing is revealed.

And the mother's face grew pallid,
Grandmamma's eyes grew dim;
The father's gone to the village—
No use to look for him.
And the baby's lost! "Where's Rover?"
The mother chanced to think
Of the old well in the orchard,
Where the cattle used to drink.

"Where's Rover? I know he'd find her."
"Rover!" In vain they call.
Then hurry away to the orchard,
And there, by the moss-grown wall,
Close to the wall lies Rover,
Holding to baby's dress,
Who was leaning over the well's edge
In perfect fearlessness.

She stretched her tiny arms down,
But Rover held her fast,
And never seemed to mind the kicks
The tiny bare feet cast
So spitefully upon him,
But wagged his tail instead
To greet the frightened searchers,
While naughty baby said:

"Here's a little dirl in the water—
She's dust as big as me;
Mamma, I want to help her out
And take her home to tea;
But Rover, he won't let me,
And I don't love him. Go
Away, you naughty Rover—
Oh, why are you crying so?"

The mother kissed her, saying,
"My darling, understand,
Good Rover saved your life, my dear,
And, see! He licks your hand!
Kiss Rover!" The baby struck him,
But grandma understood;
She said, "It's hard to thank the friend
Who thwarts us for our good."

The results of the "Motto Competition" will be announced in our next issue. Some of the competitors have neglected to observe the rule about sending in a certificate of age. This rule will be strictly kept.

Cousin DOROTHY.

A few drops of camphor put into the water when bathing the face will prevent the skin from shining.

UNCLE TOM'S DEPARTMENT.

MY DEAR NEPHEWS AND NIECES,—

The present day is noted for its wonderful inventions, many of which are meant to be time-savers, or, as the old saw goes, they are intended to enable us to "take Time by the forelock." That sly, old fellow, however, is very wary, and it appears as though he had doubled his pace in order to elude his pursuers, for albeit it seems but a few days since we heard the gladsome chiming of the Christmas bells, we find Time's shadow on the dial of '99 almost at the noon mark. But we shall not murmur at his rapid flight so long as he brings us such delights as come to all in this fair month when

"Spring scarce has gotten out of sight,
And not a stain of wear shows on the grass
Beneath our feet, and not a dead leaf calls
Our day of loveliness is past and gone!"

O obeying the behest of that nature-worshipper, Longfellow, I recently took a ramble through the woods. How delightfully refreshing everything was! The soft green ferns tossed out their fairy tresses, the snowy trilliums raised their graceful heads, and even the timid violets held up their sweet, shy faces and seemed to revel in the health-giving odors of balsam and pine, which mingled pleasantly with the perfume of lilacs and honeysuckle, wafted thither from the gardens near by.

The trees with their new verdure attracted myriads of honey-seeking bees, whose soft, monotonous hum but relieved the merry melody of the lively songsters. A very sacredness fell o'er everything, all discord seemed to vanish far from life, and peace, fair peace, held undisputed sway.

Surely his blood must run but sluggishly who does not at such a time, in such a place, feel purer and better, whose heart heaves not with new and noble aspirations, and who does not offer a tribute of gratitude and praise to the omnipotent Creator of all this beauty. What a kind old teacher Nature is, never upbraiding our density of comprehension, but ever holding out to us her marvelous secrets and sweetly inviting us to make ourselves master of them. Her silent admonitions often bear more weight than many a sermon delivered from other pulpits, and we cannot choose but hear, so gentle is her pleading. The manner in which she blends verdure and barrenness, frowning cliffs and fertile



"GETTING BETTER."

"Getting Better."

This picture of a humble home scene would be very sad were it not that the dear little invalid is evidently convalescent and now able to take delight in the dolly being tenderly handed to her by her father. What sadness and what joy comes to us through the little children!

There are few families who have not been through scenes like this, and often, alas! must bear the unutterable pain of parting with their heart's sunshine, but then there is that brighter side when hope revives as we are gently told the little one is out of danger.

There is something very natural in this whole scene of a simple home and working people.

That little chap sitting at the foot of the couch looks rather forlorn, for father and mother are naturally occupied with the sick child. Of course he's glad, in his small way, that sis is better, but he almost wishes he could be sick too and get a lot of attention. Well, he is solacing himself with an apple, and sis will soon be well enough for even a game of romps.

All our readers will recollect that beautiful and pathetic picture, "The Doctor," which appeared in our pages, and cannot fail to realize the difference between the tense anxiety of that scene and the hopefulness of this one.

Housework, sweeping, dusting and the other innumerable duties necessary to keep things in order about a house, are beneficial to the general health as well as excellence for the complexion.

valleys, into one harmonious whole, shows us how we too may blend our joys and sorrows, making discord serve, like the bleak rock, but as a relief to throw out more gloriously the surrounding beauty and making of our hearts—

"Instruments whose strings
Steal nobler music from life's many frets."

The observant eye cannot fail to notice the exactness with which each minute part of nature's great whole is executed. The tiniest frond of fern or stem of moss, and the most insignificant floweret that peeps from the grass along our way, is equally perfect as the giant oaks and pines that tower in the forest, and thus again speaks our teacher: "Be always faithful in little things, and you will never fail to do the greater well." And as we wonderingly ponder o'er the wisdom she displays, these lines from Cowper come to our minds:

"Nature is but the name for an effect,
Whose cause is God."

But see, I have fallen into a reverie from which I am pleasantly aroused by the contagious laughter of two of my bright-eyed nieces. The spell of June's fair beauty has not yet left me, for still my mind is filled with poetic fragments, and I ask, with Mrs. Blewett:

"I wonder if the day will ever come
When we will be so old, so old and dull,
That we will listen to yet never heed
The sweetest sound of all the sounds that ring
Out through this world's big aisles—the rippling laugh
Which comes from red young lips, comes straight from some
Rich storehouse in the breast, a storehouse filled
With gladness great, and hope, and all things good?"

As a fresh burst of merriment falls on my ear, I breathe a prayer that such a fate may never come to—
Your loving, UNCLE TOM.

Joke Contest.

The prizes offered in this contest have been awarded to "Brier-rose," Cannamore P. O., Ont.; "Juno," King's Co., Nova Scotia; and G. J. McCormac, St. George's, P. E. I. The prizes are all of equal value. A great number of very good selections were sent in, some of which we shall publish later. Contributions were received from the following: "Free and Easy," Jesse A. Witmer, Archie Evans, "Rover," Fred Conner, Mary E. Forsythe, Bessie A. Forsythe, Lizzie Conner, Larkspur, "Dorcas," W. R. Woodland, "Dot," "McGinty," Ruth E. R. Ford, "Shirley," "Karl," "Plowboy." Those who did not gain a prize need not feel discouraged. There was very little difference in the merits of many of them, but we had only three prizes, so some had to be disappointed. I hope you will all find fun enough in reading them to repay you for the trouble of writing them.

UNCLE TOM.

CONTRIBUTED BY "BRIER-ROSE," CANNAMORE P. O., ONT.

I.
ONE MORE THAN HE THOUGHT.

Those who have first gazed in dismay and then laughter at their own distorted reflections in a concave mirror will appreciate an amusing occurrence lately witnessed at a menagerie. Here and there between the cages were placed trick mirrors, which reflected a distorted image. An Irishman, after a critical survey of the monkeys, had wandered away from his better half, and suddenly found himself in front of one of these mirrors. After a glance at his distorted reflection he rushed back to his wife, who was still watching the antics of the monkeys. "Come away wid ye, Bridget," he exclaimed. "O've found a bigger treat than that—the ugliest beast in the show! He's in a little cage in the corner." Bridget followed her husband's lead, and he dragged her in front of the "little cage." To his astonishment, there was more in the "cage" than he expected. "Begorra, Bridget," he exclaimed, "there's a pair av 'em!"

II.

LORDLY ARAB.

Prof. John Stuart Blackie used to form a very picturesque feature in the Edinburgh streets. He was a wiry old patriarch, with handsome features and hair falling in ringlets about his shoulders. No one who had seen him could possibly forget him.

One day he was accosted by a very dirty little bootblack with his "Shine your boots, sir!" The professor was impressed by the filthiness of the boy's face. "I don't want a shine, my lad," said he, "but if you'll go and wash your face I'll give you sixpence."

"A' richt, sir," was the lad's reply. Then he went over to a neighboring fountain and made his ablutions. Returning, he held out his hands for the money. "Well, my lad," said the professor, "you have earned your sixpence. Here it is."

"I dinna want it, auld chap," returned the boy, with a lordly air. "Ye can keep it and get yer hair cut!"

III.

UNEXPECTED.

It was told some years ago of a Southern youth that one morning, after completing a somewhat protracted toilet, he turned to a servant and enquired, "How do I look, Caesar?"

"Plendid, massa, plendid," was the ready answer. "Do you think I'll do, Caesar?" he asked, surveying himself and giving Caesar a quarter.

"Guy! massa, neber see you look so fierce in all my life! You look jis as bold as a lion!"

"A lion! What do you know about a lion? You never saw one, Caesar."

"Neber see a lion, massa? Guy! I see Massa Peyton's Jim ride one ober de mill ebry day."

"Why, you fool, that's a donkey!"

"Can't help dat, massa," said Caesar, "you look jis like him!"

CONTRIBUTED BY "JUNO," KING'S CO., NOVA SCOTIA.

I.

YELLER CLAY.

Here is the first recorded instance of a hotel clerk being "sat on."

He said there was one small vacant room on the fifth floor. Bill Nye said that would do.

Still suspicious, he said the elevator wasn't running. Nye said he didn't care for that. He could climb.

The clerk had one more show to turn him out. He sprang it: "You have to pay in advance," he said.

Nye said that was all right, and was told in reply to his question that the tariff would be \$2.50.

Nye reached for a roll and threw out a \$100 bill. The clerk stammered, seeing that he had made the mistake so often fatal in this country, then said he had no change.

Nye pulled back the \$100 bill and threw out a \$50.

The clerk managed to break that one, and as he did so the lines of good nature expanded all over his face and tickled the roots of his hair. He had been entertaining an angel unawares.

Nye gazed at this auroral display of humor on the clerk's face and said:

"You remind me of Clay."

The display of vanity and good-nature on the clerk's front would have been worth a good price as an attraction in the window just then.

"Indeed," he said, "Henry Clay?"

"No," replied Nye, "just the common everyday mean yeller clay out of which they make bowls and platters in a country pottery."

And then he sought his couch.

II.

BREAKING IT GENTLY.

Young wife—"My dear, you were the stroke oar at college, weren't you?"

Young husband—"Yes, love."

"And a very prominent member of the gymnastic class?"

"I was the leader."

"And quite a hand at all athletic exercises?"

"Quite a hand! My gracious! I was the champion walker, the best runner, the head man at lifting heavy weights, and as for carrying, why, I could shoulder a barrel of flour and—"

"Well, love, just please carry the baby a couple of hours, I'm tired."

III.

MEETS HIS WATERLOO.

The champion liar among the train hands noticed the green-looking countryman boarding the train. "Now for fun," he said.

First he told of putting pneumatic tires on freight cars. Then he switched off to patent car couplers that allowed the string of cars. Then he told other yarns, and had just concluded a story of a man falling from the top of a six-story building and alighting on the pavement below without injury, when the country fellow seemed to become quite interested.

"That reminds me of a steeple-painter at work on the Methodist church down my way. He had rubber boots on so he wouldn't slip, but just as he got to the top didn't he lose his grip, and down he came, cheralop! It didn't kill him, but he liked t' starve t' death."

"Starve to death! How was that?" said the champion liar.

"Why, he struck on his feet," replied the countryman, "an' kep' bouncin' up an' down for three days before we could stop him, an' we had t' chuck biscuits at him t' keep him from starving."

The champion liar took a lantern and crawled up on top of the train, and did not get down until the train had stopped at Ottumora and the farmer was gone.

CONTRIBUTED BY G. J. MCCORMAC, ST. GEORGE'S, P. E. I.

I.

THE PASTOR'S NARROW ESCAPE.

"It was during the War of the Rebellion," said the diffident and blushing assistant pastor, addressing the young people's Friday night prayer meeting, "that a company of Union soldiers were ordered to take a rebel battery. Quickly they sprang to the charge, but, alas! before they reached the guns they broke and fled ignominiously; that is, all except a certain corporal, who rushed in, and, seizing a gunner by the throat, carried him off, an astonished captive. And when the company reached the little clump of woods from whose shelter they had started, they gathered around the gallant corporal and asked him where he had got his prisoner, and how he had managed to capture him."

"I went in and took him," said the hero, modestly. "Ah, boys! why didn't you keep on? There was a man for every one of you there!"

"And so I say to you, my dear Christian soldiers," continued the assistant pastor, fervently, "there is a man for every one of you in this world. Yes, my dear young brothers, there is a man for every one of you here! Yes, my dear young sisters, there is—er—there is—er—there is work for you all in the vineyard of the Lord if you will only seek for it. Let us now sing the 425th hymn:

"Oh! save me from the careless word,
The swift, unbidden thought,
And make me always think and speak
Exactly as I ought."

And the young assistant sat down, with an intensely relieved expression, and mopped his burning brow.

II.

WILLIAM'S INVITATION FROM THE MAYOR.

The young man had been to sea on a long cruise, and on his return was narrating to his uncle, an old Montgomeryshire farmer, an adventure which he had met with on board ship.

"I was one night leaning over the taffrail, looking down into the ocean," he said, "when my gold watch fell from my fob, and immediately out of sight. The ship was going ten knots an hour, but, nothing daunted, I sprang over the rail, down, down, and after a long search found the watch, came up and chased the ship, and climbed back to the deck without anyone knowing I had been absent."

"William," said his uncle, "I believe thee, but there are many a thousand would not."

"What!" exclaimed William, "you are politely insinuating that I'm a liar!"

"William," said the old man, gravely, "thou knows I never call anybody names, but if the Mayor of Welshpool were to come to me and say, 'Josiah, I want thee to find the biggest liar in all Montgomeryshire,' I would come to thee and put my hand upon thy shoulder, and say to thee, 'William, the Mayor wants to see thee.'"

III.

REFORMING A PARROT.

A P. E. Islander who spent a part of last summer in England tells an incident which sadly disturbed the religious peace of a parish in Penzance. A maiden lady of that town owned a parrot, which somehow acquired the disagreeable habit of observing at frequent intervals, "I wish the old lady would die."

This annoyed the bird's owner, who spoke to her curate about it. "I think we can rectify the matter," replied the good man.

"I also have a parrot, and he is a righteous bird, having been brought up in the way he should go. I will lend you my parrot, and I trust his influence will reform that depraved bird of yours."

The curate's parrot was placed in the same room with the wicked one, and as soon as the two had become accustomed to each other the bad bird remarked, "I wish the old lady would die."

Whereupon the clergyman's bird rolled up his eyes and in solemn accents added, "We beseech thee to hear us, good Lord!" The story got out in the parish, and for several Sundays it was necessary to omit the litany at the church service.

Recipes.

STRAWBERRY CANAPES.

Brown the under side of large sponge drops in a little butter, being careful not to let the butter burn.

Have ready one cup of strawberries sliced and sweetened. Heat them in another pan just enough to melt the sugar, add one tablespoon of butter and pour it over the browned cakes.

RHUBARB JELLY.

About one quart of liquid from the compote, ½ ounce of white gelatine, wineglass of white wine.

Cut off the leaves and ends from the stalks, and wipe with a clean, damp cloth. Use an earthen dish for cooking. Without removing the skins, cut the pie-plant into pieces 2½ inches long, and put over them the sugar, a piece of lemon peel, and the water. Cover and set in the oven on a shelf.

Moisten the required gelatine in a quarter of a cup of cold water. When the rhubarb is tender, place the gelatine in a large bowl on which an earthenware colander is placed. Pour the rhubarb on this, but remove it very soon to a dish, in order to retain sufficient juice with it.

Stir the hot liquid underneath, and when the gelatine is dissolved pour into teacups or molds dipped in cold water. A glass of white wine improves the jelly. The rhubarb skins impart a beautiful rose color.

Broken china may be mended by making a light paste of the white of an egg and flour, cleaning the broken edges from dust, spreading them with the paste and holding the parts together while wet, wiping off all that oozes out. It must be held or fastened in position until dry.

A fruit jar, with defective cover, may be made air-tight by putting a little putty between the cover and rubber, remembering to press the putty in around the crevice as soon as the top is screwed down as tightly as possible.

THE QUIET HOUR.

"What Wilt Thou Have Me to Do?"

Hast Thou, my Master, aught for me to do
To honor Thee to-day?
Hast Thou a word of love to some poor soul
That mine may say?
For, see this world that Thou hast made so fair,
Within its heart is sad;
Thousands are lonely, thousands sigh and weep,
But few are glad.

But which among them all to-day is mine?
O, guide my willing feet
To some poor soul that, fainting on the way,
Needs counsel sweet;
Or into some sick room, where I may speak
With tenderness of Thee;
And, showing who and what Thou art, O Christ!
Bid sorrow flee!

Or, unto one whose straits call not for words—
To one in want—indeed:
Who will not counsel, but would take from me
A loving deed.
Surely, Thou hast some work for me to do;
Oh, open Thou mine eyes,
To see how Thou would'st have it done,
And where it lies.

Intercessory Prayer.

There are some duties, amongst those assigned to each individual, which seem chiefly to fall under the head of our duty to God; others—and these a very numerous class—relate more especially to our neighbor; and, yet again, there are a few which principally concern ourselves. Many of our duties have more than one side, and there are some which puzzle us, because one appears to clash with another, and we know not to which we should give our first attention.

But there is one duty of paramount importance, imposed upon us as members of the great human family, which links together God, our neighbor, and ourselves. This duty there is never any doubt about; it never causes perplexity or clashes with any other.

It is the duty of Intercessory Prayer. By its means we, as it were, stretch forth one hand to God, and the other to our neighbor; and as we make use of this mysterious spiritual force, the blessings which we crave for others overflow into our own hearts, and enrich our own lives.

It is a truism—though one which few of us realize as we should—that the very first word of the Lord's Prayer teaches us to be unselfish in our devotions; for selfishness is, alas! such a subtle enemy that it strives to force itself, disguised as an "angel of light," into the very presence of God. Hence, we must be constantly on the watch to overcome and crush it out.

Yes! It is possible to be selfish even in our prayers, unless our eyes are constantly fixed upon our Great Example, unless we are constantly learning from Him to pray continually and perseveringly for others.

In the Garden.

Fain would I help the gardener in his toil,
Mid flowers he loveth best;
Bringing fresh water to the thirsty soil,
And doing his behest.

So would I toil in Thy garden, Lord,
Sowing the seed Divine;
And like a child some slender aid afford
To that dear Hand of Thine.

Through hidden ways—still fragrant with Thy tread—
Lead me, that I may see
Thy lilies fenced in their leafy bed,
Blooming alone for Thee.

In the cool glimmer of the early dawn
Let me arise, and go
From grove to vineyard green and dewy lawn,
Thy precious plants to know.

Too rich for me the garden of Thy smile,
My skill is Thine alone;
I can but labor for a little while,
Yet Thou my work shalt own.

Prayer.

Why are our prayers inefficacious, even if we pray for the gifts of the spirit? Because they are not pronounced in the unity of the one, but in the multiplicity of our desires. Our thoughts and will are not one; but we pretend to desire one thing and will another; we have not yet arrived in that natural state where will and thought and word are one, and which it is necessary to enter before we can expect to come in possession of the spiritual power of prayer. True prayer means sacrifice; it is a going out of the soul to the infinite, a giving one's self up to God entirely, and without any reservation. In the German language the word for prayer is "Gebet," from "geben," to give; there is no asking for favors. The soul sacrificing itself to God, and giving up its self-will, becomes one with the Spirit of Truth, and receives from Him all His blessings in return. Far better would it be if men, instead of philosophizing about the existence of God and His qualities, would learn the nature of true prayer. They would then practically know that there is a personal God, for they would feel His presence within themselves, and by attaining the knowledge of self they would become self-conscious of this Divinity.—Franz Hartmann.

Be charitable before wealth makes thee covetous.—Sir T. Brown.

Woman's Worth.

We hear a great deal about the "New Woman" (which term, by-the-by, is very difficult to define), and this is supposed to be "woman's age." Well, undoubtedly, women can and do enter into many walks of life hitherto debarred them; but if one goes to the root of it, one generally finds *necessity*, and that in these days many women as well as men have to be bread winners. This article, however, does not seek to deal with this so-called "New Woman" subject, but only with a phase of woman's life which seems to run in a groove, and upon which new theories have no influence. The phase I allude to is that in which one sole end and aim is to wait upon the men of the family who are supposed to be (and often honestly believe themselves to be) the protectors of their womankind! This sort of thing prevails, perhaps, more in the country than in cities, although it is not hard to find anywhere.

The father and brothers on a farm usually consider themselves as the breadwinners, whereas they are not one whit more the breadwinners than the helpful women of their household who, by their incessant slavery and thrift, save thousands of dollars in fewer years than one might suppose. People sometimes wonder that the daughters of really well-to-do farmers leave home and seek service, but when one considers that a girl, if fairly competent, can command a good home, fair wages, and probably far easier work than she has at home, the matter is not so much to be wondered at. How often does a father dream of giving his daughter any allowance for her services beyond her board and clothes—not a very heavy item? Look, too, at the sons on the farm. Their sisters wait upon them, wash, scrub, cook, sew for them; but how often does a brother give his sister even a little present for her willing service? He generally accepts it as a matter of course, a mere trifle, to be amply repaid by a word of thanks—too often not even that. Even if one has to admit that women *must* work hard on a farm, is it not only bare justice that if the better part of their youth be passed in this way—slaving and saving—they should at least reap some after benefits from their labors? But not so. See what generally occurs. The father dies; the mother, nine times out of ten, is left to the care of the sons (to whom the farm is left), and has usually to live with a married son or daughter, often *entirely* dependent on their kindness. The daughters have, perhaps, a few hundreds left to them—not enough for a decent income—and in many instances nothing at all. I recall a case where the girls had spent the best part of their lives in working for and waiting upon father and brothers—helping, in short, to keep the whole fabric together—to have less than five hundred dollars left to them; whilst the sons had as many *thousands* in valuable farm property, and this is only one case out of many such. Now, this is all wrong, and it is time that fathers and brothers thought more of these things and rid themselves of the idea that wives, mothers and sisters are created simply to wait upon *them* and see to their comfort, without at least being rewarded by a fair division of property when the time arrives for it.

In fairness, I will say that I believe the majority of men do not see the injustice they practice towards their womankind. Their occupations render them somewhat dense in these matters; but if they just put their minds upon the subject, they must surely see where the injustice comes in. I dare say many take it for granted that these hard-working daughters and sisters will marry. Well, some *do*, but plenty do *not*, and it is for them chiefly that thought should be taken, and also for the farm widows, who should not be left to end their days in the state of utter dependence one so often sees. All, of course, depends upon the circumstances. When there is nothing to leave, the deplorable fact can only be accepted; but I am taking a general view, and this view reveals the fact that woman's work is taken too much as a matter of course, and her *real* value as a co-breadwinner too often overlooked.

This article must not be misunderstood by our dear Canadian girls. It is a beautiful thing to see whole families working together for the common good, and devoted wives, mothers, daughters and sisters are indeed a blessing for any man. Few girls have any idea of *gain* in the matter, and work for pure love of their family and home. All honor to them! Some do wander away for various reasons, but the reason *never* should be because they feel they are receiving but scant justice. Our Canadian girls are loyal to their country and their homes, but it will not make them less brave and true to have the knowledge that their loving service is encouraged and appreciated. I am not afraid, therefore, that our girls will misunderstand, but merely appeal to that sense of fairness which is really implanted strongly in our worthy farmers, but which they are sometimes apt to overlook. Whatever a farmer has to leave at his death has usually been made as much by his wife as by himself, and—as they grew up—by his sons *and his daughters!* M. M.

Our Library Table.

"CLEG KELLY." S. R. Crockett.—There are few stories which so completely blend together humor and pathos as does this one, telling of the adventures of a street arab. Born of parents utterly opposite in character—as his gentle mother discovers almost as soon as she is married—youth Cleg inherits a curious mixture of temperament, which the author wonderfully brings out. Full of

faults, even to the astute cunning of his burglar father, the sterling elements of honor and generosity lie deep down and are incorruptible. The opening of the book is startling: "It's all a dumb lie—God's dead!" Imagine these bold words said in Sunday-school, and to its superintendent, Mr. James Lugton, commonly known as "Pund o' cannles" because he was a tallow chandler! Expelled from the school for his speech as a "bold blasphemer and atheist" (poor, ignorant Cleg), a characteristic incident follows. Wild for revenge, he thinks of setting fire to Harker's Court school, but suddenly remembers his friends, Vara Kavanagh and her little brother Hugh. "I'll get them to gang to another school first," he decides. A conflagration of some sort, however, Cleg is bound to have, and accordingly he selects a favorite furzy slope where grows a profusion of "whins and broom," and there, more to relieve his outraged dignity than for any deeper reason, he sets fire to the dry grasses. "This wee bit knowe," said Cleg, his heart beating within him at the enormity of the offence, "there's no a keelie in the toon that wad dare to do as muckle!" To his surprise, however, the "wee bit" fire extends rapidly and furiously. At first he leaps and shouts for glee—when suddenly he sees a nest with a yellow bundle and three little gaping mouths. "Guid life," cried Cleg, "I never thocht the birds wad be biggin already!" Then he sets to work with a will, beating off the flames with his ragged coat. "Here he stood, with his coat thrashing every way, keeping the pass with his life—brave as Horatius—while the flames crackled and roared past him." Herein lies the key to all our street arab's character—quick perception, bravery, tenderness, but with utter contempt of control, and a tongue like a razor, sharpened, too, with real wit. Another incident showing the true nature of the boy is where the parable of the lame man at the pool of Siloam is read, and he conceives the brilliant idea that he can cure the little lame boy. "Never heed, Chris Cullen . . . I'll carry ye doon on my back mysel'." There's naebody will daur to hinder ye dookin' in ony dub ye like, when I'm cairryin' ye!"

Space will not admit of many extracts. The story abounds with touches which draw from us tears and laughter at will. One of the most pathetic incidents relates to the big gentle giant of a man, Alex. Douglas—"Muckle Alex.," as his railway comrades call him, but it would somewhat spoil the reader's enjoyment of the book to relate more.

Cleg's adventures and character are worked out with wonderful insight. As in most stories commencing at early boyhood and when that boyhood is so intensely interesting as is Cleg Kelly's, a little of interest, perhaps, flags towards the very end. The truth is, we love Cleg so much as the boy that we cannot quite realize him as the man. Every character and every scene in the book is worth studying. The delicacy of treatment is as noticeable as in this same author's "Lilac Sunbonnet."

"ADVENTURES OF A BROWNIE." Miss Mulock "GRANDFATHER'S CHAIR." Nathaniel Hawthorne.—These are two children's books which are very charming, although not as widely known as they should be. They can be had in paper covers at about ten cents. FELIX.

Amicable Argument.

In reading lately some accounts of the late eminent statesman, Mr. Gladstone, I particularly noticed that much of his wonderful power of argument and eloquent flow of speech was due to a custom which prevailed in his family. They quietly discussed amongst themselves any subject which came up, and were encouraged to air their opinions and to give their reasons, expressed in clear, forcible and correct language. Thus their powers of reasoning and speaking were brought out from early youth. There can be no doubt that were this excellent plan more generally followed, there would be less bitterness and less blind obstinacy amongst a large majority of people. The reading of this article about Mr. Gladstone set me thinking about argument, the various views taken of it, and the various ways of conducting it. It seems as though so many regard argument as, of necessity, meaning a mere wrangling disagreement.

How often you hear people say, "Oh, I never argue, it so often leads to losing one's temper—and what's the use, after all?" This sounds very well, indeed, and we are apt to say of such people, "They are so good natured; I never heard them argue with anyone." True, my friend; but does it never strike you that there is a *raison d'être*? In nine cases out of ten this simply means that the anti-argumentist is determined to stick to his or her opinion whether the opposite side convinces or not. Then—as is hinted above—some people *do* lose their tempers—their manners—and, in consequence, almost invariably lose their argument also. Another class—frequently met with—possess no flow of language. Their ideas may be very sound, but they are incapable of expressing them with any convincing force. Such unfortunates are completely at the mercy of the antagonist who has a whole string of words ready to pour forth in clear explanation of his subject, and who ends in literally *snuffing out* the less gifted one. I have known this to occur even when the multi-wordist was utterly in the wrong.

There is yet another class—and a dangerous one. Some people cannot argue because they happen to dislike their opponent. In such case the opponent is foolish indeed to attempt to expound an opinion, for it is almost sure to be contradicted, and often

some trivial *trip-up* theory advanced, with, perhaps, little or no bearing on the question, but merely used as a means to make the other side look small. This kind of thing is *no* argument, but simply contradiction, born of a predisposition to differ with *whatever* is said by the individual disliked. So do not place either side upon an undeserved pedestal—and especially the side which *won't argue*—which side has generally some reason open to comment. Argument is a species of discussion—(with a difference, however). If people would really *discuss* their subjects they would arrive at better results. Argument so generally means opposition, that this kind of discussion (as distinct from that kind in which both sides are agreed) might be called a polite agreement to differ, to use an old phrase.

No, we must not be blind to many reasons which make people say they object to argument. I should allow, however, that there certainly are sometimes very sufficient grounds for non-argument when the opposite would mean a serious breach of manners, or, perhaps, an unkindness. This, nevertheless, does not effect the main question.

I would certainly advocate argument (or discussion, if one prefers so to call it), but I think a first-rate plan would be that as soon as the combatants show temper they should be pulled up sharp by a third person—in fact, "Time" should be called—and if no third person is present, then the two might agree, with Spartan fortitude, to pull up each other and themselves. A great stumbling-block in the way of argument is *Egotism*. People are so prone (when heated) to forget the interest of the question itself and imagine that all their adversary urges for or against is a personal affront. Many a friendship has been broken in this way.

In spite, however, of many and serious drawbacks, the idea that argument is useless—as some allege—is untenable. *Cetera depend.* F. J. M.

Puzzles.

[The following prizes are offered every quarter, beginning with months of April, July and October: For answers to puzzles during each quarter—1st prize, \$1.50; 2nd, \$1.00; 3rd, 75c. For original puzzles—1st, \$1.00; 2nd, 75c.; 3rd, 50c.]

This column is open to all who comply with the following rules: Puzzles must be original—that is, must not be copied from other papers; they must be written on one side only of paper, and sender's name signed to each puzzle; answers must accompany all original puzzles (preferably on separate paper). It is not necessary to write out puzzles to which you send answers—the number of puzzle and date of issue is sufficient. Partial answers will receive credit. Work intended for first issue of any month should reach Pakenham not later than the 15th of the month previous; that for second issue not later than the 5th of that month. Leave envelope open, mark "Printer's Copy" in one corner, and letter will come for one cent. Address all work to Miss Ada Armand, Pakenham, Ont.]

1—ACROSTIC.

1. A celebrated mountain (scriptural).
2. An East Indian coin.
3. Of no worth.
4. More than one.

Initials and finals combined give a maritime city of prominence. "SIMPLE SIMON."

2—BEHEADED WORDS.

- Behead a fish and leave a call to silence.
- Behead a stand and leave power.
- Behead a girl and leave help.
- Behead an opening in a fence and leave what we did at dinner yesterday.

3—HOURGLASS.

1. Noxious to health; 2, a necessary; 3, mother-of-pearl; 4, an epoch; 5, a letter; 6, to spoil; 7, exceedingly good; 8, slight; 9, to pour into another.
- Diagonals—From left down, "enter;" from right down, "care." "DICKENS."

4—CLEVER PEOPLE, PHONETICALLY AND ENIGMATICALLY EXPRESSED.

1. A boy's nickname, a nauseous ball, a musical note, and an adult in Scotland.
2. A pronoun and to whinney.
3. To bunt, a row, and a drinking vessel.
4. We all have, guided, and an exclamation.
5. One of Rider Haggard's novels, a vowel, and to conceal.
6. An article, a vowel, and a beverage.
7. To block and a piece of timber used in shipbuilding.
8. A barnyard animal and a person we love.
9. To color, to view, and desecry. "ARRY 'AWKINS."

5—ANIMALS.

- | | |
|------------|-------------|
| 1. l-h-n. | 4. -i-a-f. |
| 2. -r-l-a. | 5. a-t-o-e. |
| 3. w-a-l. | 6. b-a-e. |

A. E. T.

Answers to May 1st Puzzles.

- 1—Starry—tarry—'Arry.
- 2—h o w d a h
o r i o l e
w i n t r y
d o t t e d
a l r e d a
h e y d a y
- 3—A live dog is more to be feared than a dead lion.
- 4—Abronia, abutilon, adlumia, agrostemma, amaranthus, antirrhinum, amebia, dolichos, erysimum.
- 5—868,937,142 6-7 gallons.
- 6—B r i t a i n
r e m o v e
i m a g e
t o g a
a v e
i c e
n
- 7—John Halifax, Gentleman.
- 8—p r i v a t e
r e n e g e
i n u r e
v e r y
a g e
t e
e
- 9—Jalap, order, houri, nones, ascetic, lapilli, drill, equal, naphtha—John Alden—Priscilla.
- 10—E x p e c t, v e x e d, e x p a n s e, p e r p l e x e d, e x i t, e x p e r t.
- 11—y a g e r
a b i d e
g i b e s
e d e n i
r e s i n
- 12—New Year's Day—Restorative.

SOLVERS TO MAY 1ST PUZZLES.

'Arry 'Awkins, M. R. G., Gertie Klinck.

NOTICES.

Hampshire Down Flock Book.—Vol. X. of the English Hampshire Down Flock Book contains the pedigrees of rams Nos. 278 to 3224, besides much other information of interest to Hampshire breeders, such as list of members, by-laws, record of flocks dispersed, transferred, etc., and among other things an account of a prize competition among shepherds in May, 1898, in the matter of bringing through the highest percentage of lambs in flocks of various numbers of ewes. In a flock of 1,161 ewes the percentage of increase was 118.35; in a flock of 547, 126.21; and 127.37 in a flock of 349 ewes. The total number of entries in the competition were 51, representing 20,733 ewes and 23,003 lambs, or an average percentage of 110.95 lambs. The Secretary of the Association is J. E. Rawlence, The Canal, Salisbury.

The Toronto Industrial Fair.—With their accustomed energy and zeal, the Managers and Directors of the Toronto Industrial Fair, which is to be held this year from the 28th of August to the 9th September, are diligently at work preparing for this great annual event, which is looked forward to each year with great interest by all classes of the community throughout this country, and by large numbers in the adjoining States of the Union. The committees in most departments have carefully revised the prize list for this year's fair, adding new classes where the public interest suggests them and eliminating out-of-date features. The largest amount in prizes probably ever offered at any annual fair on the continent for Shorthorn cattle will be offered at this fair this year. The prizes in this class have always amounted to \$850, but this year the Dominion Shorthorn Breeders' Association has decided to add to this amount \$750, and the Industrial Fair Directors have, in consequence, agreed to add \$150 to the amount previously given, making the total to be awarded \$1,750. This should bring out one of the greatest exhibits of Shorthorns ever seen in the Dominion. It is also the intention of the Exhibition Association to offer some handsome prizes in competitions for buttermaking at the fair during its progress, and to have practically illustrative lectures given at certain hours each day. A building will be specially provided for this purpose. \$300 will also be added to the list as special prizes for export bacon hogs. All entries in the live stock classes have to be made by the 5th of August. The Directors are endeavoring to arrange with the City Council for the erection of a new dairy building, a new art gallery, and the completion of the new piggens. The importance which stock breeders attach to the Toronto Exhibition as a time for meeting together is shown by the number of such meetings which usually take place on the grounds during the holding of the fair, and this year, for the first time, some of the American breeders are going to meet there. The American Shropshire Sheep Breeders' Association and the American Dorset Horn Sheep Breeders' Association have decided to hold their annual meetings at Toronto during the second week of the fair. Several of the American breeders' associations have also been very liberal in their offers of special prizes at Toronto this year.

When to Apply Manure.—Under date of April 12th Mr. T. C. Wallace writes:—Various experiences are teaching that our farmers need special advice in applying manure, though they have quite a variety of methods, according to their conditions. There is, however, one general rule I wish to draw their attention to, and that is as to the time of application. It is not governed by any calendar calculation, but simply by the soil conditions. To get the best results from manures, such as farmyard manure or Thomas phosphate, they should be applied to the land while the gravity water is yet in the soil, and if before the frost comes out all the better. After the heavy soil water, which results from the fall, winter and early spring rains and melting snows (the gravity water), has drained out of the soil, applied manures are largely wasted for that season at least. Understand me, I am not speaking of special fertilizers called by farmers 'commercial' or 'artificial', such as nitrate and ammonia salts, potash salts, superphosphates (which are water soluble), and that complex marvel of the nineteenth century—a 'complete fertilizer', but of the natural manures, such as farmyard manure, Thomas Phosphate, Kainit and ashes. These and clover are the a, b, c of manuring, and I think we had better learn to utilize them properly before we begin to dabble in the specials. This manuring question is of immense and increasing importance, for it is the very foundation of agriculture, and if you will make an effort to get at the true inwardness of the matter, a much greater public benefit will have been obtained than by discussions in the hieroglyphics of special fertilizing before the a, b, c of the simplest natural principles has been mastered. Here are three principles lately affirmed by the most eminent English agriculturist alive, or perhaps who has ever lived. I refer to Sir Henry Gilbert, who is now 80 years of age, and has spent his life in agricultural research:

"1st. That it would be more profitable to the farmer to keep his land in good all-round condition than to work on the hand-to-mouth single crop production.

"2nd. The liberal feeding of the clover crop with the mineral manures, and phosphate in particular, as a means of economically raising the standard of fertility and preparing for the future wheat crop.

"3rd. That phosphatic manuring enhances the quality and yield of the crop, correcting the tendency to lodge and produce thin grain.

"As against this, special manuring applies to the hand-to-mouth plan of suiting the manure to the found analysis of an average crop, which is the opposite extreme of the unhappy method of blindly pouring our dollars, in the shape of manure of one kind and another, into the land, and when we fail to get satisfactory crops, laying the blame on Providence. There is no patent method, royal road or short cut in this practical problem. We must recognize that, if we carelessly or deliberately destroy the virgin fertility we inherited from nature, we must first restore it, and when we have done that intelligently there are unnumbered possibilities in special manuring, if practiced as an art on well-defined principles and not mere empirics. There is more profit to the farmer to be gained by rational manuring than by any of the special branches of agriculture, all of which depend upon it for success.

CLYDESDALES

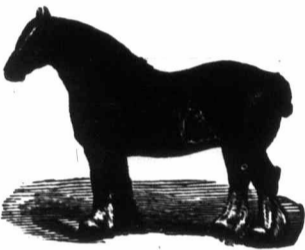


We have several imported Clyde mares 8 and 10 years old for sale at moderate prices. Some of them in foal to Grandeur An imported Hackney mare in foal to Square Shot. Also Ayrshire bull and heifer calves. Write for prices or come and see

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FOR SALE...
IMPORTED AND
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Clydesdale Stallions

From One to Four Years Old. Also



SEVERAL THREE YEAR OLD

All registered and warranted sound. Inspection invited.

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CLYDESDALES
FOR SALE.
We have on hand a few choice animals, of both sexes.
J. Devitt & Sons,
FREEMAN P. O.
Farm 1 mile from Burlington Station G. T. R.

FOR SALE:
Nine Clydesdale Stallions

Just landed from Scotland; also a few imp. and home-bred Shorthorn females.
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KINELLAR LODGE, MARKHAM, ONT.

Seven Imported Clydesdale Stallions
Four just landed, two winners at Royal Northern Show, 1898. For particulars address
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We are now offering a limited number of imported stallions and mares, and booking orders for young Ayrshires from our show cows. Sheldahl ponies and fancy poultry. R. Ness & Sons, Howick, Que.

SHORTHORNS FOR SALE
HERD ESTABLISHED 1855.
A number of Young Bulls, Cows and Heifers for sale. Herd headed by Imported Christopher — and Duncan Stanley = 16361 =. Grand milking cows in herd.
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SCOTCH SHORTHORN BULLS AND HEIFERS
HERD ESTABLISHED IN 1872.
Such sires as imported Royal George and imported Warfare have put us where we are.
A. & D. BROWN,
ELGIN COUNTY, IONA, ONTARIO.

SHORTHORNS
FOR SALE: 4 YOUNG BULLS
From 6 to 18 months old, sired by Ronald = 25325 = and Zeecho = 23597 =. Good quality. Moderate prices.
Estate of late JOHN VANNOSTRAND,
Aurora Stn., G. T. R. Vandorf, Ont.

HAWTHORN HERD
OF DEEP-MILKING SHORTHORNS.
3 heifers bred to Beau Ideal = 22554 =, of first-class quality and A1 breeding.
Wm. Grainger & Son, Lonsdale, Ont.

Toronto Markets.

Trade at the Western cattle market has been good. Quality of fat cattle better than for some time past. Prices remained about the same except for choice export, which are firmer at the advance. Notwithstanding the brisk trade, complaints were loud and deep. Many of the drovers say that they cannot buy cattle in the country and make a profit, as the butcher cattle are scarce.

Export Cattle.—Choice heavy-weight export cattle were in demand; prices a shade firmer on my last quotation. Well-finished loads of exporters were quoted at \$4.60 to \$4.90; in one or two cases only was \$5 paid. Light export cattle were more plentiful and sold at \$4.40 to \$4.60 per cwt. Mr. Jos. Gould bought two loads of choice export, 1,275 lbs., at \$5 per cwt. Mr. T. A. Marquis sold 21 exporters at \$5 per cwt. Messrs. McDougall & Morris sold two carloads exporters, 1,375 lbs. average, to Brown & Snell at a luck penny over \$5 per cwt. Mr. J. Dunn bought one load of exporters at \$4.90 per cwt. One load, 1,275 lbs. average, at \$4.90 per cwt.

Butchers' Cattle.—Butchers' cattle weighing 1,000 to 1,150 lbs. sold at \$4.50 to \$4.60 per cwt. Loads of good butcher cattle sold at \$4.35 to \$4.40 per cwt. They were not very plentiful, and the prices remained firm.

Feeders.—Heavy feeders in good demand. Prices firm, at \$4.40 to \$4.60 for well-bred steers weighing not less than 1,000 to 1,150 lbs. each. This class of stock advanced 5c. per cwt.

Stockers.—Buffalo stockers sold all the way up from \$3.75 to \$4.20 per cwt. for extra choice. The market active at these figures, and supply not adequate to the demand. A few heifers were sold for this market at \$3 to \$3.12 per cwt.

Bulls.—Heavy export bulls at \$3.75 to \$4.12 per cwt. Light export bulls at \$3.40 per cwt. Tough bulls at \$3.35 per cwt. Inferior stock bulls sold at \$2.50 per cwt. Mr. J. Dunn bought one bull, 1,620 lbs., at \$4.25 per cwt.

Milk cows.—Good choice cows are wanted; about 25 on offer; the bulk of inferior quality, and sold at \$21.00 to \$47.00 per head. Mr. P. Holland purchased a cow at \$46.50.

Calves.—Only 25 on offer, which met a ready sale at from \$3.00 to \$3.00 per head. One extra choice fat calf fetched \$10.00. The drover said it had been fed on separated milk and corn meal.

Sheep.—There is a firm feeling in this branch; deliveries continue light; unclipped ewes sold at \$4 to \$4.25, while clipped ewes sold at \$3.50 to \$3.75, and bucks at \$3.50 per cwt. Mr. T. G. Colwell sold eleven sheep at \$4 and \$5; yearling lambs \$5.75 per cwt.

Hogs.—As foreshadowed in my report of May 1st, hogs have again advanced 12c., with further prospects of an advance in the near future. About 1,000 each market day—not sufficient for local demand—caused the price to advance. Market will remain steady for some little time at \$5, with good prospects for best singers. Light and thick fat all graded into two classes and paid for at \$4.37 and \$4.45 per cwt., and for thick fat, coarse hogs, \$4.25 per cwt. The complaint is that too many light fat come on the market—hogs that want finishing by two or three weeks feeding. Hogs that weigh 100 to 150 pounds are crowded on to catch the advance, and lose money to the shippers, and have to be sold as stores. Mr. Ironsides shipped four carloads of these light hogs to the Northwest. The cars are double-decked, with small troughs for feed and water en route; about 450 in this consignment; more wanted for next week. Mr. I. Mathews, of Messrs. Mathews & Sons, Peterboro, was a visitor on the market to-day. He complains of the delivery of small weight hogs; 40 per cent. of the deliveries at his factory are too light. He thought that the farmers were making a great mistake in selling their hogs under the recognized weight of 160 lbs. Sometimes we are inclined to blame the drovers on this account. They often urge a sale when the farmers' better knowledge would prompt them to feed two weeks longer.

Hay.—Market firm, at an advance; supply not equal to the demand. Timothy sold at from \$11 to \$14 per ton; clover and mixed hay, at from \$7 to \$9 per ton.

Straw.—Very scarce, at \$7 to \$8 per ton.
Baled Hay.—Car lots quoted at \$7.50 to \$8.50 per ton.
Baled Straw.—In car lots, at from \$4 to \$4.50 per ton.

Butter.—Demand is fair for strictly choice dairy. There is a lot of poor stock coming in. Mr. Skeans has established a commission business (88 Front street) to deal in dairy produce, butter, cheese, and eggs. The poor quality of butter seen on this market comes chiefly from the Province of Quebec. This has a tendency to reduce the price of our choice butters. Dairy tubs, 11c. to 12c. per lb.; large rolls, 9c. to 12c. per lb.; creamery, 16c. to 17c.; small dairy prints, 13c.

Eggs.—Demand good; supply quite equal; prices remain firm, at from 11c. to 11½c. per dozen. The prospect for the ensuing export season is considered very good by King, Darrel & Co., produce export company, Elm st., Toronto.

Seeds.—The season is nearly over and reported as the best for many years; demand light. Red clover, 100 pounds, \$5 to \$6; alsike, 100 pounds, \$4.50 to \$7; timothy, 100 pounds, \$2.50 to \$2.75.

Grain Market.—Receipts of farm produce at the St. Lawrence market were larger. Messrs. Dawson, wholesale fruit merchants, gave the citizens of Toronto a treat—four carloads of strawberries arrived late and were sold cheap.

NOTICES.

Cooper's Sheep Dip.—There have recently come to our notice testimonials from Hon. John Dryden and Mr. R. Gibson to the value of Cooper's Sheep Dip in destroying ticks and cleansing the wool and skin of sheep and thus promoting rapid growth of the fleece. The Cooper Co. offer special premiums to users of their dip, which are explained in pamphlets which can be secured from Evans & Sons, Montreal and Toronto.

Clydesdale Stud Book.—Vol. XXI. of the Clydesdale Stud Book of Great Britain and Ireland has been issued by the secretary and editor, Arch'd MacNeillage, Glasgow. It contains pedigrees of mares having produce previous to 30th September, 1898, and stallions foaled before January 1st, 1898, with four appendices and a list of the members of the Society as at January 1st, 1899. The pedigrees of mares contained number 13335 to 13677, and stallions 10481 to 10694. The volume is bound in the usual substantial form.

GOSSIP.

Mr. R. Corley, Belgrave, Huron Co., Ont., advertises three choice young Shorthorn bulls for sale, also cows and heifers. Parties requiring such stock will do well to write Mr. Corley for description and price.

At the sale of Mr. Fraleigh's Jerseys, at Forest, Ont., May 24th, the highest price, \$120, was made by the three-year-old cow, Coomasie's Oonan. Bisson's Bell's Gem brought \$100. Other cows and heifers sold for \$70 to \$92, and calves at \$25 to \$35.

Mr. Robert Miller, Stouffville, Ont., intimates in our advertising columns that he sails for England this week, and that his address will be The George Hotel, Shrewsbury, and that he will be pleased to receive orders for the importation of stock. See the advt.

In publishing in a recent issue the list of judges selected by the Western Fair Board for the various classes of swine an error occurred. The judge chosen for Chester Whites and Berkshires is Mr. W. H. Jones, Zenda, and for Poland-Chinas and Duroc-Jerseys, Mr. Thos. Teasdale, Concord.

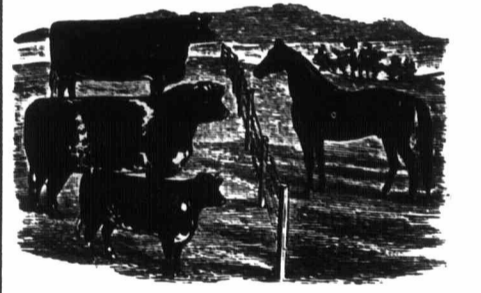
A representative of the FARMER'S ADVOCATE called upon Messrs. Fitzgerald Bros., at Mount St. Louis, near Barrie, and found a good bunch of young Shorthorns. Half a dozen young bulls, fit for service, are now ready for disposal, having a variety of pedigrees. The imported stock bull, British Statesman, is looking fine and enjoying his liberty in luxuriant pastures at Mount St. Louis, his new home. All cows bred to him are reported safe in calf.

R. Mitchell & Son, Nelson, Ont., write:—We report a few recent sales of Shorthorns: To W. D. Flatt, Hamilton, a blocky, stylish two-year-old bull, and the fine-topped bull calf, Dreyfus; to Chas. Stewart, Harrowsmith, a ten-months-old bull calf, a real good one; and to W. A. Heubach, N. W. T., a lengthy red yearling for the ranch. These bulls all sired by Elvira's Saxon 21064, which we now offer for sale; he is four years old and as good on foot and useful as any yearling.

Canadian Live Stock Exports.

The following is report of live stock shipments, as prepared by R. Bickerdike, of the Live Stock Exchange, Montreal, week ending May 17th: Cattle, 4,122; sheep, 694. For week ending Wednesday, May 24th: Cattle, 2,749; sheep, 952.

W. D. FLATT,
HAMILTON P. O. and TELEGRAPH OFFICE,



OFFERS FOR SALE
Twenty-two Shorthorn Bulls

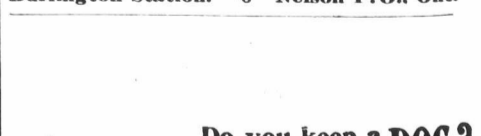
CHOICE
from three to fifteen months old.
Persons requiring show bulls can be supplied from this bunch.

TWENTY COWS AND HEIFERS
served by imported bull, Golden Fame = 26056 =. Farm 6 miles from Hamilton. Catalogue sent on application. Visitors met at G. T. R. or C. P. R. if notified. Prices consistent with quality. Inspection invited.

4 - SHORTHORN BULLS - 4
SCOTCH BREEDING.
Good growthy ones from 5 to 15 months. Also one coming 3 years. Would spare a few heifers. Prices very moderate. Write—
SHORE BROS., White Oak, Ont.

SHORTHORN BULL FOR SALE:
Elvira's Saxon 21064, by Royal Saxon 10537; dam Elvira 11th 11616, by Duke of Guelders (imp.).
R. MITCHELL & SON,
Burlington Station, Nelson P. O., Ont.

Do you keep a DOG?
Send for free pamphlet on feeding, treatment, etc., and catalogue of foods, etc.
To SPRATT'S PATENT Ltd
239 E. 56th St., New York.



THE GLOBE FURNITURE COMPANY, LIMITED
WALKERVILLE, ONTARIO.
CHURCH SEWS.
PULPITS, ALTARS, BARS,
SCHOOL DESKS, etc.
WRITE FOR PRICES

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F. BONNYCASTLE & SONS
CAMPBELLFORD P. O., ONT.,
BREEDERS OF

Shorthorns, Cotswolds, and
BERKSHIRES.
offer for sale 7 bull calves from 1 to
5 months old, also heifers and heifer
calves. A choice lot of Berkshire
pigs, December and January litters,
at five dollars each, registered.

W. G. PETTIT & SON,
FREEMAN P. O., Burlington Junction
ONT., Telegraph Office.

10 SHORTHORN BULLS 10
By Indian Statesman = 23004 =, from 10 to 20 months.
Twelve young cows or heifers with calves by side or
in calf. Twelve ram and 20 Shropshire ewe lambs,
sired by (Imp.) Flashlight. Also, Berkshire boars
and sows, all of which will be sold at moderate prices.
Farm half mile from Burlington Junction, G. T. R.
-om

River Bow Stock Farm.
B. SNARY & SONS, CROTON, ONT.,
Breeders of

Shorthorn Cattle,
Poland-China and
Chester White Swine.

We offer for sale seven good
young bulls, from seven to
twelve months old; eight
heifers of choice quality
and breeding. Sired by
Chief Captain. Pigs of
both sexes and all ages at
moderate prices, quality
considered.

JOHN DRYDEN,
BROOKLIN, ONTARIO.

BREEDER
OF
Scotch Shorthorns,
AND

Choice Shropshire Sheep.

SPRINGFIELD FARM
HERD OF
Shorthorns, Oxfords,
AND
Berkshires.

Young bulls and heifers
on hand. Also a few
choice Berkshires.
CHAS. RANKIN,
Wyebridge, Ont.
SIMCOE CO. -o

WE OFFER
Three Bulls for Sale

Six, eight and eleven months old, all red, and ex-
ceptionally well bred, and FOUR BERKSHIRE
BOARS fit for service. Prices right.

A. J. C. SHAW & SONS,
THAMESVILLE, ONT.

MOUNT ROSE
STOCK FARM

Young Shorthorn bulls,
heifers and cows for
sale. Prices right.

J. W. Hartman
& SONS,
Elmhedge P.O., Ont.

Maple Lodge Stock Farm
SHORTHORNS--Imported Knuckle Duster,
and the great sire and show bull, Abbottsford, in
service. Several choice heifers for sale, and a grand
lot of young bulls by Calthness, from good milking
dams. Some splendid Leicester ewes and rams for
sale also.

A. W. SMITH,
MAPLE LODGE P. O., ONT.

SHORTHORN CATTLE
AND LINCOLN SHEEP.

Imp. Baron Blanc 11th at head of herd. Seven
young bulls for sale--good ones. Also a few females.
Stud rams all imported from H. Dudding, Esq.; the
same blood as the 1000-guinea ram.

J. T. GIBSON,
DENFIELD, ONT

SHORTHORNS
9 BULLS, 4 HEIFERS,

Mostly Scotch-bred, and got by such bulls as Kinellar
Sort (imp.), Northern Light (imp.), Prince and Prince
Bismarck. Prices right. Correspondence Soli-
cited, and Visitors Welcome.

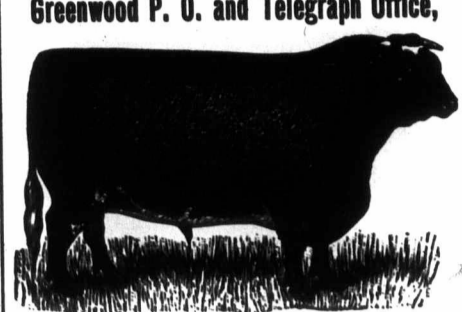
G. A. BRODIE,
Stouffville Stn., G. T. R. BETHESDA, ONT.

SHORTHORNS
For Sale: THREE CHOICE YOUNG BULLS

ALSO HEIFERS AND YOUNG COWS.
R. CORLEY, BELGRAVE, ONT.
Shorthorns and Shropshires.
I have a few promising young bulls on
hand, and am booking orders for Shrop-
ram lambs for fall delivery; well covered.

GEORGE RAIKES, BARRIE, ONT.

ARTHUR JOHNSTON
Greenwood P. O. and Telegraph Office,



OFFERS FOR SALE
15 SHORTHORN BULLS
FIT FOR SERVICE; 3 IMPORTED.

25 COWS AND HEIFERS
Including 9 recently imported heifers. Prices right.
Catalogues on application.

Claremont Station, C. P. R.
-om Pickering Station, G. T. R.
"NO BUSINESS, NO HARM."

SPRING GROVE STOCK FARM

Shorthorn Cattle and
Lincoln Sheep. Herd
prize and sweepstakes at
Toronto Industrial Ex-
hibition, 1897 and 1898.
Herd headed by Imported
Blue Ribbon = 17095 =
and the famous Money-
fuffel Lad = 20521 =.
High-class Shorthorns of
all ages for sale. Also
prizewinning Lincolns.
Apply
-om

T. E. ROBSON, Ilderton, Ont.

SPRINGHURST SHORTHORNS

Herd bred for practical usefulness, and
produces as large a proportion of top
show cattle as any herd in Ontario.
Young stock, both sexes, for sale.

Exeter Station, G. T. R.,
half mile from farm. H. SMITH,
-om HAY, ONT.

Scotch Shorthorns For Sale:
90 HEAD TO SELECT FROM.

We are offering a number of cows
and heifers (including some show
heifers), from such sires as Valkyrie
= 21806 =, Young Abbottsburn's
Heir = 15947 =, and imp. Mariner
= 2730 =, served by imp. Diamond
Jubilee (Vol. 15) now at the head of
herd. Farm 1 mile north of town.
T. DOUGLAS & SONS,
-om Strathroy Station and P. O.

SPRINGBANK FARM.
Shorthorn Cattle, Oxford Sheep, and Bronze Tur-
keys. Young bulls for sale.

JAS. TOLTON, WALKERTON, ONT.

TROUT RUN STOCK FARM.

Snap! One Ayrshire bull calf, 3 mos., \$25. Grand
lot of females, all ages. Five cows to calve
in August, fit to show in any company.
The calves will be from Royal Star, 1st at Toronto
and 1st and sweepstakes at London, 1898. Write for
prices and full particulars.

WM. THORN,
Norfolk County. -om LYNEDOCH, ONT.

WM. WYLIE, 228 BLEURY ST., MON-
TREAL, OR HOWICK, P. G.

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

AYRSHIRES FOR SALE.

The kind that can speak for themselves. Size,
constitution, dairy and show combined. Six young
bulls for sale, by Glencairn 3rd (imp.), dam Primrose
(imp.). Five from Napoleon of Auchinbrain (imp.).
Their dams are all Glencairn heifers. Five of their
dams were shown last fall at Toronto, London, and
Ottawa. Also a few good cows. No culls sold.

JAMES BODEN, TREDINNOCK FARM,
-om STE. ANNE DE BELLEVUE, QUE.

Ayrshire Cattle and Berkshire Pigs.

The bull Tom Brown and the heifer White
Floss, winners of sweepstakes at World's Fair,
were bred from this herd. Young stock for
sale. Also Leicester sheep & Berkshire swine.

D. BENNING & SON,
5-1-y-o Glenhurst Farm, Williamstown, Ont.

HIGH-MILKING AYRSHIRES.

Descended from some of the most noted prizewinners
at the World's Fair, Chicago, and other important
competitions. None but the best are bred from. Young
stock of both sexes for sale. Leicesters.

DONALD CUMMING, LANCASTER.

GOSSIP.

Copies of the Winnipeg Industrial Exhibi-
tion Prize List may be had on application to
the General Manager, F. W. Heubach, Winni-
peg, Man.

Mr. S. Dymont, Barrie, Ont., advertises in
this issue two yearling Shorthorn bulls, a
richly-bred Jersey bull (grandson of the noted
Theoline), and young Berkshires. See the
advertisement.

The English Shorthorn Society is offering
this year at about a dozen shows in England,
three in Scotland, and four in Ireland, a prize
of £10 as a first prize in a special class for pure-
bred Shorthorn cows in milk, of any age, the
societies having agreed to offer in such class a
second prize of £5. These prizes are offered in
a class for Shorthorn cows of any age in milk,
eligible for and entered in Coates' Herd Book,
or pedigree sent for such entry previous to the
show. No animal will be eligible to take more
than one prize offered by the Shorthorn Society.

Mr. Alfred Mansell, Shrewsbury, England,
who has been visiting Canada and who was
booked to sail for home per SS. Majestic of the
White Star Line, May 31st, writes: "I shall
be sending out several shipments of sheep and
cattle, so breeders in want of a single bull, two
or three heifers, or a few sheep, can have them
sent out without any trouble. I desire to
specially thank through your paper the various
breeders and others who have made my visit
so pleasant and interesting. Canadians visit-
ing England are cordially invited to use my
office to have their letters mailed to or for any
other purpose."

T. Douglas & Sons, Strathroy, Ont., write:
"Our Shorthorns came through the winter in
good form and are doing nicely on grass.
We have twenty bull calves to start the fall
calves, and an equal number of heifer
calves. We have had a fair share of patronage,
having sold twenty-one animals the last eight
months (all our own breeding). Since our last
report we have sold one young bull to Wm. R.
Scott, Woodstock, Ont.; one to A. N. McLean,
Turtle Lake, Ont.; and another to D. Waters,
Springbank, Ont.; four heifers to Chas. E. Ladd,
North Yamhill, Oregon; Mr. M. S. Weber,
Astoria, Ore.; one to Mr. J. E. Ladd,
Mariner = 2730 =, and her five-months-old
heifer calf by Valkyrie = 21806 =."

TO CHECK THE SCRUB.
An ounce of prevention is worth a pound of
cure, and in the enactment of a law which
Colorado will enforce July 6th the old saying
will receive a practical test that ultimately
will be of untold value to her live stock
interests. The way to "finish" a scrub steer
says a veteran feeder, is to "finish" him with
a club on the head. It is much easier to check
a disease before its germs have spread con-
tagion, and similarly it is much better to kill a
scrub before its miserable conception than
after its wretched bringing forth. The law of
prevention will therefore provide that no mus-
tang or other inferior stallion, no Texan, Mexi-
can, Cherokee or other inferior bull, and no
inferior ram shall be allowed to run large in
Colorado. Not only will this be a punishable
misdemeanor, but any stock-grower who finds
an inferior sire running at large may castrate
the animal. Any mistake, however, will cost
the person castrating, as should he castrate
a valuable sire he will become liable to three
times its value when so proven by a competent
court. Furthermore, any person allowing his
cows to run at large upon the public ranges of
the State must furnish a high-grade bull for
every 25 cows so running. It is a practical law
in every respect, and if properly carried out
will work great good to Colorado. It is a sort
of compulsory education law, since in its
nature it compels improvement in the quality
of the State's live stock.

A THOROUGH-BRED TRAMP.
For several months past a slick young man,
apparently of English origin, fairly well
dressed, a glib talker, well posted on the
location of breeders of pure-bred stock in
Western Ontario and having a high knowledge
of the different breeds of stock, has been im-
posing on the hospitality of a large number of
stock breeders, professing to be himself of the
same fraternity and in search of good cattle
wherewith to replenish his herd or to stock a
choice farm which he had recently purchased.
His name is Smith, Brown, Jones, Robinson,
Bates, or anything to suit the situation and
surroundings. He calls on a breeder, praises
his stock, gets a buy days' board, and contracts
for stock to the value of \$100 to \$5,000 with
ready readiness, promising to remit a draft in
payment, with instructions for shipping, etc.
Having made his host happy, he asks him to
drive him to the next or some other stock
farm within reasonable distance, and there
repeats the operation, securing meanwhile
comfortable accommodation and a bill of fare
in quality quite above that which falls to the
lot of the average tramp, a distinction to
which he has no valid claim, since we are not
sure that "the average" is a thief, while there
is evidence that this one is not above replenish-
ing his threadbare garments from the ward-
robe of those whose hospitality he has enjoyed
without as much as "by your leave," a pro-
ceeding for which, we are informed, he was for
some time in the early spring accommodated
with quarters in one of the county buildings in
which the menu is less varied than in farm-
houses, but which, no doubt, those whom he has
victimized consider good enough for his kind.
We are not aware to what extent this "scrub-
at-large" has succeeded in borrowing money,
being short of change for travelling expenses,
till he could get his drafts cashed, as those who
got caught in that trap are apt to keep their
own secret, as far as that is concerned, rather
than run the risk of being laughed at, but we
trust his success in that line has been limited,
and that the fact of this imposition having
been perpetrated upon some of their number
who have in this case failed to "entertain an
angel" may not have the effect of hardening
the hearts of a class of people proverbial for
their generous hospitality to visitors, so that
some honest cattleman or way-worn agricul-
tural press man may, in consequence, find him-
self subjected to suspicion and denied a bowl
of bread and milk or a night's lodgings. We
have, however, felt it our duty to our friends,
the breeders, to make this expose, so that being
forewarned they may be forearmed, and pre-
pared, if called upon by this wanderer, to give
him a practical application of their motto:
"The scrub must go."

W. F. STEPHEN,
Breeder and importer of choice
and fashionable

AYRSHIRES
from deep-milking strains. Two bull
calves for sale. Write or come to
BROOK HILL FARM,
Carr's Crossing, G. T. R. om Trout River, Que.

MAPLE CLIFF Dairy and Stock Farm.

AYRSHIRES Three young bulls fit for
service, and bull calves.
BERKSHIRES, TAMWORTHS,
Booking orders for spring litters. -om

R. REID & CO., HINTONBURG, ONT.
Five minutes' walk from Cen. Expl. Farm, Ottawa.

CHOICE AYRSHIRE BULLS

Four calves dropped in August, October,
December and March, and sired by Craige-
lea of Auchinbrain (imp.), first prize bull at
om Toronto in 1897 (the only time ever shown).

W. W. BALLANTYNE,
Formerly Thos. Ballantyne & Son, Stratford, Ont.
"NEIDPATH FARM" adjoins city, main line G.T.R.

Six-Young Ayrshire Bulls - Six
FOR SALE!

From eight to ten months old; all imported in dam,
and all from good herds. Will sell them right. Address
ROBT. HUNTER,
Manager to W. W. Ogilvie. LACHINE RAPIDS,
-om QUE.

MEADOWSIDE FARM,
J. YULL & SONS, Props., Carleton Place.

Breeders of high-class, deep-milking Ayrshires.
Sweepstakes young herd at Ottawa. Shropshire
sheep from prizewinning stock. Berkshire pigs
and Barred Plymouth Rocks. Young stock for
sale. Visitors met at Queen's Hotel. Give us a call.
-om

4 Yearling Ayrshire Bulls for Sale. Also a
number
of spring calves, sired by Douglas of Loudoun.

F. W. TAYLOR, Wellman's Corners, Ont.

INGLESIDE HEREFORDS.

UP-TO-DATE HERD
OF CANADA!

TAMWORTHS
CHOICE PIGS SIX TO SEVEN
WEEKS OLD.

Send for Illustrated Catalogue. Address, -om

H. D. SMITH, COMPTON, QUE.

HIGH-CLASS JERSEY BULLS

Owing to his being related to most of my herd, I
will sell the perfect show bull, Prince Frank's Son
48758; solid color; dropped Oct. 25th, 1896; winner
of 1st prize at Western Fair, London, 1897 and 1898.
Sire Prince Frank, three times winner of sweepstakes
at London; dam Zola of Glen Rouge, a pure St. Lam-
bert. Also Stoke Fogis of Ettrick 23007; solid color;
dropped Feb. 8th, 1898; sire Pride of Alton, winner
of 2nd prize at London, 1897; dam St. Lambert Jane's
Rose, by Prince Frank--a capital young bull bred
from rich-producing strains. I have also a promising
bull calf 11 months old. Come and see or address
-om W. G. LAIDLAW, Wilton Grove, Ont.

Deschenes Jersey Herd.

HEADED BY IDA'S RIOTER OF ST. LAMBERT 47570.
4 young bulls fit for service--regis-
tered. Also Tamworth swine from
diploma herd, Canada Central Fair,
Ottawa, 1898. -o

R. & W. CONROY,
DESCHENES MILLS, QUEBEC.

FOR SALE!

JERSEY BULL, THREE YEARS OLD, A GRANDSON
OF THEOLINE, THE SECOND RICHEST COW IN THE
WORLD. ALSO TWO YEARLING SHORTHORN BULLS
AND A FEW CHOICE YOUNG BERKSHIRES.

S. DYMENT, -om BARRIE, ONTARIO.

MEADOWBROOK JERSEYS, TAM-
WORTHS, W. WYANDOTTES.

Young Heifers and Bulls for sale. Six nice Tam-
worth Sows, fit to breed; a splendid Boar, 7 months
old, for sale. Eggs for balance of season, two set-
tings for \$1. o EDGAR SILCOX, Shelden, Ont.

HANDSOME A. J. C. C. BULL CALF

Dropped 8th Sept. (1898); sire Jubilee Rover,
dam Matrina of St. Lambert. Also, 4 choice
young Berkshire sows pigs.

WM. CLARK, Meyersburg, Ont.

GLEN ROUGE JERSEYS.

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

Jersey Cattle

THAT WILL PUT
MONEY IN YOUR POCKET.
Mrs. E. M. Jones,
Box 324. BROCKVILLE, ONT., CAN.

S. WICKS & SONS

MOUNT DENNIS, ONT.
Offer two Registered A. J. C. C. Jersey Yearling Bulls. These are grand youngsters; cheap if sold at once. We have also some fine Registered C. K. C. Collie Pups; also some fine young Registered Bitches. Manufacturers of the Skee Hot Water Incubator. Hatches 100 per cent. The best and most scientific incubator in the market.

BRAMPTON JERSEY HERD.

Offering high-class A. J. C. C. cows and heifers in calf, and heifer calves; 9 choice young bulls. High-grade cows in calf; and Berkshires.
R. H. Bull & Son,
BRAMPTON.

MAPLE HILL.. HOLSTEIN-FRIESIANS

I offer for sale MADGE MERTON 5th, sire Colanthus Abbecker 2nd, dam Madge Merton (nine months old); INKA 5th's MERCEDES, sire my champion show bull Count Mink Mercedes, dam the Advanced Registry cow Inka 5th, record 18 1/2 lbs. butter in a week (one month old). Remember my herd won championship gold medals in 1897 and 1898.
G. W. CLEMONS, ST. GEORGE, ONT.

HOLSTEIN BULLS

that we think you will want when you know their breeding, and the large OFFICIAL milk and butter records of their nearest ancestors. Six of them are sired by a son of our great cow, Korndyke Queen, others by sons of De Kol 2nd, and some by Manor De Kol. Heifers and young cows of equal breeding. It's better to buy the best. We furnish papers to pass them through without duty or detention. There is no quarantine. Write for just what you want.
Henry Stevens & Sons, Lacona, N. Y.

LYNNFIELD HOLSTEIN HERD.

Herd headed by the butter-bred bull, Homestead DeKol Belle Boy. I advertise for sale from this herd a heifer calf sired by this grand bull, and from the cow Rideau Dellah; a Netherland bull, 11 months old; also some richly-bred one- and two-year-old heifers and young cows. Correspondence solicited.
C. M. KEELER, GREENBUSH P.O., ONTARIO.

CHOICE HOLSTEIN BULLS

9 to 14 months old. Just imported. Personally selected. Bred by Chapman & Horr Bros., Ohio; sired by the richly-bred bull, Pauline Paul's Grandson Clothilde. Dams are great producers in this fine herd. Write for particulars at once.
A. & G. RICE, Currie's Crossing, Ont.

HOLSTEIN-FRIESIAN BULLS

of the very richest milk and butter breeding, from 3 to 11 months old, for sale. Also, Eggs for hatching from a grand pen of B. P. Rocks at \$1.00 per 15; from Rouen Ducks at \$1 per 11. Satisfaction guaranteed.
H. BOLLERT, CASSEL, ONT.

GUERNSEYS

Two Choice Bull Calves and Five Heifers for Sale.
— ALSO —
Tamworth and Berkshire Pigs.
W. H. & C. H. McNish,
LYN, ONT.

GUERNSEYS.

This is the dairy breed for ordinary farmers. Large, vigorous, and hardy, giving plenty of rich milk. Several fine young bulls for sale at very reasonable prices. A few heifers can be spared.
Address—
SYDNEY FISHER,
17-y-o ALVA FARM, KNOWLTON, P. Q.

YORKSHIRES.

6 - BOARS READY FOR SERVICE - 6
In-pig sows—bred to boar
12 lately imported by J. E. Brethour. 12
A large number of young boars and sows on hand, and 20 sows to farrow this spring. My stock contains the noted Marian blood—the prizewinners.
E. DOOL, HARTINGTON, ONT.

Yorkshires, Holsteins, & Cotswolds

Boars and sows not akin for sale, of the best type. Thoroughbred and high-grade Holsteins, also a three-sheared ram for sale.
R. HONEY,
WARKWORTH, ONT.

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

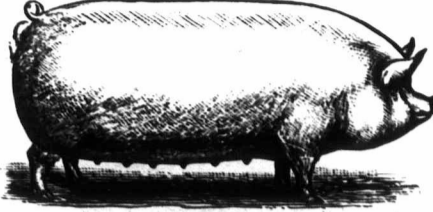
In writing to advertisers, mention the "Farmer's Advocate."
Hon. John Dryden, Brooklin, Ont., writes: "Kindly change my advertisement. Some weeks ago I shipped the last bull advertised in your columns during the winter. I still have repeated enquiries, and prefer that your subscribers should know that I cannot supply them with animals ready for use. I have a very promising number of young bulls coming on; I think the best all-round lot I have had for many years. They are good colors, good pedigrees, and all of good size."
AYRSHIRES AT AYR.

At the Ayrshire Agricultural Society's Spring Show, the show of cattle is said to have been the best ever seen there. The feature of the Derby was the great improvement noticeable in the thickness and length of the teats of the cows, which is an improvement devoutly to be desired. Mr. Wm. Howie's Drummy, by Sloth Boy of Burnhouse, was a popular winner. Mr. John Drennan closely followed with Punch and Queen of Hillhouse. In the class for aged cows in milk, Mr. Hugh Todd's Nellie 4th was a clear winner. Mr. Robert Sillar's Juniper being placed second, and Mr. Alexander's Barclay third. Aged cows, in calf, were headed by Mr. Geo. Alston's Dandy 1st, and Mr. James Neil's Hover-a-Blink was second. Among the three-year-olds in milk, the Derby winners again came to the front, and those in calf were led by Pride of Bute. Bulls and yeld stock formed superior classes. Among the aged bulls there was a newcomer in Mr. Scott's champion Prince Imperial, from Netherhall, Lanark. There was considerable speculation as to whether he would affect recent decisions, but in the result he failed to displace the winners at previous shows this season. Mr. James Howie's White Cockade bull, Kohinoor, again led, as at Kilmarnock and Glasgow. Mr. Geo. Gilmore's Rare Style was second. Messrs. Wardrop came third, with Darnley. Prince Imperial received the fourth ticket. In a moderate class of two-year-old bulls, Mr. David Murdoch, Ochiltree, was first with Enterprise; Mr. Montgomery's Sensation bull, Blucher, and Mr. James Howie's Luck's All being second and third respectively. Mr. William Mair, Crothead, Tarbolton, was fourth with a well-topped bull, and Mr. John Drummond, Bargoyle, next with Sunlight. The yearling Derby was practically a repetition of the open class, but in both cases the issue was never in doubt. Mr. William Howie won the female championship with his Derby winner, Drummy; Mr. Drennan's Punch being reserve; while for the male championship a clear winner was Mr. James Howie's Kohinoor, although Mr. Osborne's Still Another made a good appearance.

CLYDESDALES FOR CANADA.
The Scottish Farmer of May 6th says: Mr. Robert Ness, Jun., Howick, Que., sailed from Glasgow, April 29th, with three choicely-bred animals, two of which were purchased from Mr. James Kilpatrick, Craigie Mains, Kilmarnock, and one from Mr. Petrie, Dargavall, Dumfriesshire. The two horses purchased from Mr. Kilpatrick were Durward Lely (9000) and Full of Fashion (10345). Durward Lely was bred by Mr. John Fleming, Cookston Farm, Paisley, and was for some time owned by Mr. Andrew Bruce, Jordanstone. He was got by the Glasgow champion horse, Sir Everard (5353), and his dam was Mr. Fleming's well-known mare, Maggie of Crookston (2219), the dam of Mr. Wilson's noted mare, Jennie Wilson (5153), which gained first prize at the Royal and Paisley shows years ago. Durward Lely is thus almost own brother to Mr. Wilson's mare, her sire having been Top Gallant. He has proved a successful breeding horse in the Meigle district, where Mr. Bruce travelled him. A yearling filly and two-year-old gelding by him were both first at the Stornoway Union Show last year. He is a horse of great weight and substance, and when put on the scales at Kilmarnock Station on Saturday turned them at no less than 191 cwt. The younger horse, Full of Fashion, was bred by Colonel Stirling, of Kippendavie, and is three years old. He was got by the celebrated Cawdor Cup champion horse, Prince of Kyle (7155), and his dam, Heroine (11081), is a noted mare in the Kippendavie stud. She won 4th at the Royal Agricultural Show, at Windsor, as a yearling, and as a two-year-old stood 4th at Kilmarnock, 5th at Maryhill; 5th at Edinburgh; 3rd at Stirling; 2nd at Dunblane. As a three-year-old 1st at Stirling; 1st at Kilmarnock; 3rd at Stirling; 2nd at Maryhill; 5th at Edinburgh; 3rd at Stirling; 2nd at Dunblane. As a brood mare, Full of Fashion was also put on the scales at Kilmarnock, on Saturday, and turned them at 167 cwt. Full of Fashion has been a distinguished prizewinner, having been 1st at Stirling as a yearling; and as a two-year-old 4th at Spring Show, Glasgow; 3rd at Kilmarnock; 4th at Ayr; 1st at Maryhill; and 2nd at Dunlop. The horse purchased from Mr. Crawford is Merchriston (10236), bred by Mr. Henry B. Howie, and owned successively by Mr. Alex. Scott, Greenock, and Mr. William Renwick, Meadowfield, Corstorphine. Merchriston is a short-legged, thick, compact horse, got by the Cawdor Cup champion horse, Prince Alexander (8890), and his dam, Lothian Lassie (12188), is a particularly well-bred mare, got by the noted prize horse, Lothian King (6885). His grandam, again, was by the fine horse Glendale (1668), which gained 1st prize at Edinburgh as a two-year-old many years ago. Merchriston gained several prizes when in the hands of his different owners, a full list of which is not known to us; but amongst them were 1st at Linlithgow, Bathgate, and Mid-Caldor, as a two-year-old. He was also well placed in the short year at Glasgow Station Show as a three-year-old, and was 2nd at the Border Union Show as a yearling. An examination of his pedigree shows that probably no better bred horse than Merchriston has ever been exported to Canada. All three horses are of the type which Mr. Ness thick, and very stout, and they are likely to be popular in Canada.

An Excellent Remedy.
Flat Ridge, Va., Oct. 12th, '97.
The Lawrence W. Williams Co., Cleveland, O.:
I used "Gombault's Cautic Balsam" for scratches, and have never seen anything so equal to it. I find it to be an excellent remedy for human flesh, when used on bruises, etc.
A. B. ROBERTS.

HIGHEST TYPE OF BACON HOGS.



Oak Lodge Herd of Large Yorkshires

The largest herd of pure-bred Yorkshires in America. This herd has won the best prizes offered for the breed during the last ten years.
STOCK BOARS.—Three imported boars, all winners at the Royal Show, including championship and gold medal. Also, two Canadian-bred boars, both first prize winners at Toronto, 1898.
BREEDING SOWS.—Royal Duchess, Royal Queen and Royal Queen 2nd, all winners of highest awards at Royal Show, and 15 of the best sows to be purchased in England. Also, 50 matured Canadian-bred sows of the choicest quality.
PRIZEWINNING STOCK A SPECIALTY.
J. E. BRETHOUR, BURFORD, ONT.

- Snelgrove - BERKSHIRES AND COTSWOLDS

High-class Berkshires of the large English bacon type, bred from the best specimens of the best importations. Young Boars and Sows of breeding age for sale. Also choice spring pigs six to eight weeks old. Can supply pairs not akin. Yearling Cotswold Rams and Ewes for sale.
R. P. SNELL, Snelgrove, Ont.

W. R. BOWMAN, MT. FOREST, ONT.

Offers York. and Berk. Boars and Sows, weighing from 30 to 40 pounds, at \$6 each, registered; a pair of boars weighing from 200 to 300 pounds, at \$12 to \$14 each. All stock shipped C. O. D. We will have a limited number of Shrop. and Suffolk Rams and Ewe Lambs to offer, also a few shearings. A choice Jersey Bull for \$35. Five settings of Barred Rock Eggs for \$2; single setting, 75c.

SPRING OFFERING YORKSHIRES AND BERKSHIRES

A fine lot of boars and sows eight weeks old. Pairs and trios supplied, not akin, of the best breeding and individual merit. A number of Yorkshire boars fit for service, and fine lengthy sows in pig to an imported boar. Berkshires, all ages, quality of the best. Write H. J. DAVIS, BOX 290, WOODSTOCK, ONT. Breeder of Yorkshires, Berkshires, Shorthorns.

PINE GROVE FARM HERD OF LARGE YORKSHIRES.

Imported and Canadian-bred, from the Hasket family, which has taken more prizes at the leading fairs in Canada and the World's Fair at Chicago than any other family of Yorkshires in America. Young boars and sows fit for breeding for sale. Correspondence solicited, which will receive prompt attention.
JOSEPH FEATHERSTON, Streetsville, Ont.

Large English Berkshires.

HERD headed by two imported boars—Nora B's Duke and Royal Star III, half-brother to Columbia's Duke, which recently sold for \$1,200. Choice pigs, all ages. Write for prices.
H. BENNETT & SON, St. Williams, Ont.

BERKSHIRES FOR SALE.

A few choice boars at reasonable prices; also sows of all ages. Young pigs from stock of all breeding.
JOHN RACEY, JR., Lennoxville, Que.

LARGE ENGLISH BERKSHIRES.

Herd headed by four first prize stock boars of large size, strong bone and fine quality. Young Boars and Sows, all ages, for sale. Orders booked for spring pigs.
GEORGE GREEN, - FAIRVIEW P.O., ONT.
Telegraph and Station: Stratford, G. T. R.

BERKSHIRES.

Two sows due to farrow in February, 1899. My pigs are all of the up-to-date bacon type. Orders booked now will have my special attention.
J. B. EWING, Dartford, Ont.

YORKSHIRES & BERKSHIRES

Yorkshire sows ready to breed, boars fit for service; extra quality. Boars and sows two months old, choice. Berkshire boars fit for service; fit to head a pure-bred herd; large size, strong bone, fine quality. Sows ready to ship, from prizewinners. B. P. Rock eggs, \$1.00 for 13; \$1.75 for 26. Satisfaction guaranteed.
JAS. A. RUSSELL,
Precious Corners, Ont.

BORNHOLM HERD IMP. CHESTER WHITES.

Stock for sale at all times, all ages. Nothing but first-class stock shipped. Inspection invited. Correspondence answered.
Daniel DeCourcy,
Bornholm P. O., Ont.

CHESTER WHITE SWINE.

Young stock, both sexes. Booking spring orders.
W. E. WRIGHT, - GLANWORTH, ONT.

REGISTERED CHESTER WHITE PIGS.

Eight weeks old, at \$5.00 each.
REGISTERED JERSEY BULL CALVES \$20.00 each.
F. BIRDSALL & SON, BIRDSALL, ONT.

DUROC - JERSEY SWINE

We have an excellent lot of long, strong, hardy young Duroc-Jersey pigs now on hand. Also a few choice young boars ready for service. We have also a choice flock of White Minorca Chickens. Eggs, \$1 per dozen. Address,
Tape Bros., Ridgetown, Ont.

OXFORD HERD OF POLAND-CHINAS

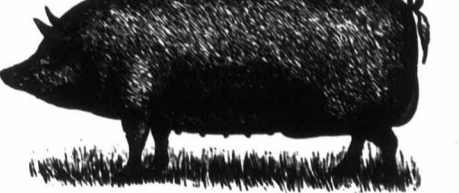
The home of the winners of the imported boars, Conrad's Model and Klondike, assisted by Bacon Boy and Lennox. Has won 64 out of a possible 69 first prizes. Stock of all ages for sale. Write for prices or come and see.
W. & H. JONES,
OXFORD CO. - MT. ELGIN, ONT.

Springridge Poland-Chinas

Now offering the 2-year-old sire, Blackmoore, and a few of his young females, and booking orders for young stock from the royally-bred Goldbug, lately added to the herd.
WM. J. DUCK, MORPETH, ONT.

POLAND-CHINA SWINE.

Young stock, both sexes. Eggs for hatching from B. P. Rocks and L. Brahmas, \$1 per 13; Rouen Ducks, \$1 per 11. Turkey Eggs in season. Farm three miles east of town.
J. F. M'KAY, PARKHILL, ONT.



One hundred Tamworth and Improved Chester White Spring Pigs of a true bacon type, our herd having won the best prizes offered at the leading exhibitions throughout Ontario and Quebec for the past ten years. Stock for exhibition purposes a specialty. We pay express charges between stations, and guarantee safe arrival of all stock shipped. Pairs furnished not akin. Write for prices.
H. GEORGE & SONS, Crampton P.O., Ont.

Tamworth Boars.

3 Tamworth boars three months old, from Toronto winners, \$6 each, with registered pedigree. Also, two registered sows 6 months old at \$15 each.
D. J. GIBSON,
Bowmanville, Ont.

Chatham Tamworths

One 12-mos.-old boar, 8 sows 5 mos., 6 sows 4 mos., 2 boars 4 mos. 30 boars and sows, 10 weeks registered—express prepaid in Ontario—for \$7 each; also 30, six weeks, \$6 each, prepaid and registered in Ontario.
J. H. SIMONTON, Box 304, Chatham.

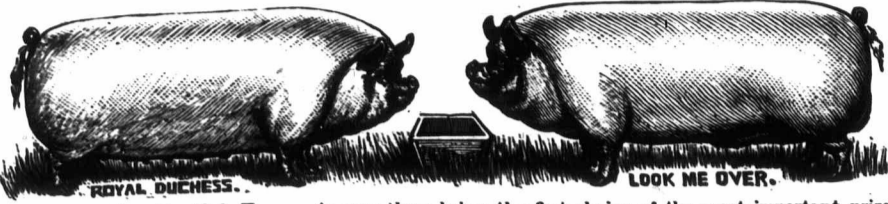
TAMWORTHS

Of the Most Approved Type.
WE have a dozen vigorous sows to farrow this spring to O. A. C. 419, and can book orders for right good stock. Our stock was not only represented at the Illinois State Fair, but won the best prizes offered in '98. We also have a choice imported Berkshire sow three years old, and a twenty-months boar for sale.
P. R. HOOVER & SONS,
GREEN RIVER, ONT.

Tamworths, Holsteins, and Barred Rocks.

Tamworth (January, 1899) farrow (choice), sired by (Royal winner) Whitacre Crystal (Imp.). Also, booking orders for spring litters, sired by imported boars. One ten months' sow, in farrow. Breeding and quality of stock unequalled. Barred Rock settings.
A. C. HALLMAN, NEW DUNDEE, ONT.

AT SUMMER HILL IS THE LARGEST HERD OF... Imported Yorkshires IN THE DOMINION.

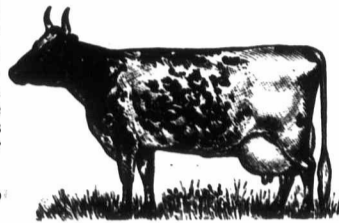


Large, Lengthy, English Type. Among them being the first choice of the most important prize-winning English herds. My Canadian-bred herd comprises the choicest individuals, selected from the best herds in the country, and is headed by the undefeated prize-winning boar, Look-Me-Over 2612. I am offering young stock directly imported, imported in dam, or Canadian-bred. We ship to order, prepay express charges, and guarantee stock as represented. Trains met at Hamilton by appointment.

D. C. FLATT, MILLGROVE, ONT.

AYRSHIRES and YORKSHIRES

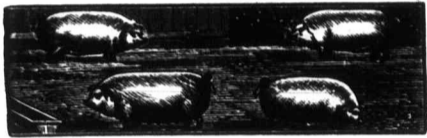
One Yearling Bull, February, March and April calves, and other young stock, all of choicest breeding and individual excellence. February, March and April pigs, some extra good ones, at moderate prices. Can furnish pairs of either calves or pigs not akin. For prices, or anything in Ayrshires or Yorkshires, write us—



ALEX. HUME & CO., Menie P. O., Ont.,
IMPORTERS AND BREEDERS. Hoard's Station, G.T.R.

PURE-BRED GUERNSEY CATTLE

Chester White Swine.

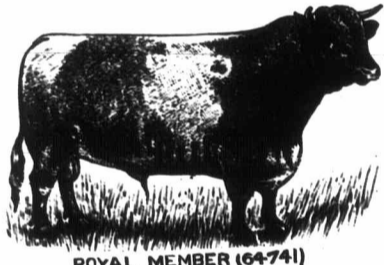


Duroc-Jersey Swine.

FOR SALE—Two young Bulls ready for service, and Heifers bred. First-class Pigs of all ages from imported and prizewinning sires and dams. Twenty head of HOLSTEINS for sale. Write for particulars and prices to **WM. BUTLER & SONS, DEREHAM CENTRE, ONT.**

WE ARE OFFERING FOR SALE 8 HIGH-CLASS YOUNG IMPORTED SHORTHORN BULLS OF THE BEST SCOTCH BREEDING,

TOGETHER WITH A FEW **Home-bred Bulls** AND A NUMBER OF **Cows and Heifers** BOTH IMPORTED AND HOME-BRED.

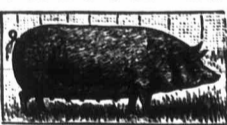


Correspondence or a personal visit solicited. Catalogues on application.

H. CARGILL & SON, CARGILL, ONTARIO.

Cargill Station and Post Office on G. T. R., within half mile of barns.

CHOICE SPRING PIGS



In pairs, not akin; also young sows bred and ready to breed. Prices right and freight paid. **JOHN FULTON, Jr.,** Brownsville, Ontario.

18-Tamworth Brood Sows-18 FOR SALE.

From George and Laurie stock, and in pig to a George-bred boar. Also a few beautiful St. Lambert Jersey heifers.

W. D. REESOR, MARKHAM, ONT.

TAMWORTHS, YORKSHIRES, BERKSHIRES.



For Sale—Three Tamworth Boars, one Sow, ten weeks old, \$7.00 each; Tamworth Pigs from six to eight weeks old, \$5.00 each; Yorkshires, same age and price; two Berkshire Boars and four Sows, four months old, at \$8.00 each. All Pigs registered and crated. **COLWILL BROS., Newcastle, Ont.**

OAKHILL TAMWORTHS.

FOR SALE—One boar, 16 months old. Sows in pig, and young pigs from 6 to 10 weeks old, sired by Sandy Hill 639, a prizewinner wherever shown, and out of first-class sows. Prices reasonable.

R. J. & A. LAURIE, WOLVERTON, ONT.

TAMWORTH BOARS AND SOWS

From Elliott, Bell and Nourse foundation. A choice bunch of Shropshire Ram Lambs for fall delivery; extra well covered; imported foundation.

CHAS. LAWRENCE, COLLINGWOOD, ONT.

Barred Plymouth Rock Eggs

From a pen of selected, extra well barred, large, strong, healthy hens. And have purchased an AI imported cockerel of the "National" strain to mate with them. My customers may rely on getting the very best value for their money. Price, \$1.00 per setting, or 3 settings for \$2.00.

W. C. SHEARER, Bright, Ont.

FOR 60 DAYS MY ADDRESS WILL BE

GEORGE HOTEL, Shrewsbury, Eng. Sheep and Cattle Orders for high-class will receive careful attention. Sheep imported by me have won more premiums in eight years than all other importations combined.

ROBERT MILLER, Stouffville, Ontario.

SHROPSHIRE

FOR SALE: **30--Ram and Ewe Lambs--30** Mostly sired by the imp. ram Newton Stamp 9631. A prizewinner at Toronto in 1897.

GEORGE HINDMARSH, AILSA CRAIG, ONT.

SMITH EVANS, GOUROCK, ONT.

Breeder and importer of registered Oxford Down Sheep. Selections from some of the best flocks in England. Stock for sale at reasonable prices. Inspection invited.



SHROPSHIRE

Shall have a fine lot of choice early lambs for the fall trade. We import and breed only the best.

J. P. PHIN, Hespeler, Ont.

EGGS FOR HATCHING

From Bronze Turkeys, Pekin and Rouen Ducks, B. P. Rocks, Andalusians, Black Javas, Houdans, B. Leghorns, and Black Spanish. Turkey eggs, 25c. each; others, \$1.50 per setting.

W. E. KNIGHT, Bowmanville, Ont.

EGGS

It pays to get the best. We have them in L. and D. Brahmas, B. and W. Rocks, W. Wyandottes, Black Minorcas, and Indian Game, at \$1.25 per setting.

JACOB B. SNIDER, German Mills.

Barred Plymouth Eggs for Hatching.

Two pens of fine, large, well-barred birds, fine laying strain. 15 Eggs, \$1; 30 Eggs, \$1.75; 45 Eggs, \$2.

Thos. Baird & Sons, Chesterfield, Ont.

GOSSIP.

Mr. John Provan, Larbert, Scotland, has sold to Mr. George Stewart, Howick, Quebec, two Clydesdale stallions named Royal Baron (10268) and Royal Pearl, the former bred by Mr. Park-Hatton, and got by Prince of Erskine. Royal Pearl was by Royal Alexander (9997), out of a mare by Scottish Pearl (2949), and his grandam was by Top Gallant (1850). They were purchased by Mr. Provan from Mr. W. S. Park, and shipped May 8th.

THE MAPLE LODGE SHORTHORNS AND LEICESTERS.

On the occasion of a recent visit to Mr. A. W. Smith, of Maple Lodge P. O., Ontario, the herd of forty-five high-class Shorthorns were found in capital condition, evidencing proper care and an intelligent system of breeding, feeding, and treatment, resulting in a thrifty, robust and early-maturing class of cattle, with strong constitution and good feeding qualities, while several of the families represented show superior milking propensities, some of the cows swinging udders which would do credit to the best of special dairy herds. One of this class, Princess of Thule, tracing to imp. Lavinia, is now yielding fully 50 lbs. of milk daily, while her dam, previous to her death from milk fever, gave 60 lbs. daily, so that this quality comes through the family honestly by inheritance. Another family in the herd, which combines good feeding and fleshing qualities, with deep-milking proclivities, is the Constances, founded on one of the best of the Bates tribes, and topped with choice Scotch-bred bulls, producing animals of good size and style, together with a wealth of natural flesh, such as fills the eye and the hand at once, and making a favorable impression at first sight, which grows on one the longer he looks at them. This family produced the great show bull Calthness, sold to Premier Greenway, winner of first honors at the Winnipeg Industrial Exhibition last year, and Cedric, the first prize bull calf at the Toronto Exhibition, 1897, now in service at the Ontario Agricultural College farm.

The Scotch-bred families are represented by a number of the descendants of the grand old imported Cruickshank cow Lovely 19th, of one of the choicest of the Sittytton tribes, a cow which bred till she was twenty years old, and left a large and lusty progeny. The reliable Scotch-bred Syme family, which has produced probably as many prizewinners as any other in Canada the last twenty years, is represented by several choice members tracing to Jane 3rd, imp. by Simon Beattie. The newly imported 3-year-old cow, Lady Mary 15, is a straight, even roan, of fine quality, sired by Denmark, dam by Mountain Gem, from the Missie family, which produced Marengo, the champion of the Royal Show last year, and got by William of Orange. She is nursing a bull calf by Maximus, a Marr bull of the Missie tribe. Other excellent families are represented by individual females of the same general type, and a grand lot of heifers, young bulls and calves are coming on to fill the blanks made by numerous sales during the past few months. These show in their pedigrees top crosses of such choice bred bulls as Conqueror, of the Cruickshank Clipper tribe (from which came Cumberland, Commodore and Roan Gauntlet); Leverrier Prince, of another of the favorite Sittytton Sorts, and British Flag by Bampton Hero. The present stock bulls in service are Abbotsford, a first prize Toronto winner (of the same family as the World's Fair champion, Young Abbotsburn), and the newly-imported Knuckle-Duster (72793), bred by Mr. Bruce, of Inverquhomery, to whose herd many complimentary references have been made, and which, being near the most noted herds of the day, had the use of their best sires. He was got by Waverley (8672), dam by Cap-a-Pie, and is a typical Aberdeenshire Shorthorn of fine quality and character. With the services of such sires the calibre of the herd should continue to improve.

Mr. Smith's flock of Leicesters has long held a leading place in the list of prizewinners at the principal shows in the Dominion, and as an indication that it is up-to-date, it is only necessary to state that at the Toronto Industrial-Canada's leading exhibition—in 1898, the Maple Lodge flock won in keen competition both the open and the Canadian-bred flock prizes, and the first prizes for aged ram and shearing ram, for aged ewes and shearing ewes, and also second prize in the latter section. The same record was repeated at the Western Fair at London, and, in addition, the special for best 5 yearlings went to the Maple Lodge flock, and the Provincial Winter Show at Brantford the gold medal offered by the American Leicester Association was also captured by Mr. Smith. The four imported prize ewes added to the flock three years ago have proved excellent breeders, and their produce has added strength to the flock; but the owner, never satisfied as long as there is a possibility of improvement, contemplates importing again this summer, having engaged passage via one of the Beaver Line packets sailing from Montreal June 3rd, and it is safe to say will be content with none but the best obtainable.

THE TORONTO EXHIBITION.

Stimulated by the grand success of last year's Industrial Fair, the Directors of the Toronto Exhibition are putting forth greater efforts than ever to make the one for the present year eclipse all that have gone before, both in the extent and variety of exhibits, as well as the magnitude and novelty of the special attractions. The prize list has been published, and copies can be procured by any of our readers by dropping a post card to the Secretary at Toronto. The fair is to be held from the 28th August to the 9th of September.

HOW ADVERTISERS IN THE FARMER'S ADVOCATE ARE KEPT RUSHED.

J. E. Meyer, Kossuth, Ont., writes: "Please withdraw both my ads. in your paper. I have so many orders for eggs that I can hardly fill them, and do not want any more or I will get no eggs to set myself. I am especially behind in Barred Rock eggs and think I will have to return some of the money, as they are not laying fast enough to keep up. I am very busy sending out incubators and brooders. I have sent out ten incubators, besides almost as many brooders, in last ten days. I sent a 240-egg incubator to W. E. H. Massey's Dentonia Park Farm on Monday, which makes the second of that size he has bought this season. I shall be glad when this rush lets up, as I can stand a rest soon."

EUROPEAN ADVERTISEMENTS.

Hampshire Down Sheep.

SPLENDID GOOD GREAT MUTTON. WOOL. WEIGHT.

This highly valuable English breed of sheep is unrivalled in its

Rapid and Wonderfully Early Maturity,

possessing, too, a hardness of constitution adapted to all climates, whilst in the quality of

MUTTON AND LARGE PROPORTION OF LEAN MEAT IT IS UNSURPASSED.

Full information of

JAMES E. RAWLENCE,

Secretary, Hampshire Down Sheep Breeders' Association, SALISBURY, ENGLAND.

HENRY DUDDING, RIBY GROVE, GREAT GRIMSBY, LINCOLNSHIRE, has always for inspection and sale from the largest and most noted flock of pure Lincoln Longwool Sheep in the country, both Rams and Ewes of all ages. Representative specimens from this flock have secured for many years past at the Royal Shows champion and other prizes; whilst they have also at both the Paris Exhibitions, Vienna, Amsterdam, Chicago, Palermo, secured champion awards, and at all the leading shows in Australia, New Zealand, Canada, and the States, Riby sheep and their descendants have secured the highest honors. Wool is a leading feature in the flock, its quality being amply testified by the fact that wherever exhibited it has each time secured the premier prize including that at Windsor in 1899. The record of its careful breeding and consistent success is worldwide, and the present members of the flock are fully equal to any that have preceded them during the past 130 years in which it has been in existence, descending from father to son without dispersal. The flock holds the record for the highest price ram of 1898 (i. e., 1,000 gs.), and for the highest recorded average for an auction sale of fifty-two rams (i. e., 456 19s.) at the annual sale in July, 1898. A grand selection of yearling and other sheep on offer, sired by the most carefully selected sires obtainable, in which are contained all the best strains of the present day. Telegrams: "Dudding, Keelby."

Kent or Romney Marsh SHEEP ANNUAL RAM SHOW & SALE.

The annual show and sale of registered Kent or Romney Marsh rams, consisting of selected specimens from the leading flocks of the breed, will be held at

ASHFORD, KENT, ENGLAND,

ON

Friday, 29th Sept., 1899

CATALOGUES AND FULL INFORMATION FROM

W. W. CHAPMAN,

SECRETARY KENT OR ROMNEY MARSH SHEEP BREEDERS' ASSOCIATION,

FITZALAN HOUSE, ARUNDEL STREET, STRAND, LONDON, ENG.

J. E. CASSWELL,

Loughton, Folkingham, Lincolnshire, breeder of Lincoln Long-wooled Sheep, Flock No. 46. The flock was in the possession of the present owner's great-grandfather in 1785, and has descended direct from father to son without a single dispersion sale. J. E. Casswell made the highest average for 30 rams, at the "Annual Lincoln Ram Sale," 1895 and 1897. The 1896 rams were all sold for exportation. Ram and ewe hogs and shearings for sale, also Shire horses, Shorthorns, and Dark Dorking fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingham, G. N. R.

W. W. Chapman,

Secretary of the National Sheep Breeders' Association, Secretary of the Kent or Romney Marsh Sheep Breeders' Association, and late Secretary of the Southdown Sheep Society.

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American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER LEVERING, Secretary, Lafayette, Indiana.

GOSSIP.

Mr. L. B. Silver, originator of the Ohio Improved Chester White breed of hogs, died at Cleveland, O., May 15th, aged 73 years.

The thirty-first annual meeting of the American Jersey Cattle Club was held in New York, May 3rd. About forty members were present, and ninety-four were represented by proxy. The annual report showed that during the past year 3,300 bulls and 3,481 females had been registered, a total of 12,781, as against 13,025 in the previous year. A part of this decrease is supposed to be due to the recent ruling in regard to pasture service, to which several members objected, but the rule was sustained, and will continue in force. The transfers during the year numbered 12,957, against 13,976 last year. Vol. 50 of the herd register has been published during the year, and Vol. 51 will probably be issued next month. The total receipts for the year were \$30,686, and expenditures \$25,078, or \$5,608 less than receipts. The salaries account is \$13,565. The Club has a balance of cash on hand of \$7,426, and \$45,000 of assets, including real estate, bonds and deposits with trust companies, and \$4,930 in books and furniture, making a net credit to Club fund of \$52,040. The officers elect are: President, E. A. Darling, New York; Vice-President, George E. Poer, Rochester, N. Y.; Recording Secretary, J. J. Hemingway; Corresponding Secretary, Valancy E. Fuller.

GOLD MEDALS GALORE.

The special prizes in addition to the regular cash premiums offered for the Canada Central Fair at Ottawa this year include 30 gold medals, five silver medals, and also numerous money prizes. There are 21 gold and 2 silver medals offered in the classes for horses, and 7 gold medals for the best herd of one bull and four females over one year old in each of the following breeds of cattle, viz., Durhams, Herefords, Galloways, Holsteins, Jerseys, Guernseys, and Ayrshires. The Dominion Shorthorn Association gives, in addition to the regular class prizes, \$50 for a young herd, in two prizes: 1st, \$20; 2nd, \$10; \$50 for best herd of 4 calves bred by exhibitor, and \$10 each for best bull and best female any age. The Holstein-Friesian Association of Canada gives \$100, and the American Association \$75 for prizes in a milk test. Several of the sheep breeders' associations offer special cash prizes, and Mr. W. C. Edwards, M. P., a gold medal to the Russell Co. farmer taking the largest amount of prizes in live stock.

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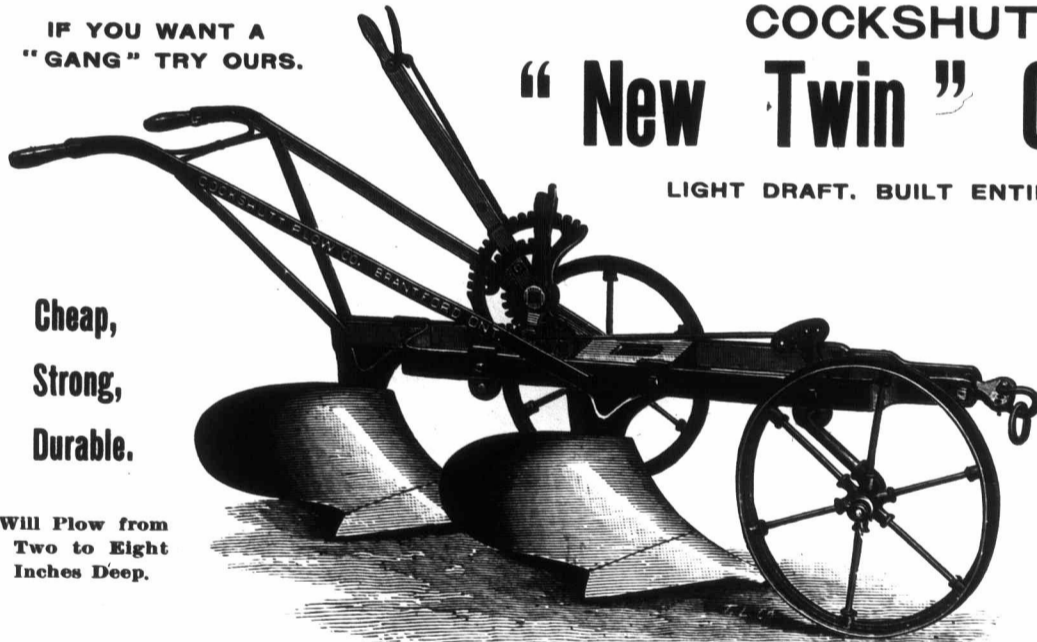
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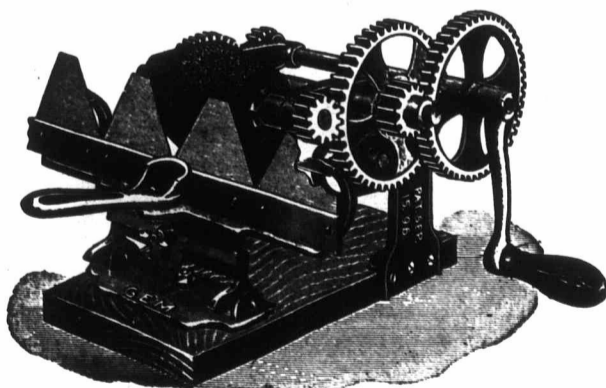
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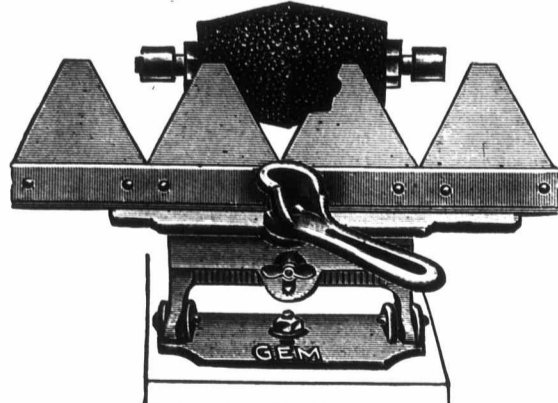


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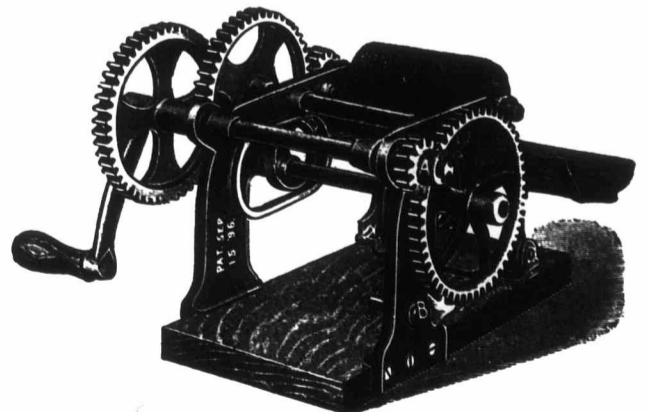
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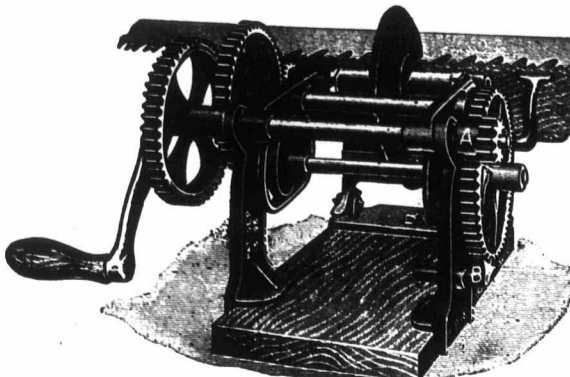


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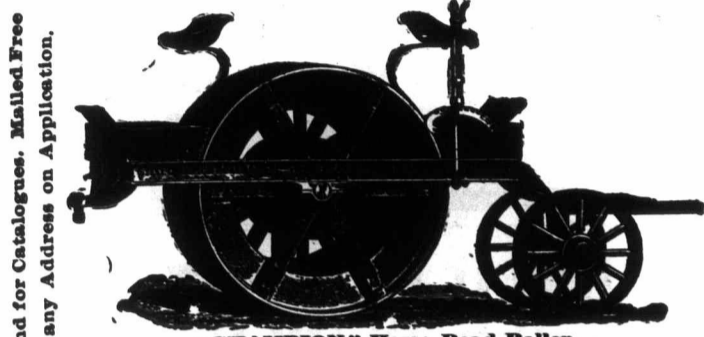
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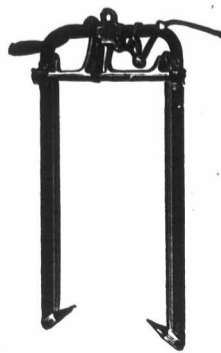
in competition with all comers at the principal Canadian exhibitions, being all the gold medals for which they entered into competition. **THIS FACT ATTESTS THEIR QUALITY.**

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GOSSIP.

The newly-elected officers of the American Tamworth Swine Record Association are as follows: President, Edwin O. Wood, Flint, Michigan; secretary, E. N. Ball, Hamburg, Michigan.

A movement is on foot in England with the object of establishing a herd book for Longhorn cattle. At a largely attended and influential meeting of admirers of the breed at Rugby, under the presidency of Mr. W. H. Sale, it was decided to form a society with an annual subscription of £1 and after considerable discussion it was resolved that no animal having less than five crosses of pure blood should be accepted for entry in the herd book. Mr. T. H. Westman, Rose Cottage, Atherstone, Warwick, has been appointed hon. secretary to the new association.

Hon. M. H. Cochrane & Son, Hillhurst, Que., have, we are informed, a new importation of Shorthorn in quarantine at Quebec, included in which is the roan yearling bull, Scottish Hero, bred by Mr. Duthie, by Scottish Archer and out of Missie 134th, by William of Orange. His breeding is thus very close to that of Marengo, the Royal champion of last year, being by the same sire, and his dam is a half-sister to the dam of Marengo. A fine red cow, Vain Belle 2nd, in calf to Silver Plate, also comes from the Collynie herd, and the red yearling heifer, Consuelo 2nd, from the herd of Mr. Reid, of Cromley Bank.

Mr. Wm. Wilson, of Haddon Hill, Brampton, Ontario, writes:—"The four-year-old imported Shorthorn cow, Fortuna 2nd, on the 14th of May dropped a fine heifer calf, imported in dam and sired by Royal Mail (6947). Fortuna 2nd comes of a noted family in the herd of Mr. Marr, Cairnbrogie, Aberdeenshire, the Floras, much prized as being good breeders and milkers. The sire of Fortuna 2nd is Superb (61902), bred by Mr. Cruickshank's Sittlyton Farm. She is a very heavy milker. Haddon Hill Farm can also boast of a superb imported bull in Scotland's Fame, by Mr. Duthie's Golden Ray, by Scottish Archer, bred by Mr. Cruickshank and sold to Mr. Willis, Bapton Manor, when a yearling, for 300 guineas. Scotland's Fame is doing well and getting splendid stock."

JOSEPH CAIRNS' CHESTER WHITE PIGS.

Mr. Joseph Cairns' stock farm adjoins the village of Camlachie, in Lambton County, Ont., where a few very choice Jersey cattle receive attention as well as the extensive herd of Chester White swine, the foundation of which was purchased from the herd of Mr. Willis, Ohio, whose winnings at important competitions have attracted the attention of admirers of the breed in all sections of the continent. At present some eight matrons are doing service as breeders, and among them our attention was attracted by the splendid brood sows Alma 368, by Coco 223, and her daughter Nellie A 1009, by Cracker Jack 351 T. They are a pair worthy of the attention of admirers of the up-to-date type, possessing splendid length and uniformity, with the requisite depth to class them among the type so much sought by packers for their high-class bacon trade. Their management is such as to maintain vigor and constitution. Both of these sows are rearing litters this spring to imported sires. Kab 973, by Cracker Jack, and out of Rachel G 3646 T, is another splendid sow suckling a litter this spring. Much care has been given by Mr. Cairns in his selection of sires, and animals from the best families have been selected. John A 951, by Jack A 2601 T, dam Auntie 6282, has done three years' service on the farm, and each year has strengthened his standing as a sire in Mr. Cairns' estimation. His immense length and quality are shown all through his stock. Nonsuch 912, by Quality 3989, is also an extra strong sire with immense bone, and mated on the former's daughters has proven himself highly satisfactory to his owner. Of more recent importation, we saw the very promising youngster Willis, by Protection Chief, and out of one of Mr. Whinery's best sows, Lady Wall, and though he has to be tested, he is a promising-looking fellow, with splendid length and quality. And of his ancestry we were informed that his grand sire was one of the high-priced boars in his day, and a noted prizewinner. Some forty head are ready for shipment, having a variety of pedigrees. See Mr. Cairns' advt.

FOOD TESTS OF HOLSTEIN-FRIESIAN COWS.

Mr. S. Hoxie, Supt. Advanced Registry of American Holstein-Friesian Association, writes: "The greatest scientific interests of the day with regard to the comparative merits of the various breeds of dairy cattle is the cost of production of the various products. The Holstein-Friesian Association of America, in connection with the various State experiment stations, is conducting tests for the purpose of determining the food cost of butter. As a matter of interest to your dairy readers I give below the results of recent tests: De Kol Manor Beets; age 2 years, 1 month, 15 days; food consumed, pasturage, pea meal 11.83 lbs., ground oats 11.83 lbs., ground barley 11.83 lbs., butter-fat 9.695 lbs. Representative of Cornell University Station, H. C. McLallen. Mutual Friend 2nd; age 6 years, 6 months, 26 days; food consumed, ensilage 434 lbs., hay 36 lbs., wheat bran 45 lbs., cottonseed meal 34 lbs., ground oats 5 lbs., corn meal 15 lbs.; product, milk 427.4 lbs., butter-fat 14.724 lbs. Representative of Cornell University Station, A. R. Ward. De Kol Lady; age 1 year, 11 months, 2 days; food consumed, pasturage, pea meal 11.83 lbs., ground oats 11.33 lbs., ground barley 11.83 lbs., product, milk 312.4 lbs., butter-fat 9.384 lbs. Representative of Cornell University Station, H. C. McLallen. Aaggie Paul; age 2 years, 2 months, 2 days; food consumed, ensilage 303 lbs., hay 7 lbs., wheat bran 28 lbs., oil meal 16 lbs., corn meal 30 lbs., ground oats 14 lbs.; product, milk 290.3 lbs., butter-fat 11.303 lbs. Representative of Michigan Station, Porter H. Davis. Clothilde Artis Topsy; age 4 years, 1 month, 10 days; food consumed, pasturage, malt sprouts 21 lbs., gluten meal 7 lbs.; product, milk 412.8 lbs., butter-fat 13.724 lbs. Representative of Cornell University Station, Leroy Anderson. Paula Dorinda; age 2 years, 10 months; food consumed, ensilage 363 lbs., hay 13 lbs., wheat bran 80 lbs., oil meal 314 lbs.; product, milk 343.2 lbs., butter-fat 11.101 lbs. Representative of Michigan Station, Porter H. Davis.



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If your dealer hasn't it, write us for it, and tell us of anything special in the ailments of your flocks or herds and we'll advise you how best to use it.

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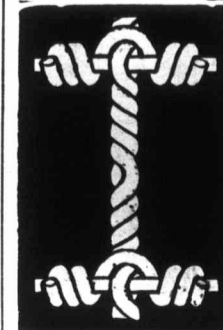
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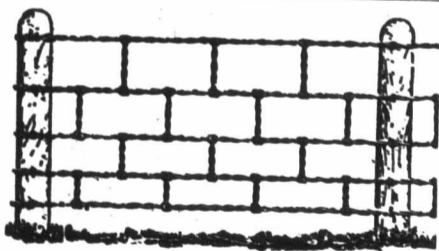
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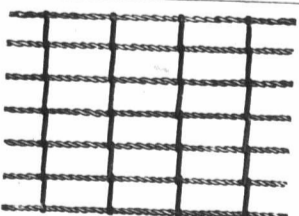
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 100 Rods Per Day.
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GOSSIP.

In writing to advertisers, mention the "Farmer's Advocate."
 The Smithfield Club has decided to adopt the single judge system at future shows. The world moves.

J. Harris Woolley, Simcoe, Ont., writes: "The Ayrshire bull that is advertised in this issue is an animal of very choice quality and breeding. He was born on the 20th of March, '88, and at present tips the scale at 325 lbs., is not coarse, and only in good breeding shape. He is deep, low on legs, extra long in back, well quartered, of good disposition, and beautifully marked. His dam is a very heavy milker. He was exhibited at six fairs, winning six firsts; and on two occasions was shown against Toronto prizewinning stock. The Shropshires are good quality."

THE SPRINGHURST SHORTHORNS.

The herd of Mr. H. Smith, of Hay P. O., near Exeter, on the London, Huron & Bruce branch of the G. T. R., was recently inspected by one of the ADVOCATE staff and found in its usual excellent condition, having come through the winter in fine form. Mr. Smith has had a fair share of the active demand for good Shorthorns, and has contributed to several of the best shipments that have left the Province during the past year, but retains a strong herd both in numbers and individuality. One of the principal families represented in the herd is the Scotch-bred Village Blossoms, of which there are about a dozen females descended from the Sittyton herd of Amos Cruickshank. From this family came the World's Fair champion bull, Young Abbotsford, and the Springhurst stock bull, Abbotsford, winner of 1st prize at Toronto Exhibition and the Western Fair at London. The Duchesses of Glosier, another popular Cruickshank family, tracing to imp. Duchess 12th, by Champion of England, are represented by several really good individuals, worthy of the reputation of the tribe. There are in the herd two capital daughters and three granddaughters of Vanity, the 1st prize cow at Toronto in 1897, descended from the imported cow Van Duchess, bred in Aberdeenshire and sired by Edgar (4301). The recently imported Lady Bell 3rd is a sonnie roan coming 3 in June, bred in Aberdeenshire, sired by Denmark, and out of Lady Bell, by Gravesend, and makes a substantial improvement in the herd. A few good things trace to imported Lady Eden, a family which has been developed very satisfactorily at Springhurst by judicious crossing with Scotch-bred bulls, producing among others the fine show heifer, Freida, winner of 1st prize at London, 1897, beating the 1st prize and sweepstakes winner at the Toronto show of the same year, and winning also 1st at the Winnipeg Industrial in 1898.

The stock bulls in service are Abbotsford, who has proven a very successful sire, and the imported Knuckle-Duster, owned jointly with Mr. A. W. Smith, of Maple Lodge; and it is safe to say that few herds in the country have the services of two as good bulls. Three capital young bulls about a year old are held for sale. One in particular, a choice, even roan by Abbot of Strathallan, and out of a daughter of Abbotsford, has a grand back and a wealth of natural flesh seldom equalled. Taken all in all, the Springhurst herd ranks among the very best, and keeps well up to date in all desirable qualities.

WM. BUTLER & SONS' GUERNSEY CATTLE, DUROC AND CHESTER SWINE.

During a recent visit to the stock farm of Messrs. Wm. Butler & Sons, Dereham Centre, Ont., we saw evidence of active business operations in both cattle and hogs. Mr. Butler, Jr., who had recently returned from British Columbia, where he had taken a carload of pure-bred animals, was busy making preparations for a second trip to the Pacific coast with a similar lot of stock, including Guernseys, Durocs, Chesters, besides a valuable pair of Clydesdale mares. Preparations were also being made for the shipment of several consignments of swine to various points in Ontario and the Maritime Provinces.

The Guernsey herd at present numbers twenty-one animals, at the head of which is the very handsome and breedy young bull King of Maple Hill 5332, sired by King of Oxford 4063, the winner of 1st prize at the Toronto Industrial in 1898, and of 1st prize and silver medal at Toronto, Montreal and Ottawa in 1897. The young bull's dam is Queen of Sunny Springs, a very choice prizewinning cow and the dam of several winners which are now in the herd, and on account of the close relationship of the bull with several females include ten cows and heifers in milk or in calf, and a few heifers and heifer calves. One of the noted cows is Pamarina 6176, bred by Mr. Tillson, N. Y. She was purchased by Messrs. Butler from the noted Forsythe herd, of which she was claimed to be the second best cow. She won second premium in the big Ontario shows of 1898, and is a heavy producer. Among other matrons are Irma 3121, Lady Sauk 6286, Fancy of Sedgfield 8512, Rose of Sunny Springs and Phyllis Lassie, all of which have won good prizes in important showings. There is also in milk the yearling Hesperanthe, selected on the island by F. S. Peer, N. Y., and imported by him in 1898. There are two very nice 12-months bulls in the herd, sired by King of Oxford, and out of Effie of Sunny Springs and Rose of Sunny Springs.

The swine number considerably over one hundred head, and include many prizewinners in both the breeds kept—Chester White and Duroc-Jersey. Of Chesters there are some twenty sows with litters at foot or recently weaned. The principal stock boar of this breed is Frisker 3rd, imported in 1898 from the herd of L. H. Martin, Ohio. The grandsire and granddam of this hog won sweepstakes awards at the Columbian Exposition. The Duroc-Jersey matrons include fifteen fine sows with suckling or weaned litters. The chief Duroc stock boar is Perfection 2527, bred by Stonebreaker, of Illinois. The young pigs were nearly all out to pasture, and were apparently making good progress in growth. A number of selections from either breed have already been made to fit for the coming season's exhibitions.

Messrs. Butler have recently purchased the entire herd of twenty pure-bred Holstein-Friesians from Mr. J. T. Hutchinson, Hayfield, Man. They are expected to arrive at Dereham Centre during the present month. See Messrs. Butlers' change of advertisement.

THE FARMER'S BEST FRIENDS
Good Horses and Good Fences.
 Any sound horse is a good horse, but there is only one absolutely satisfactory fence—
THE AMERICAN FIELD FENCE.
 Made of large, strong wires, absolutely immovable, thoroughly galvanized and nicely woven.
A Genuine Money Saving Fence.
 Sold by dealers everywhere. If you can't find it, write direct to us for catalogue.
AMERICAN STEEL AND WIRE CO.,
 CHICAGO and NEW YORK.

Work Done With THOROLD CEMENT *Speaks for Itself.*

BARN OF ALLAN McMANE, ELMA TOWNSHIP, ONT.
 Basement Walls, 84 x 100 x 9 feet high.
 Built with Thorold Cement.

BARN OF WM. PATTON, SOUTH CAYUGA, ONT.
 Size of Basement Walls, 36 x 60 x 9 feet.
 Built with Thorold Cement.

FOR FREE PAMPHLET WITH FULL PARTICULARS, ADDRESS
ESTATE OF JOHN BATTLE,
THOROLD, - ONTARIO.

GOOD FARM FENCE
 should turn all kinds of live stock and even tramps; should expand and contract according to the weather so as always to be tight; should stand all storms—even fire and last indefinitely.

The Coiled Spring Page
Is just such a fence.
 Its virtue is attested by the fact that there is more of it in use than all other makes combined. Prices lower than ever this year.

THE PAGE WIRE FENCE CO., (Ltd.)
 WALKERVILLE, ONT.

PLEASE MENTION FARMER'S ADVOCATE.

TEST OF
Alpha De Laval and Reid's Improved Danish Cream Separators

Made at Nilestown Factory of Thames Dairy Co.

Date, 1899.	Machine	Amount skimmed per hour	Speed revolutions per minute.	Butter-fat left in skim milk at following temperatures.				Lbs. Milk per Lb. Butter.
				80	85	90	95	
January 25	Alpha Reid's	2800	6000	.05	.02	.01	.01	21.10
January 27	Alpha Reid's	2800	6200	.15	.14	.12	.10	22.45
January 30	Alpha Reid's	2600	6000	.05	.03	.02		
January 30	Alpha Reid's	2600	6200	.15	.10	.08		

On January 25 Buttermilk from Cream of Alpha churned at 50 tested .05 (no water added).

January 26th Buttermilk from Cream of Reid's Improved Danish churned at 48 tested .10 (no water added).

Mr. Richardson, St. Mary's, and Mr. John Brodie, Mapleton, were present when testing Reid's Improved Danish, January 27th.

On January 30th both Separators were running at the same time, and the skim milk from the Reid's was put through the Alpha. There were 3,700 lbs. of milk received, and after it had been skimmed by Reid's Improved at a temperature of 90 degrees the Alpha skimmed 303 lbs. of Cream from the skim milk which tested 8/10 of 1 per cent.

The Cream from each Separator was ripened by the use of a pasteurized starter, and contained .65% of acid at the time of churning when tested by Farrington's Alkaline Tablets.

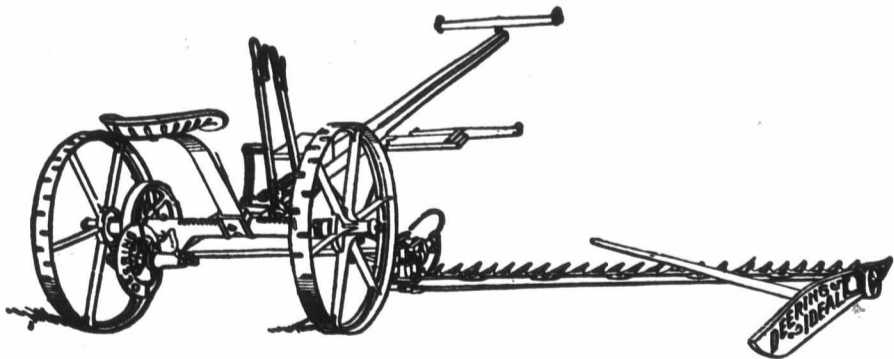
(Signed) **T. B. MILLER,**
Manager Thames Dairy Co.

...THE...

MACHINES

...THAT MADE...

AMERICA FAMOUS.



IDEAL MOWER, 4 1/2 FT. AND 5 FT. CUT.

This is the Mower they are all trying to copy.
Buy none but the original

DEERING IDEAL

made by

Deering Harvester Co.,

Main Office and Factory:
CHICAGO, U. S. A.

Permanent Branch Houses:
LONDON, ONT.,
AND **WINNIPEG, MAN.**

GOSSIP.

At the Eccleshill Hackney sale held by Mr. T. Mitchell, of Bradford, England, May 4th, the three-year-old colt, Cullingworth, by Ganymede, brought 1,100 guineas (\$5,775). The brood mare, Lady Dudley, sold for 450 guineas; Blucher, a three-year-old colt, for 400 guineas, and Earl Dudley, a yearling colt, for 340 guineas. Forty-five animals averaged \$840.

Mr. T. G. Binney, Houghton Green, Playden, Sussex Co., Eng., whose advertisement of Rose-Comb Buff Orphington eggs recently appeared in these columns, writes advising us that he has no more settings to sell this season. As some of his own eggs turned out infertile, we learn that in case of one of his Canadian customers Mr. Benney sent an extra setting of one dozen eggs. He looks for a greatly increased trade next season.

Messrs. H. Stevens & Son, Lacona, N. Y., write: "Our sales of Holstein-Friesian cattle the past winter and spring have been very large, especially so in the States. We have also sold some very fine animals to go to your side. Among the number was an exceptionally fine and well-bred yearling bull and heifer to Mr. A. C. Hallman, New Dundee, Ont. The bull Mr. Hallman selected to head his herd is Judge Akkrum De Kol 3rd, a beautiful individual, very straight, broad, and level, with a very rich, mellow skin, soft, fine hair, with a very large escutcheon. He also has a great milk-vein development, with four large rudimentary teats set wide apart. In appearance he is a very stylish, showy animal. His breeding is exceptionally good, being sired by Judge Akkrum De Kol and his sire is De Kol 2nd's Netherland, a son of De Kol 2nd. De Kol 2nd has made the most butter that has ever yet been made by any cow in any seven-day official test, except her stable companion, Netherland Hengerveld, she only excelling her nine one-hundredths of a pound, and we know of no other cow of the breed that has ever transmitted with any such a degree of certainty as De Kol 2nd. The dam of Judge Akkrum De Kol 3rd is Mosetta, a very promising young cow. She gave at two years old 48 lbs. milk in one day, and later she gave 58 lbs. milk in one day, her milk testing as high as 3.8% butter-fat by the Babcock test. Her sire was Aaggie Lella's Prince, he by Netherland Prince, too well known to need any comment here. Aaggie Lella's Prince was the sire of Netherland Hengerveld. This cow heads the list as a butter producer in all official tests up to date. We feel very confident Judge Akkrum De Kol will do credit to the fine herd he has gone to head. The heifer taken by Mr. Hallman was Queen Hengerveld De Kol, and, as her name indicates, combines the blood of the De Kol and Hengerveld families, her sire being a son of De Kol 2nd and her dam a daughter of Manor De Kol who is a son of Netherland Hengerveld. Individually, this heifer is all that can be desired, her breeding is among the best that can be had, and should nothing befall her she will be a valuable acquisition to the many fine females already in the Springbrook herd. Mr. Hallman is one of the pioneer breeders of Ontario, is a good judge of a dairy cow, and very familiar with the breeding of the best strains of Holsteins both in the U. S. and Canada. He started many years ago with the best class of animals he could purchase, the price being a secondary consideration. Judge Akkrum De Kol, spoken of above, is not only a great sire, but one of the finest show bulls in this country. We have also sold this great bull to Mr. John Drummond, of Killmaurs, Ont., and he will no doubt be seen at your leading fairs this fall. Mr. Hugh Stewart, of Grand, Ont., also has had from us a very fine yearling De Kol bull in De Kol Artis 3rd, and the fine heifer calf, Jessie Veeman De Kol. We have also sold others which we have not the time to mention at this writing, but will state we are getting many inquiries from our ad. in the ADVOCATE and making a fair amount of sales, and are well satisfied with the investment."

THE CARGILL SHORTHORNS.

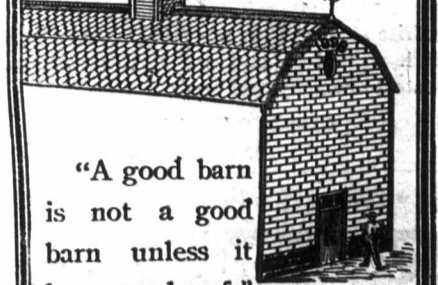
The up-to-date herd of Shorthorns owned by Messrs. H. Cargill & Son were given a hasty look over during a brief visit lately and were found in their usual fresh condition. Numerous sales made during the winter have reduced the number at present to about thirty-five head, but the quality is up to the usual standard. The grand imported roan Nonpareil bull, Royal Member, bred at Kinellar and sired by the Cruickshank bull, Royal James, ranks as one of the very best bulls in the Dominion and makes a worthy head for so good a herd. He is seconded by the recently imported roan three-year-old, Orange Duke, bred by the Duke of Richmond and Gordon, a prizewinner in the Old Country, richly bred, level, and full of fine quality. Red Ribbon, a red with little white, yearling, bred by Mr. Shepherd, Shethin, Tarves, Aberdeenshire, and imported by Messrs. Cargill, is a strong, thrifty, thick-fleshed bull of great promise. Of the 1898 importation of females there are half a dozen or more very good ones, among which is the prize roan four-year-old, Catalonia, by Marathou, bred by Mr. Longmore, of Retlie. She has great substance and depth, with grand brisket and long quarters, and is proving a good breeder. Castilla, of the same family as the last named, was a championship winner at one of the Scottish shows last year, and is a red two-year-old, of splendid character, with strong, level back and the best of handling quality. Beauty 13th, by Lord Ythan, a low-set, level, thick-fleshed, roan four-year-old cow, has proved an excellent breeder. Pineapple 12th is a choice roan yearling, sired by Challenger, and is a model in form and quality, low and level, and covered with a soft, mossy coat of hair. Rosa Fame is a capital roan four-year-old daughter of imp. Indian Chief and imp. Rosalind, by the Cruickshank bull, Stockwell. The favorite Ury tribe is represented by a daughter of Gravesend and a daughter of imp. Saladin, bred by Mr. Duthie, and the Kinellar Roscbuds by a handsome red two-year-old daughter of imp. Royal Member. The imported red and white eight-year-old cow, Myrtle 3rd, is a thick, blocky, beefy sort and has bred well. A quartette of yearling imp. heifers are very attractive and of modern type, while the grand old cows imported some years ago by Mr. D. D. Wilson from the herds of Mr. Duthie and others in Scotland make a substantial backing for a useful working herd which has produced regularly and given much satisfaction to the enterprising owners.

Horse Owners! Use



GOMBAULT'S Caustic Balsam
A Safe Speedy and Positive Cure
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or bluish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO. TORONTO.

ROOFS FOR THE BARN.



"A good barn is not a good barn unless it has a good roof."

Pedlar's Steel Shingles and Siding

Are water, fire, lightning and storm proof, and being constructed by modern machinery from the best stock obtainable, are superior to any similar goods on the market.

Sold by all dealers.

Do not accept any others that are "just as good," but get the genuine, old reliable "The Pedlar Patent."

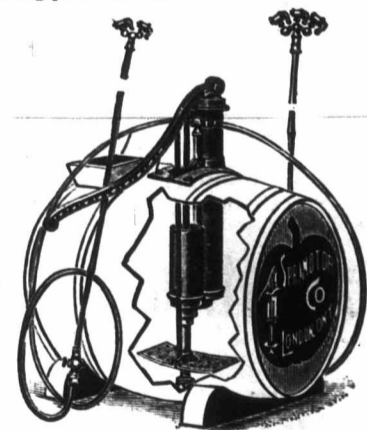
Made only by

Pedlar Metal Roofing Co.
OSHAWA, CANADA.

ALL SPRAYING, DISINFECTING AND WHITEWASHING CAN BE DONE WITH THE

SPRAMOTOR

It is the result of most careful and exhaustive experiment. Each feature was thoroughly tested before being placed on the market.



SENATOR GEO. A. DRUMMOND,
The Sugar King of Canada, Vouches for the Spramotor.

Montreal, January 11th, 1899.
Spramotor Company, London, Ontario:
Gentlemen,—Your apparatus for whitewashing answers admirably; does the work much better than can be done with brushes, and at a great saving of time. Yours truly,
The Canada Sugar Refining Co.
G. A. Drummond.

CERTIFICATE OF OFFICIAL AWARD.

This is to certify that at the Contest of Spraying Apparatus, held at Grimsey on April 2nd and 3rd, 1898, under the auspices of the Board of Control of the Fruit Experimental Stations of Ontario, in which there were eleven contestants, the SPRAMOTOR, made by the Spramotor Co. of London, Ont., was AWARDED FIRST PLACE.

H. L. HUTT, }
M. PETTIT, } Judges.

If you desire any further information, let us know and we will send you a 72-page copyrighted catalogue and treatise on the diseases affecting fruit trees, vegetables, etc., and their remedies.

SPRAMOTOR CO.,

357 RICHMOND ST., LONDON, ONT.
Mention this paper AGENTS WANTED.

PLEASE MENTION FARMER'S ADVOCATE

COLOR and flavor of fruits, size, quality and appearance of vegetables, weight and plumpness of grain, are all produced by Potash.

Potash,

properly combined with Phosphoric Acid and Nitrogen, and liberally applied, will improve every soil and increase yield and quality of any crop.

Write and get Free our pamphlets, which tell how to buy and use fertilizers with greatest economy and profit.

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

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CANADIAN PACIFIC RY.

Fishing

The best Trout and Bass streams are to be found on the line of the Canadian Pacific.

Open season for Trout commences 2nd of May.

Open season for Bass commences 16th of June.

For further particulars and copy of "Fishing and Shooting," consult any agent or

C. E. McPHERSON,
Asst. Gen. Pass. Agent,
1 King Street East, Toronto.

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CANCER

CURED WITHOUT KNIFE OR PLASTER. FULL PARTICULARS FREE.

F. STOTT & JURY, Bowmanville, Ont.

LIVE STOCK AUCTION SALES

Conducted in all parts of the country. Pedigree stock a specialty. Write for terms. References: J. C. Snell, Edmonton; John I. Hobson, Guelph; Hon. M. H. Cochrane, Compton, P. Q.; or this office.

JOHN SMITH, BRAMPTON.

GOSSIP.

The fourteenth annual meeting of the Holstein-Friesian Association of America will be held at Iroquois Hotel, Buffalo, N. Y., Wednesday, June 7th, at 10 a. m. It requires 100 members personally or by proxy to constitute a quorum.

J. F. MCKAY'S POLAND-CHINAS AND POULTRY.

Some twenty-five head of select Poland-China swine were on hand at the time of our visit upon Mr. J. F. McKay, at Parkhill, Ont., the most of which are the result of the mating of Parkhill King, by the noted Conrad's Model, and out of the show sow Bryant's Choice, to such sows as Olga and Mysie, by Lennox and Tiny, by James Blain (imp.). Much care has been given in the selection of the lengthy type, and Mr. McKay's management has been such as to strengthen rather than diminish this quality. Much satisfactory stock has been sent out from this herd, and at no season has there been a better bunch than at the present.

Much attention is also given to pure-bred fowls. Of the Barred Plymouth Rocks, of Lyon, Fenton and Duff strains, we saw a couple of fine, fresh, well barred, healthy pens. In Light Brahmas we think we never saw better; they were selected from Lyon breeding, and are strong, vigorous, well-kept birds, with splendid plumage. A few very fine Bronze turkeys and Pekin ducks are also kept, and a pen of Toulouse geese. And as the firm's ambition is the production of something good in poultry, parties desiring reliable stock, either in eggs for hatching or matured stock, may rely upon gilt-edge orders from Mr. J. F. McKay.

WILLIAM GRAINGER & SON'S SHORTHORNS.

The extensive improvements under progress at the time of our last visit to Wm. Grainger & Son's farm, Lonsdale, Ont., last year, and very greatly to the convenience of the out of their extensive breeding operations, and a would be hard to imagine. Everything has been well considered and carried out in detail. The row of 10 x 18 feet box stalls for the young things to winter in are the best arranged for their purpose we have seen, and the result is plainly visible on the young stock.

The herd was founded on the noted Fairmaid of Hullet 2nd, of World's Fair fame in the milking test, and the mating to such sires as Truce Bearer, Golden Nugget, and the present stock bull, Beau Ideal 2254, by Sittytton Stamp (imp.) 24824, by Banner Bearer, and running through many of Scotland's most noted sires and showyard winners, has proved a distinct success. At present the firm has four splendid three-year-old Golden Nugget females of exceptional quality and true characteristic Shorthorn type, which quality is very fully brought out in the Beau Ideal progeny of more tender age, and as their grandam was a member of an exceptionally good milking family, the high dairy qualities of the Fairmaid tribe will be largely maintained. Beau Ideal has made wonderful advance since we first saw him, and is held in the highest esteem by his proud owners, as he possesses the ability to stamp strength and quality on his offspring. The pair of five-months sons of Kitty Clay and Busy Bee are youngsters worthy of the attention of breeders requiring straight good sires of sterling breeding; they have plenty of bone, a great wealth of natural flesh, broad, level backs (the exact pattern of their sire's), and covered by skins of the finest texture, in solid red color. The young females too are not behind their brothers in Shorthorn conformation, and show the early maturing qualities of the race to which they belong. Mr. Grainger's young stock always advances rapidly, but at no season in our recollection has more real progress been made than in the past year. Some important sales have recently been made and tempting offers refused, and from what we can gather we are inclined to believe the Messrs. Grainger's ambition is to make this one of the largest and most important herds on the continent, and will only be limited to the capacity of the extensive accommodation provided. Fourteen cows have and will drop calves during the present season, mostly to the service of Beau Ideal.

You know there is much more painting done now-a-days than of old, but did you know there is a far better way to do it? Painting is no exception to other things. The art has not stood still. You can still buy some white lead (are you a judge of it?) and some oil (are you a judge of that?) and find a neighborly painter and have some paint made; but as sure as you are alive there is a better way.

THE SHERWIN-WILLIAMS PAINT

Are you awake to the fact that you can get a paint that is made for the particular work you want done, of the best materials combined in the best proportions, mixed in the best way; and that will do more than any other paint will do? If this is not true, then The Sherwin-Williams Paint factory with its tons of daily output and its thirty years of wonderful growth is a pure miracle. "Paint Points" will help you paint right. It's free.

THE SHERWIN-WILLIAMS CO.,
PAINT AND COLOR MAKERS,
Canadian Dept., 21 St. Antoine St., Montreal.

Ask for Tint Card

Of 16 beautiful tints (and white) of that sanitary and absolutely permanent covering for the walls and ceilings of your rooms—Church's cold water Alabastine. The card will help you every way. Goodbye to the worry of constant wall-papering. Alabastine (never sold in bulk) becomes as hard as the wall itself. It won't rub off, peel, or scale. Painters use it and recommend it, but you can apply it yourself, if there is no painter handy—ask your dealer for the "TINT CARD" of

ALABASTINE

For sale by paint dealers everywhere

Free to any one who will mention this paper, a 45-page book, "The Decorator's Aid." It gives valuable information about wall and ceiling decorating.

The Alabastine Co. (Limited), Paris, Ont.

Five Different Styles of Engines:
Locomotive
and
Return Tube,
Portable and
Traction ..

Two Styles of Threshers:
Challenge
and
Advance ..

WRITE FOR ILLUSTRATED CIRCULAR.





4 1/2 AND 6 FOOT CUT.

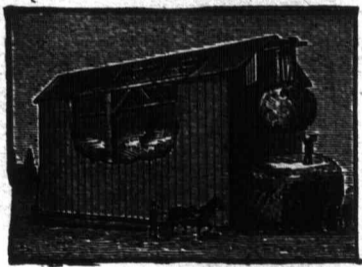
"O YES!" Our No. 8 Mower will start in heavy grass without backing the team, and will cut grass any other mower can cut. Will run as easy and last as long. We sell our machines on their merits, and build our reputation on the "quality," not the quantity, of goods we make.

THE FROST & WOOD CO., LTD.,
HEAD OFFICE AND WORKS: SMITH'S FALLS, ONT.

Toronto Branch: 77 Jarvis Street. Winnipeg Branch: Market Square.

BUCHANAN'S
(Malleable Improved)
PITCHING MACHINE

For unloading hay and all kinds of loose grain.



Unloads on either side of barn floor without changing car. No climbing necessary. Malleable Iron Cars. Steel Forks. Knot Passing Pulleys. Will work on stacks as well as in barns. Satisfaction guaranteed.



The Common-Sense Sheaf-Lifter

Works in connection with Pitching Machine, and is the most complete apparatus ever offered to the public for pitching sheaves. Sheaves left in the mow just as they come from the load.

RESPONSIBLE AGENTS WANTED

Circulars, Prices and Terms on application to **M. T. BUCHANAN & CO., Ingersoll, Can.**

CONTAGIOUS ABORTION AND HOG CHOLERA

can positively be cured or prevented by the use of

WEST'S FLUID, DISINFECTANT.

which is a tar product, is also a cheap and effective

Circulars (specially prepared by a veterinary surgeon) on these diseases, on application.

THE WEST CHEMICAL CO.,

"Dept. F.," TORONTO, ONTARIO.

Agents wanted in all countries.

PLEASE MENTION FARMER'S ADVOCATE.

HAMILTON

Engine and Thresher Works.

ESTABLISHED 1836.

FIRST IN THE FIELD! STILL IN THE LEAD!

WE MAKE AND SELL MANY MORE ENGINES AND THRESHERS THAN ANY OTHER FACTORY IN CANADA.

OUR COMPOUND AND SIMPLE TRACTION AND PLAIN ENGINES

Are models of SIMPLICITY, and pictures of NEATNESS and FINISH. They are unequalled for high-class working qualities.

OUR PEERLESS DAISY AND ECLIPSE SEPARATORS AND CLOVER HULLERS

Are unsurpassed for fast and clean threshing. Forty-page Descriptive Catalogue sent on application to

SAWYER & MASSEY COMPANY, Ltd., HAMILTON, ONTARIO.

GOVERNMENT ANALYSIS

LABORATORY OF INLAND REVENUE,
OFFICE OF OFFICIAL ANALYST,
Montreal, April 8, 1895.

"I hereby certify that I have drawn, by my own hand, ten samples of the **ST. LAWRENCE SUGAR REFINING CO.'S** EXTRA STANDARD GRANULATED SUGAR, indiscriminately taken from ten lots of about 150 barrels each. I have analyzed same and find them uniformly to contain:

99 99/100 to **100** per cent. of pure Cane Sugar, with no impurities whatever."

(Signed) **JOHN BAKER EDWARDS, Ph. D., D.C.L.,**
Prof. of Chemistry and Public Analyst, Montreal.



RANEY, SELBY & COMPANY, BOX 620, KINGSTON, ONTARIO.

It Pays to Care for Your Horse

The Crystal Rosette is double the size of this cut.



The Crystal Rosette is double the size of this cut.

NATIONAL GALL CURE

Is wonder-working in its effects. No other preparation in the world can equal it. It is the only speedy and sure cure for

GALLS, SORE BACK AND SHOULDERS, CORNS, SCRATCHES, MUD SCALDS, ETC.

National Gall Cure does its Good Work while the Horse is Working! For Sore Teats on Cows it gives immediate relief and certain cure.

OUR SPECIAL OFFER!

On receipt of 25 cents we will send a full size box of National Gall Cure and a pair of handsome Crystal Rosettes, like illustration above, which are retailed at 50 cents a pair.

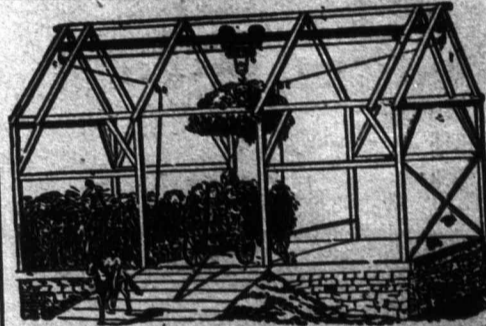
Money refunded if not found satisfactory.

National Gall Cure is for sale by all dealers.

When ordering from us, please write name and address plainly, and enclose this advt.

English Embrocation Co.,

337a St. Paul Street, -om MONTREAL.



HORSE FORK OUTFIT, \$12.25

On receipt of only \$12.25 we will promptly ship you a complete Horse Fork Outfit, consisting of the following articles:

- 1 Improved Reversible Carrier,
- 1 Double Harpoon Hay Fork,
- 12 Jointed Track Hooks,
- 3 Swivel Pulleys (one a knot passer),
- 3 Wrought Iron Screw Pulley Hooks,
- 62 feet Russian Hemp Trip Rope,
- 125 feet of 7/8 inch pure Manila Rope.

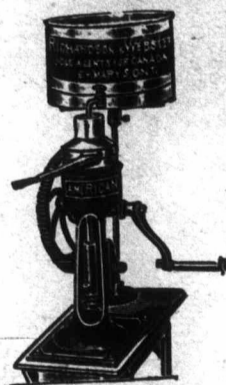
The above list includes all that is required for a complete Horse Fork Outfit, except the wood track, which is 4 x 4 scantling, and which may be obtained in any locality at small cost. Everything in this outfit is good, and you can put it up yourself. Don't pay high prices to agents when you can get an outfit just as cheap as they can. Terms, cash with the order. Outfits are shipped same day as order is received. Hundreds are taking advantage of our low prices. The very latest improved machine for grinding Section Knives we sell for only \$3.00. Address,

Stanley Mills & Co., Hamilton, Ont.

"With what we cannot know we cannot be concerned."

But we do know that the

AMERICAN CREAM SEPARATOR



Stands without rival on the market to-day.

The AMERICAN will be sent on trial, and we guarantee perfect satisfaction. Get prices and illustrated catalogue from

RICHARDSON & WEBSTER
ST. MARY'S, ONT.

Also manufacturers of Cheese-factory and Creamery Apparatus.

TORONTO ENGRAVING CO.
92 BAY ST
CUTS BY ALL PROCESSES
LIVE STOCK A SPECIALTY.

PLEASE MENTION FARMER'S ADVOCATE.

WESTERN CANADA'S GREAT INDUSTRIAL FAIR

JULY 10th TO 15th, 1899.

Fifteen Thousand Dollars in Prizes.

FEATURES, ATTRACTIONS, ACCOMMODATION

MORE EXTENSIVE AND GRANDER THAN EVER. COMPETITION OPEN TO THE WORLD.

Prize Lists and Splendid Illustrated Programme of Attractions and of Horse-racing Events Mailed Free on Application to

WM. BRYDON, President.

WINNIPEG, MAN.

F. W. HEUBACH, General Manager.

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