

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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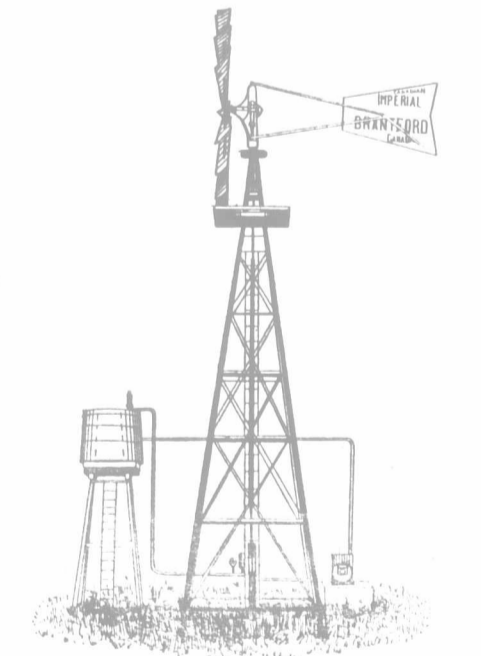
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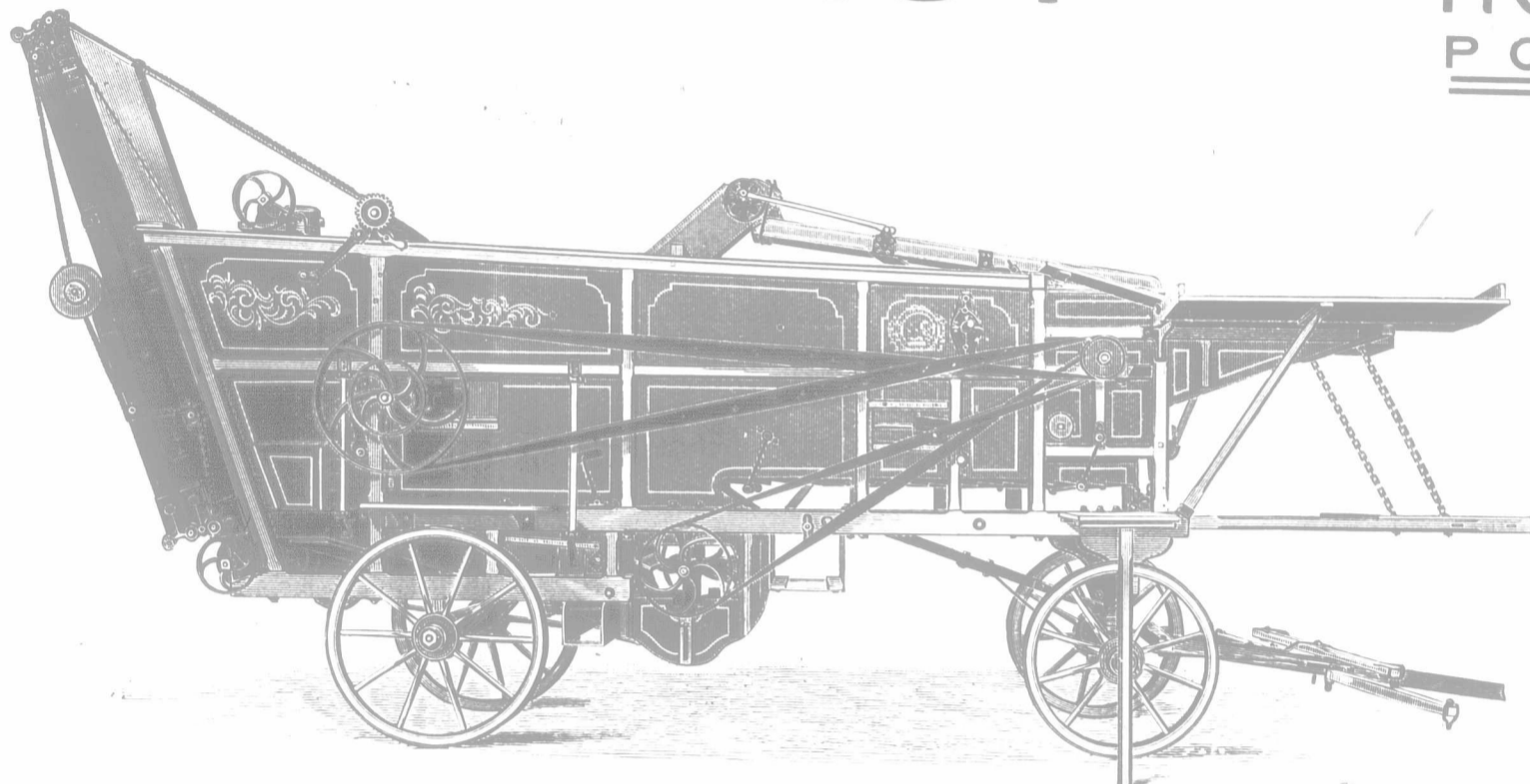
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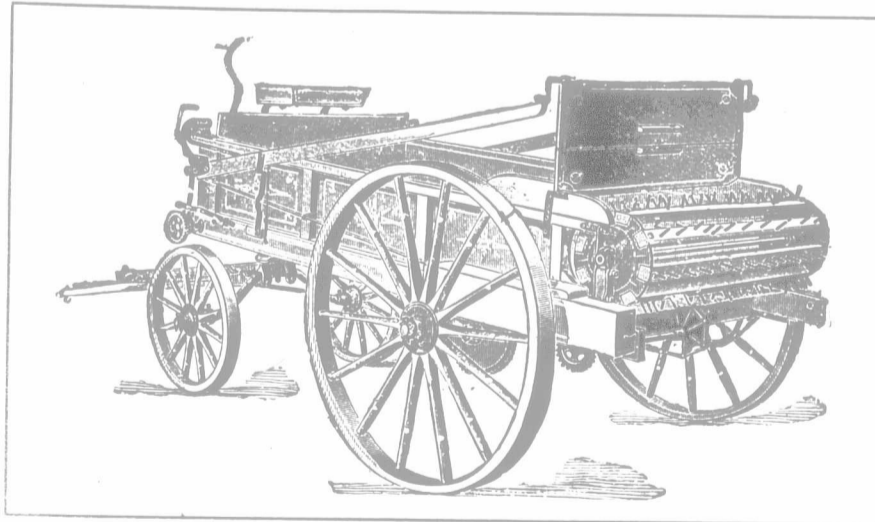
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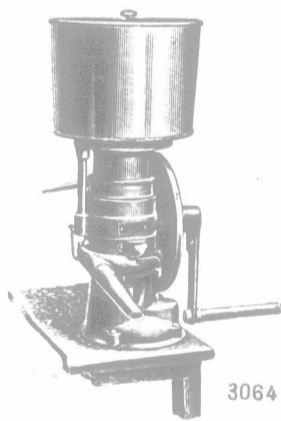
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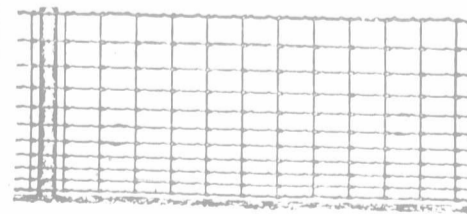
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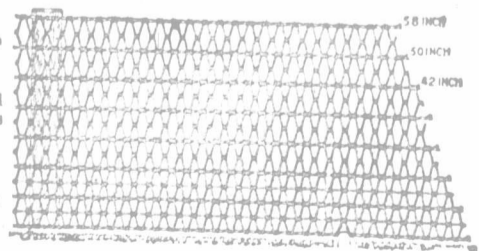
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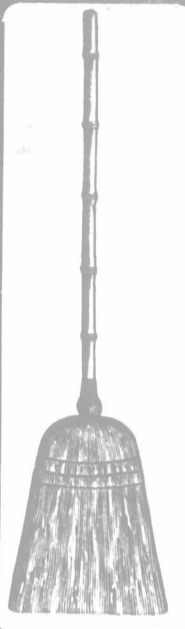
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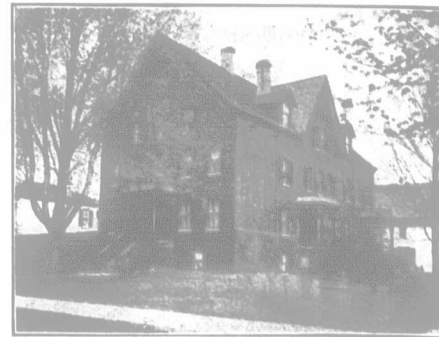
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FARM HORSES IN HARVEST TIME.

Undoubtedly the time of harvest is a time of strain for the farm horse. The hours are long, and the heat is great. There is no time for pasture, and if there were, the pasture is dry and without flavor. The usual feed is hay and oats, and with the severe strain of harvest heat and heavy work, this dry food is difficult to digest. A tablespoonful of Herbageum added, twice daily, to the horse's food will enable him to thoroughly digest it, and this thorough digestion of food will keep him in perfect health and in high spirits. Herbageum does nothing but assist in the digestion of food. It contains no antimony, saltpetre, arsenic, copperas, resin, aloes, sulphate of iron, or any drug that acts directly on the system.

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The Farmer's Advocate

"PERSEVERE AND SUCCEED." and Home Magazine.

ESTABLISHED 1866.

VOL. XXXVIII.

LONDON, ONT., AND WINNIPEG, MAN., AUGUST 1, 1903.

No. 579

EDITORIAL.

The Boys' Claim.

There is not a more persistent nor perplexing question in the minds of intelligent young men than the question of choosing a vocation in life. It enters the minds of all thinking boys, and starts them upon a course of solid, original investigation, to determine the relative advantages and disadvantages of different lines of work, and to analyze their own capabilities and inclinations in the matter of a life's calling.

If left to himself at this stage, it is more than probable that the boy will decide on some profession as far removed from farming as possible, and by sheer determination and honest work become a successful man and useful citizen, but the farm is the loser by just that much. If, on the other hand, the boy is given a chance to see something of life, to mingle with men, to know the life of the great world around him, a different course might be followed. To accomplish this end at a small and judicious outlay, farm boys should be given a chance to attend a good agricultural college. At such a place the influences surrounding him will all tend to implant in him a love for the farm, for stock, and for outdoor life. The teachings of the college will bear so logically upon his knowledge of farming operations that he is at once interested, and the longer he studies the more interested he becomes, until any preconceived inclination for other professions are entirely obliterated, and there is formed the nucleus of the successful farmer of the future.

These remarks should bear particularly upon the well-to-do classes, for it is among them that some of the most unfortunate conditions relative to farming exists. Because of the good circumstances of some families, some of its individuals receive the benefits of a liberal education, and follow professional careers, and for the same reason others in the same family are started upon farms, but without any special educational training for their business. The result in many cases is obvious. The former have received not only special training, but in receiving it have been surrounded by influences that direct in the proper use of success. The latter, having missed the special training, are also devoid of the broadening and elevating influences of liberal education. A higher standard of living, or a better appreciation of life, is one of the most crying needs of the country to-day, in order to retain the young people on the farm. Give the farmers of the future their dues. Patronize the agricultural college, for there is infinitely more in making a life than in making a living.

Slow Freight Transportation.

An evidence of the imperfect live-stock transportation facilities which are available in the West is to be found in the case of a car which left Smith's Falls, Ont., June 20th, and arrived at its destination in Edmonton, July 2nd. This is a rate of a little less than eight miles per hour for the entire journey. If that is encouraging the live-stock industry of the country, we fail to see the point.

Teach the colt to eat oats and chop. The time is not far distant when the apron-strings will be cut loose and he will have to find for himself.

Theory and Practice of Live-stock Judging.

The best education and preparation for the office or function of a judge of live stock of any class, is prolonged practical experience in breeding, feeding and handling high-class animals of the breed upon which one undertakes to pass judgment. Not all, however, who are fortunate enough to have this advantage become discriminating judges. Close observation and comparison of animals and a careful study of their peculiarities and of the particular use to which they are to be put in life is essential, as well as thoughtful consideration, in the case of meat-producing animals, of their comparative value for that purpose. A man may spend the most of his life in the care of cattle or other stock, and if he has not an innate liking for animals, an eye for symmetry of form and of the proper balance of proportions, he will probably fail to become a critical and reliable judge. While the art of judging, in the best sense of the term, and in its best application, is in large measure a natural intuition, it is freely conceded that by careful study and comparison of animals of differing types, one not naturally gifted with this special faculty, but having a fair knowledge of the accepted standard of excellence and of the approved type, may become a good and safe judge. Some of the most successful breeders and most reliable judges in the business are men who had not the advantage of youthful training in the care of pure-bred stock, or of early association with experienced stockmen. Whether their success has been mainly due to a natural faculty for discriminating between faulty and correct conformation in animals, or to close observation and persistent study, by which they have acquired the accomplishment is not easily determined, but the fact of their success favors the reasonable contention that judging is a science which may be acquired in spite of the lack of favorable associations and environment, though these are, of course, exceedingly helpful.

Standards of excellence, giving the relative value of the various points or parts of animals, have been prepared by acknowledged authorities in some of the breeds, and these serve a useful purpose in the class-room of agricultural schools as a partial guide and help, but the use of the score-card in the work of judging in the showing has been found impracticable, and it has, after a fair trial, been discarded. A knowledge of what is known as breed character, and a discernment of what is generally accepted as the type best suited to the purpose for which the animals are intended, and for the requirements of the legitimate trade of the times, and of the best available markets, is of first importance in one accepting the position of a judge. This knowledge is acquired by observation, and by reading, and, best of all, by practical experience in breeding, buying and selling superior stock.

Among the principal and most important points to receive careful attention in judging any class of stock, are the indications of strength of constitution. These consist of good width of chest, or width between the fore legs, thickness through the body behind the shoulders, with long and deep foreribs, giving ample capacity for the free action of the heart and lungs, so essential to health, strength and robustness, and without which vigor, thrift and the best feeding qualities are not found. In male animals a strongly-

muscled neck and a masculine but not coarse head is desirable, as indicating energy and prepotency as a sire. A comparatively short head, broad between the eyes, a full, clear, bright eye, a broad muzzle and strong jaws and lips, are indications of a good constitution and a good feeder, as also are well-sprung and deep ribs. A comparatively short back, giving the appearance of compactness, with a wide, strong loin, are qualities which betoken strength and endurance, while a long-coupled animal of any class is apt to sag in its back, to prove lacking in force and feeding qualities, and more liable to digestive ailments and disease. In all animals the shape and quality of bone in the limbs, and their placing, is of supreme importance; clean, flat bone, of fine texture, being essential as a token of quality, soundness and strength. While in judging horses the shape and quality of the feet, pasterns and hocks are of first importance, and practically fix the value of the animal for any purpose, it is from a breeder's standpoint, nearly of as great consequence in the case of other classes of farm stock, that they stand well up on their feet and have their legs well placed under them, with this difference, that while the pasterns of the horse to best fit him for speed or for draft should be moderately long, sloping and springy, cattle, sheep and hogs should stand straight up on their hoofs and pasterns, and all, especially horses, should walk well, for a horse that cannot walk well rarely trots well, and the easy, active, swinging walk counts for much in any class of stock where competition in the show-ring is close. To require that competing animals walk as well as stand still is a point that should never be forgotten by the judge, for observation teaches that skilful and experienced showmen can, in some instances, place an animal standing so as to show for more than it is worth, and in other cases by keeping it constantly moving can do much to divert attention from the fault of a sagging back or other defect.

In judging cattle of the beef breeds, we look for symmetry of form as of next importance to strength of constitution and breed character, and for top and bottom lines nearly level, though not absolutely straight, remembering always that nature invariably neglects right angles and delights in gentle curves. The shoulders should be wide on top, but smooth, neither prominent nor bare, and the crops, or the part immediately behind the shoulders, should be broad and full, the ribs springing well from the spine and being long and deep, the flanks, fore and aft, well let down, the back and loins thickly and smoothly covered with natural flesh, the hooks not prominent but smoothly turned, the hind quarters long and level, and the buttocks and twist full and far down, especially in the case of the bull. The legs should be short, strong and well placed, the handling quality of the skin mellow, moderately thick and pliable, and the hair fine, soft and furry, which is an indication of a good feeder, and one that makes good use of its food.

The standard for dairy cattle, while differing materially in many points from that for the beef breeds, is essentially the same, in so far as the indications of constitution are concerned, large heart and lung room, and capacity for working up large quantities of food into milk being a sine qua non in a dairy cow. The principal difference in the conformation of the two classes is that while in the beef breeds width of chine and thickness of flesh is required, in the dairy breeds

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narrow withers and spareness of flesh is preferred, and this is not incompatible with a good constitution, since the heart and lungs are situated low down in the chest, and the thick or thin withers are largely the result of difference in the early feeding and training of the two classes. Feed a dairy heifer fat in calfhood and keep her fat till she reaches maturity and her value for dairy purposes will be seriously impaired, as will also her chances of winning in the show-ring. The breeding and training of the dairy cow should tend to produce an animal at maturity having good spring and depth of ribs, thick through the heart, with smooth, sloping shoulders, fine, sharp withers, a moderately long, level back, a broad, strong loin, a strong spine, well-defined and open-spaced, broad and wide spaced ribs, with much space between the last rib and hook point, broad and moderately prominent hooks, long, broad and level hind quarters, thin thighs, soft handling skin and hair, and withal, and perhaps most important of all, since the standard gives nearly thirty per cent. of value to these points, a large and well-balanced, evenly-quartered udder, and good-sized, well-placed teats, the udder running well forward and well up behind, not fleshy, but flexible, elastic and covered with soft skin and hair. Bulls and young females not in milk, of the dairy breeds, are more difficult to judge than are those of the beef breeds, as in the latter the same standard practically applies to male and female, old and young alike, except that masculinity of appearance and spirit, indicating precocity, are required in one section, and femininity in the other, while in the dairy breeds the conformation of the bull differs from that of the cow in that the former is relatively lighter in the hind quarters than the cow, the functions of maternity requiring the broader conformation of hind parts in the female.

In judging sheep the rules laid down for judging beef cattle apply in the main, the principal difference being that of breed character and of the fleece, which has to be considered, and this

should be of fine fibre, lustrous and of even quality on all parts of the body.

Swine are judged with a view to their conformity to the type that most nearly meets the demands of the markets for the time being. Good length and depth of body, a strong, slightly arched and well-fleshed back, smooth shoulders, thick hams and flanks, moderately light head and jowls, muscular neck, deep foreribs, strong, flat bone, and standing well up on the toes, are the most essential points to be considered.

A word as to the course of the judge in the performance of his duties. He should, of course, enter upon his work with the settled purpose that to the best of his judgment the best shall win. It is presumed that he knows his business from experience and close observation and study. It is well after a general look over the animals in each section to draw out a few of those most likely to be in the prize-list, have them walked to see how they look in motion, and after a close and careful examination, viewing them from various standpoints, to place them in the order of precedence, according to his judgment, with a view to usefulness, quality and breed type. It is well, if the class is not too large, that the entries outside the prize-list be placed in order of merit, so that the dominant type may be recognized throughout the class, and the judge's work show uniformity and consistency of aim, in so far as the character of the material will admit. The judges are expected to set the standard of approved type, and if their work is well done it will be an education to those who need to learn what is the best type in each breed.

Harvest Excursions.

[From our Manitoba and Western Edition.]

Reports have been circulated to the effect that no harvest excursions to the West will be run this year. However, we are glad to be able to state that no substantial foundation can be found for such rumors.

This year, as heretofore, it will rest chiefly with Western farmers whether or not an attempt will be made to bring men westward to help harvest the product of the fields. At present the Manitoba Department of Agriculture are busy gathering information from the different municipalities, and just so soon as they get an approximate estimate from the farmers of the additional numbers required, the Government officials will freely circulate in Eastern papers a call for harvesters, and also make provision with the railway companies for bringing them out at such times as will best suit the majority of grain-growers. There is an idea afloat that owing to the heavy tide of immigration which has poured in upon us this season, little if any outside help will be required to harvest the crop of 1903. It is true that many farmers have hired help this year for eight months, who formerly only hired for harvest and threshing, and as numbers have done this there is little doubt but that the amount of harvest help required will be less than in former years. It is also further expected that a great many of the home-seekers who have actually located and commenced breaking this season will be able and ready to take part in the harvest fields. All this is true, but we must not forget that the large army of last year's home-seekers did the same, and they now have changed places, being no longer able to help others, but have themselves joined the ranks of that large army who require additional help.

Although we believe it to be true that owing to changed conditions less additional harvest help will be required this year than formerly, yet we are confronted with the fact that the number of farms has increased amazingly, and that although in many of the older settled districts, where for the last few years most of the soil has been tilled and where to-day less outside help per square mile is required, there are other localities which constitute perhaps the largest portion, and we must not forget them.

Perhaps, taken on the whole, less Eastern help will be required this year, and if such proves true it will be a good thing, for our grain-growers would suffer severely if they had to depend as fully on outside help as they have had in former years. In the East laboring men to-day are about as difficult to get as with us,

and wages are equally high, except, perhaps, during our harvesting and threshing months.

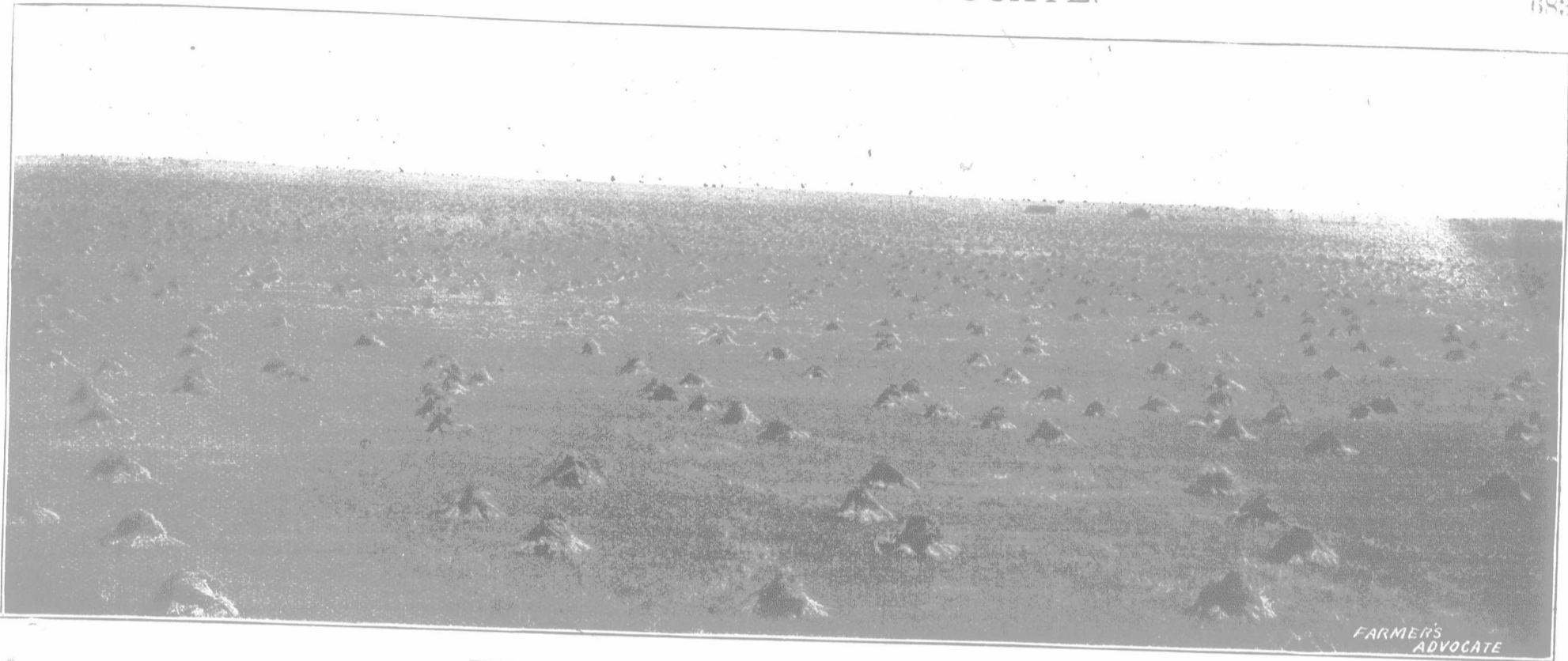
Crop prospects are bright; wages will likely be good, and every indication at present points to a return of the harvester in considerable numbers.

Fiscal Reform.

From one end of the country to the other, says the Farmer & Stock-breeder, of London, England, the subject paramount in the minds of the people at the present time is the question of fiscal reform. All who have observed the trend of public opinion of late years, could not have failed to observe that the Imperial idea, based on the reality of the Empire, and its community of interest at present existing with strange lack of cohesion, left much to be desired in the welding of the separate parts into one cohesive whole. It is no new idea, this Imperialistic enunciation; it has been fostered more within the past ten years than at any previous time in the history of this country, but it has been left to Mr. Chamberlain to bring the question within the range of practical politics. What we as agriculturists have to decide is, whether or not the system of free trade pertaining in this country shall be abolished in favor of preferential tariffs. It is true that the country's greatness has to a very large extent been built up concurrently with the system of free trade, but it has still to be proved that free trade was the making of the country. It has been shown beyond a shadow of doubt that a country protected like the United States can make even greater strides in commercial progress than the history of Great Britain can show. If that is so, it is clear that to a very large extent the inherent qualities of the race must be held responsible for the proud position which this country has attained in the world's commerce.

What is the proposal which has been laid before the country in very bald outline? Briefly, it is to the effect that preference should first of all be given to the produce of our colonies, which in return should afford our manufacturers special facilities for the cultivation of their markets. All raw material for purposes of manufacture shall be admitted free to this country, but food will be taxed and the dream of old-age pensions become a practical reality. The chief consideration from the farmer's point of view is the attitude which he shall adopt towards the principles enunciated by Mr. Chamberlain. What advantages will accrue, not for the agricultural interest only, but to the nation at large? It is necessary when considering this question to take a broad look at the effect which such a policy would have, not upon one section of the community, but upon each integral part. Agriculture is still our greatest industry, and, from a purely selfish point of view, the principle contained in Mr. Chamberlain's proposal—viz., that of taxing food—would undoubtedly receive more support from the agricultural classes than from any other industrial branch of the nation. And yet, unless taxation is tolerably heavy, it is very difficult to see in what particular way the farmer will be benefited, save, perhaps, by the removal of some of the taxes which press rather unfairly upon him. Feeding-stuffs will doubtless be dearer, but by a revision of our system of taxation, as suggested, it would no doubt tend to make the Empire more dependent on its own resources, and agriculture in this country would share in such benefits as are conferred.

A revision of our fiscal system, or our system of taxation, is inevitable. It is clear that the burden is very unfairly borne at the present time, and since the country has become so wealthy, and the wealth has shifted since our present system of taxation was introduced, it is only right that the whole subject should come up in a concrete form before the nation. It is impossible as yet to discuss the question as fully as might be desired, because we are not yet in possession of any succinct proposal; nor are we yet definitely aware of the feeling which exists in the colonies, although preliminary evidence seems to indicate that the proposals of Mr. Chamberlain are receiving very favorable, and, in some respects, enthusiastic consideration. It is clear that if we can preserve our own markets for ourselves, we shall receive an infinitely greater reward than could possibly fall to our lot by the maintenance of the present or even a slightly extended foreign trade. Our own markets, after all, are the principal markets of the world, and as we at present conduct affairs we are completely at the mercy of those tariff-raising countries which do everything to protect themselves and, as far as possible, to ruin us. The moral effect of having a tariff authority to protect ourselves must undoubtedly be very great, and our manufacturers would receive from foreign countries better consideration than they have done within the past fifty years. Agriculture, of course, has a good deal to gain, because it is one of the few



WHEAT FIELD ON THE FERTILE PORTAGE PLAINS, MAN.

FARMER'S ADVOCATE

producing industries of this country which has been turned to a large extent by favorable legislation into the world's manufacturing center. Nowadays the theory has been abandoned that the nations of the world were either manufacturing or producing nations, and that the two could not go hand in hand. We have ample evidence that this belief, which was energetically urged by statesmen in the early part of last century, has proved to be ill-founded, and we would certainly be seriously neglecting an opportunity which is presented to us once in a lifetime if we did not dispassionately consider our whole fiscal policy, and the attitude which we as individuals must adopt towards it. Agriculture is far from being played-out yet, and the great majority, we might say, of farmers are strongly protectionist, but the question must be considered as apart from the discussion of the relative merits of free trade and protection. It must be considered as a national question, and not as one which will benefit one particular industry while perhaps destroying another.

STOCK.

The Sheep's Mouth.

BY J. M'CAIG.

The incisor teeth in the sheep are situated only on the lower jaw, just as they are in the cow. It is important to understand when the sheep gets these teeth, for the condition of the mouth is the best index of usefulness of the sheep. The mouths of the ewe flock should be gone over in the fall, when they are being culled and selected for the breeding season. It is not difficult to know the age of a sheep up till four years at least.

When a lamb is dropped it generally has one pair of incisor teeth showing in the lower jaw. Sometimes there are none in sight, but all the incisor teeth appear in the course of a few weeks. They are eight in number. The first teeth of the lamb are only temporary. They drop out in time and are succeeded by permanent ones. The temporary teeth are narrower and smaller in every way than the permanent ones. The permanent teeth come in the same order as the temporary ones, from the center of the mouth outwards. When the sheep is one year old the center pair of temporary teeth drop out, and are succeeded by a strong, broad pair of fine looking permanent teeth. By two years old another pair of permanent teeth one on each side of the center pair, can be seen. They are broad like the first ones, but take some time to come up with the center pair. The same thing takes place the third year, so that by the time the sheep is four years old it has all its permanent teeth, or is said to be full-mouthed. Some variation, particularly with regard to the first pair of teeth, there is considerable variation. High bred animals generally have their first teeth before a year old, and sometimes have two before eighteen months old. Again, the

periods between each succeeding lot of teeth and the one before it shortens with the age of the sheep. There is not a full year between the changes. For example, the first pair comes in at about a year old, or perhaps fourteen months; the second at a year and nine months; the third at two years and six months; and the fourth at three years and three months. It is still a safe rule, however, that a sheep with a full mouth is four years old.

Once the mouth is complete the decay begins. The usefulness of a sheep's mouth varies with the breed and the feed. Highly improved sheep, or early improved sheep, which are distinguished by early maturity or by delicacy of any sort, are not distinguished by the same longevity as rustlers, slow growers, or as the later improved breeds. Then if a sheep has fed on short pastures and on gravelly land, its mouth shows wear and breaking sooner than it would if it had grazed on better land and better pasture.

It is hard to tell the exact age of a sheep after four years old. If the last pair have lost their new look, their chisel edge, and show some top wearing with the three older pairs between them, the ewe cannot be under five. The center teeth show age by their becoming narrower, and by spaces showing between them, particularly towards the roots. By observation and comparison it is possible to make a good guess as to

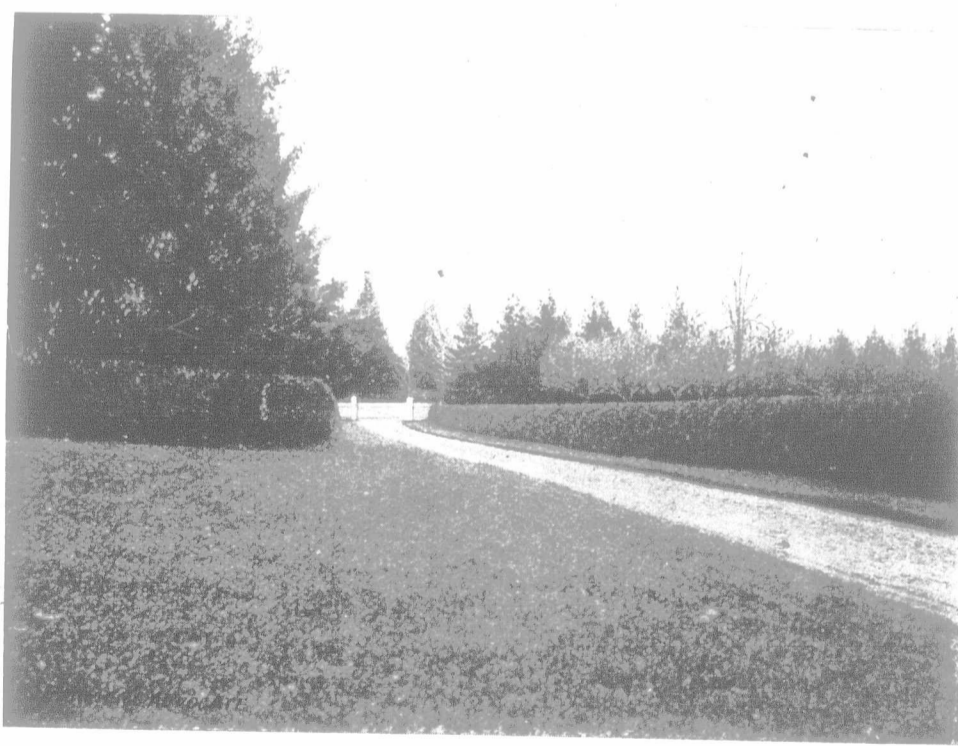
certainly she would not be able to support lambs well, as her milking value depends on her masticative and digestive machinery being in good condition. There are ewes, however, which it is desirable not to part with on account of their blood and proved excellence as breeders. They can do all right in summer on good pasture, but need to be near the bran-box in winter.

The molar teeth are six in number in each jaw, but a knowledge of their growth is of very little practical importance.

Developing a Champion.

To hear some men talk, one would think that a champion steer was a phenomenon—a sort of freak of nature—appearing once in awhile like a comet to flash upon the astonished beholder and then disappear in darkness. To our mind this is all wrong. There are thousands of steers born to be champions but destined to chew corn and die undetected. There are thousands of men crouched over city desks who might have developed into athletes had opportunity offered. There are shy-singing maidens in the woods and fields capable of development into operatic stars. Training and practice, patient plodding, persevering determination to excel, scientific guiding and handling—these things make the champion in

other spheres of activity and art. Is it not somewhat so with the champion steer? Someone fit to undertake the task has selected him for the ordeal of preparation. His astonishing polish when the "do or die" day arrives speaks most for his feeder's skill. It lies latent as a hidden possibility in his blood. Breed has ordered that he is susceptible of being developed into something great; but breed cannot rise superior to circumstances—cannot make a champion of an animal doomed to ordinary care, plain rations and average environment. Given the right sort of cattle, be they pure-bred or grade Shorthorns, Herefords, Aberdeen-Angus of Galloways, who can limit the possibilities they possess for materialization when ideally handled? But how many are given a chance from before birth to develop all that their breed assures them? How many from birth are kept gradually progressing on a complete ration, digestible, palatable, assimilable? But a few, a very few, and these the animals that win the championships, first prizes, place in fine company, the plaudits of the people and the appreciative price of the purchaser. It is not a matter of exact analysis, of "nutritive ratio," of superficial or deep understanding of food nutrients; it is the ability of the feeder to bring out to the fullest degree the latent inborn possibilities of his beast. And how does he do it? Not by any mysterious method. Simply by infinite attention, loving care, the understanding intelligence of a mother for her child, anticipating wants, recognizing intuitively and instantly every wish and want and gratifying or supplying it. The man who does this with an animal



ENTRANCE TO THE FARM OF S. G. LITTLE, HAGERMAN, ONT.

whether a ewe is nearer to four than she is to eight years. Generally, however, before a ewe has reached eight one or both of her center incisor teeth will be missing, and sometimes the whole lot of them. A tooth may drop out at five years old; one or two are almost sure to at six. A ewe having lost one or more teeth is said to be broken mouthed. Her value for breeding purposes is lessened by the loss of teeth, for the reason that she cannot gather food for her own sustenance as well as before, and

must be a naturalist, a gentleman in the truest sense of the term, an enthusiast, as is every lover, patient, observing, quiet, sympathetic, good tempered, intelligent, experienced. Take a slum-bred child of criminal parentage out of the environment of squalor, poverty, starvation and sin and set it in the sunlight of civilization and education, and there is hope, yes, probability, of refinement, manliness, integrity and worth in the adult man. The brain of a man may enable him to rise above environment—such things have happened, but with the dumb beast environment will vanquish hereditary tendencies. Man's care and guidance, his brain-gifted intelligence, are necessary to develop and materialize the possibilities of his charge. Thus it is that champion animals are produced and they are the acme of success. Thus it is to a lesser degree that polished, well-finished animals bring good prices to the coffers of the few, and for its lack millions of man-retarded beasts prove unprofitable. There is no sure possibility without specific blood. The animals must have breed prepotency and its attributes, but they alone are comparatively weak when subjected to untoward circumstances. That champions may be nurtured and matured under the feeder's eye should teach the possibilities and profit of similar methods applied to the everyday breeding, feeding and finishing of cattle.—[Live Stock Report.]

Scotch Stockers:

WHAT ARE THEY, AND WHERE DO THEY COME FROM?

BY JOHN GRAHAM CALBERRY, MAN.

A contribution on this subject ought to be of more than ordinary interest to us as Western Canadians. Scotland not only leads at the present time in pure-bred cattle, but by daily quotations on the London market, the leading market in the world, leads on prime beef likewise. If anyone takes the trouble to look up the daily market reports, they will find that prime Scotch, both mutton and beef, is quoted higher per pound than all others.

That they produce the best of stocker cattle in Scotland is a generally held opinion, and when I state that the great bulk of them are only of ordinary merit, I am aware I am running athwart the opinions of many who will be loath to accept the statement. Nevertheless, facts are stubborn chieftains. That they produce beef of the best quality, goes without saying, but that alters the case when we say that as a consequence all their stockers must be good. A well-bred stocker will make the best of beef; a poor-bred one will do likewise. The difference lies in the good one producing far more of it and more on the valuable parts than the poor-bred one, and, hence, must be worth far more to the feeder. To be a little more definite, I might state that the stockers are very good and very poor. The finest in pure-bred and cross beef can be found there, but at the other end of the balance can be found the dairy-bred beef cattle, if I may be pardoned for using such a roundabout expression.

Let us look at the different sources from which the feeders draw their supplies, and it will help to solve the problem. Taking the cattle as a whole, the best supply comes from the Midland and Northern counties of England. England is perhaps the smaller source of supply, but the cattle are more uniform and of better breeding as a whole, entirely of Shorthorn breeding, mostly of Bates and Booth type, although not on a par with the choice lots which go up from Aberdeen to London about Christmas.

The second source of supply is Ireland, and perhaps Ireland furnishes more stocker cattle than England and Scotland combined. The great bulk of Irish stockers are Shorthorns or Shorthorn grades, and the great bulk of them are but poorly bred and fed, although within the last few years a great change has taken place for the better, mainly through the efforts of the Government giving valuable premiums in certain districts, to induce the use of the very best bulls, and it is worthy of note in this connection that just one-third of all the bulls offered at Perth Shorthorn sale went to Ireland, and some of them at high figures. Nevertheless, the fact remains that good feeding and breeding would still work wonders on their cattle. Improved as they are, nearly at every auction sale and cattle market, and the redoubtable Irishman would buy a yearling and two-year-old, always at a fair price on the market, and yet feel that they do well after they get a steer, but at a loss as to how to get them moved.

The third source of supply is home production. The very best stockers are raised at home. From

the pure-bred cross down to the produce of the dairy cows, we find the terms good to medium will apply. The home product, as a whole, is away above in quality what is imported from Ireland, although when compared with English importations, taking the average, they will be lower.

What are they, the Scotch stockers? First, and also so in importance, comes the Shorthorn and Shorthorn grades, and I question if there is a cross produced likewise in which the Shorthorn is not a factor. This class compose about two-thirds of all the cattle that go into the feeding pens. The quality of this class is from very good to very poor, the poorer sorts coming from Ireland mostly. The better class are produced by farmers and graziers who keep good cows and breed to good bulls. Although produced at home, there is likewise a great amount of stuff produced that is unsatisfactory to the feeder and no credit to the breeders, who are too often parties who sell the calves in babyhood, and are satisfied so long as they get a market for them, no matter what comes of them ultimately.

Next in point of numbers comes the Aberdeen-Angus. They are on the whole a superior lot, confined mostly to their native district. Only a few find their way south—then only as stockers—as they are seldom bred away from home. The pure-bred Angus are a little slow in maturing, and the cows are not used much as milkers, making the supply very limited, because nurse-calves reared in Britain are a very expensive commodity, and can only be made to pay on the poorer and low-rented lands.

The other supply of any of the distinct breeds might be divided equally between the West Highlands and Galloways. The Galloways are confined mostly to their native districts, the south-western counties, and seldom find their way north, except a few for crossing purposes. They are like the Angus, a distinctly beef breed, seldom used in the dairy, and their usefulness is to a great extent curtailed by this deficiency.

The West Highland cattle, unlike the Angus or Galloways, confined to their native districts, find their way over most of the country, especially in the feeding districts. They are the only distinct breed of cattle that are raised outside proper, bred on the high and exposed districts in the extreme north of Scotland. They are never housed except in the feed lot, and often not even then, often being finished on grass and other feed in summer. They are a slow maturing and very picturesque breed, with long horns and shaggy coats. Their beef is of the finest quality, like other slow-maturing breeds, with a less percentage of fat to the carcass. They are eagerly sought after by the butchers, and sell higher by the pound than perhaps any other breed. All other sources of supply are drawn from the crosses of the breeds named, and likewise besides a cross between a Shorthorn bull and an Ayrshire cow, the only distinct dairy breed of cattle in the country.

Taking the crosses in their order of merit, the premier place must be assigned to the "blue-gray." This cross is produced by mating a white Shorthorn bull to a Galloway cow. One needs to see the blue-grays to appreciate them. They are on the shortest of legs, deep of body, and the choicest of handlers. There is a mellowness of touch about them that is all their own, and only for the cost of producing them, they would be far more generally in use. The Galloway dams not being dairy cows makes nursing a necessity and rearing calves in this way on high-rented land a very dear commodity. I don't think there is any class of cattle that will bring more money as stockers than the blue-grays, but as I said before, their high cost to rear and high price as stockers for the feed lot works out against them as a breed.

Then there is the Angus-Shorthorn cross. Although this cross is not at all numerous, still they are bred quite freely. They are produced by mating an Angus bull and Shorthorn dairy cows, and are mostly always black and hornless, unless in exceptional cases, when small huns appear. They make good feeders and first-class butchers' cattle, but a little slow to mature. They are bred to a limited extent, and mostly where the pure-bred Angus prevails. Some crossing has been done with the Highland cattle, but not to a great extent, such a cross being no improvement on the pure-bred, and not up to the standard of some other crosses mentioned.

The last distinct cross, and the poorest from a beef point of view, is the Ayrshire-Shorthorn cross. This cross is a necessity to a great extent in the great dairy districts of the midland western counties of Scotland, where the Ayrshire cow holds sway as a dairy cow par excellence, and where milk is the chief consideration. What better can be done by crossing with the Shorthorn? The offspring, not being wanted for dairy purposes, are the most profitable that can be produced under the circumstances. Although foreign to our subject, I mention that the Ayrshire-Shorthorn cross as a dairy cow is much sought after by the dairymen, as they are commonly called, cowfeeders, who keep their cows just a

year, and at the end of that time have them fat for the butcher. I might mention that they are fed on brewers' grains and other heavy feeds, for all that they are worth, and will only stand the strain one year; any which have been bred and kept a second have proved a partial failure. The cross has the advantage of both ancestors in this respect—she can produce both milk and beef. That is to say, give a liberal allowance of milk for a good period and then prove superior to the Ayrshire dam as a beeper. I might mention further in this connection, that the great difficulty with this line of business is the discrepancy between the price of the cow as a milker and the price as a beeper. The cross shows smaller loss in this respect, and hence preferable on that ground alone.

Now, with the foregoing we have exhausted the list of distinct breeds and crosses; but still there is a small army outside of all these which is certainly a factor, and I am sorry to say an undesirable one, in the stocker world. I refer to the great amount of cows kept by private parties—farm servants and dairymen generally—which are often of no distinct breed at all, or more often a combination of all. A great part of all the stock bred in this way is of an undesirable class, milk being the chief consideration. The calf born of such a cow is only a means to an end; only a medium to get milk, and is at once thrown on the market for what it will bring, and too often falls into the hands of some farmer looking for stockers, who has simply to take what he can get, and often has to pay dearly for it too. The writer has seen very ordinary calves sold at auction of such breeding from \$9 to \$12, at a week old. Thousands of the poorer bred sorts are slaughtered every year for veal, and thousands more are turned into stockers that had better have followed their less-fortunate fellows. But then calves must be had to raise into stockers, and farmers can't breed all they raise, and have simply to take what they can get. Even in the famed city of Aberdeen, the center of the greatest cattle district in the world, I saw some of the most ordinarily-bred beef cattle that I ever saw in any market in the country. Of course, my observations only extended over one market day, but covered different auction marts. Upon enquiry I found that most of the cattle were Irish, and that they could not begin to breed at home even a small part of all the stockers going into the feed-pens.

What a grand chance Canadians have to raise cattle of the very best description for beef purposes, when we consider our circumstances as compared with our fellows on the other side the water! We breed our own cattle, and why should we not breed them well? Our cattle, on an average, are better even now than they are compelled to feed in Scotland, simply because we breed for beef and not for dairy purposes. We stand in striking contrast in this respect, even with the Eastern Provinces, where butter and cheese, in a majority of cases, is the principal use of cattle, and we have only to look at the stockers which reach our borders from Ontario to verify this statement.

While in Britain lately, I might mention I worked incessantly, both by word and pen, to enlighten British feeders on the superior class of beef cattle we could raise, and if only they would raise the embargo and allow us to send them on as stockers, that they might put the final touch on them as feeders, what a blessing it would be for both. Many Scotch feeders I conversed with admitted that they had never made much money fattening cattle since the Canadians were excluded.

In conclusion, my advice to Western fellow stockmen is this: Breed the best, for the day will come, and indications are tending that way now, when our cattle will be admitted into Britain alive. Imperialism is making rapid strides these days, and if ever it is a consummated fact, it must be brought about on some such lines as our working to one another's interest. We can produce cattle cheaper than we can fatten them, and the British people can fatten better and cheaper than they can produce. Then why shouldn't free admission be our battle cry when we are raising the banner of Imperialism aloft? So say I. What say all?

The "Pastoralists' Review" tells of Mary's final success as a breeder thus:

So Mary, tired of wrinkly sheep
That "Shaw" the kemp and hair,
She bought herself a plainer one—
Her new-chum neighbors stare.
But Mary, who was not a fool,
Got frame and constitution;
And for short fibres, kemp and hair,
Grew wool in substitution.

Take a day off to attend the grand dispersion sale of the noted Hillhurst herd of Shorthorn cattle at Hamilton, Ont., on July 11th. It will be an inspiration to lovers of good cattle.

Special and General Purpose Stock.

BY J. M. CAIG.

A good deal of discussion has been provoked at different times by the very positive attitude taken by individuals as to the merits of special purpose stock on one hand, and of dual or general purpose stock on the other. Judged from the standpoint of national gain, or from the standpoint of the breeder's skill, special-purpose stock represents higher gain and higher attainment than general-purpose stock. It must be admitted that in relation to each other the special-purpose stock is the more highly-developed or evolved, and that it is the product of breeding skill beginning at the commonplace starting point of the dual or general purpose stock and working on this raw or partially nondescript and featureless material. The existence of special-purpose stock is the evidence of the existence or operation of the same law in animal breeding as operates in other arts as they progress, viz., the law of differentiation. It is another illustration of the law that is displayed in the evolution of the animal organism itself, viz., that of specialization of function. Assuming that the common ancestry of our horse is no myth, it must be evident that the differences between the draft horse and the trotter are not the result of accident, but of a conscious moulding by breeding and selection of the animals to a special purpose and use. The milking and beef families of cattle illustrate the same kind of contrast, and the Spanish and English breeds of sheep. It may be said that of the two classes of horses both possess draft and speed properties, also that all cattle are dual purpose to some extent, and that the same is true of sheep. The contrast, however, between the different families is so great that it very decidedly illustrates what is meant by differentiation and by specialization of function. It would provoke anger to have to make a quick jaunt to town and back with a fifteen hundred, feather-legged Clyde, and it would be foolishness to put a pair of thoroughbreds breaking the virgin prairie. Jersey steers make very poor beef, and a beefy Shorthorn or Polled-Angus would not make an ideal village milk-cow. Pure Merino mutton tastes too sheepy, and the fleece of the greedy English mutton sheep would not bring the wealth of the Merino where mutton was nothing and fine wool everything.

By these examples the induction is easy that specialization is a very prominent feature in live-stock classes, and that this specialization means special utility. It must follow infallibly that this condition is an economy. It corresponds exactly with the division of labor among men in the mechanical arts, and is the corresponding sign of efficiency for the ends in view. Given two men and two tasks, the total result will be better if each is assigned the duty he can do best by reason of his experience and tastes than it will be if there is no division of labor. The existence of special classes must be regarded as a good, and the recognition and utilizing of these differences ordinary wisdom. This is the theoretical side. We have them, and having them is a good, for the measure of their fitness to survive, and the reason of their survival is their utility.

As in many other matters, practice and theory do not here universally agree. It must always be conceded that the economy of producing a particular commodity rests with a particular class of animal: of beef, with the beef classes of cattle; of milk, with the milkers; and so on. There is always another factor that cannot be eliminated with the producer, and that is the factor of demand. The condition of the farmer too, is unlike that of most producers or manufacturers. He is a jack-of-all-trades in many ways. His business is not capable of the same organization and division of labor, even on a large scale, that most industries are subject to. He is teamster and horse-breeder, dairyman and cattle-breeder, shepherd and agriculturist combined. His horses are generally not sufficient in number to make it possible to keep both drafts and drivers, and a general-purpose horse may fill the bill better for him. He may find it profitable to breed more horses than he uses, and put in some time shaping up an occasional one for sale. He may not be near enough to a city to enjoy a steady demand for milk all the year round at a good price, but he may enjoy a fair general demand for milk products, such as butter, and likewise for beef. In such a case, the special demand being absent, he would be a loser on the beef side if he kept a special milk class

of cattle, while he would not be a distinct gainer on the milk or butter side. The best illustration of the position of the farmer on the cow question is to be gathered from actual facts. The ranges or most distinctly suburban and sparsely-populated districts are given over to beef. The dairies are just on the fringe of the cities, and the farmer is between them, so his interests are somewhat split, or perhaps we should say composite. These general contrasts have their exceptions, and the profit of the farmer is in seeing his opportunity. In the small towns of the ranching district it just happens that the beef business is so fashionable that dairying is left to the few, and is highly profitable near the cities; likewise, the convenience of the beef that is grown near the city gives it an enhanced value to local butchers, which all goes to show that profit is a matter of opportunity. The neighborhood of cities is usually highly cultivated, and is adapted to the concentrated feeding that is necessary for making pork. Pork-making, likewise, fits in well with certain phases of dairying, particularly cheesemaking, but there is the best possible market for pork in all our Western ranch towns. The advantage arises from demand rather than facilities for its production. The ordinary farmer seems to be in a middle position, enjoying ordinary facilities and ordinary demand.

It is this condition that has given rise to the talk about the dual purpose cow. The advocates of the dual purpose cow seem at times to imply the existence of a cow as good in two respects as the special purpose cows are in only one. This, of course, is a mistake. The flesh-making and the milk-secreting processes must obviously be opposed to each other as simultaneous



IN BRITISH PASTURES.

processes, and the development of one has universally been accompanied by the suppression of the other as a constitutional tendency. This does not mean that a given grade of stock could not be simultaneously improved by selection and breeding as to both fleshing and milking qualities above the condition they were in when improvement began, but simply that you cannot carry two features to the same perfection in a single animal as you can one. It must be said, however, that it is possible to select from existing stock families that will suit the species of commonplace dual demand of the farmer better than others will. The Shorthorn is essentially a beef animal, but there are certain strains with good milking qualities among them. Such animals as belong to this class will do fair work as dairy animals, will fatten up after their usefulness is over, and will produce steers that will make good beef and will not have to be knocked on the head like the Jersey male calves of a pure dairy herd.

The question of equipment is an important one likewise. A dairy plant is more or less elaborate and special, and its management a matter of some skill. It is not always possible, either, to reconcile ordinary farm needs with the demands of the dairy in the matter of labor and attention.

Probably the consideration of the dual-purpose animal is more important in the case of cattle than it is in the case of sheep or horses for the farmer, but there is something to be said with respect to each. Our dairy and beef products are much more important than our wool and mutton products, but there is the same gain in being susceptible to general demand and general conditions. In Canada our sheep are prac-

tically all English sheep, and so we feature the mutton side of the business. Most of our mutton is sold as lamb; that is, of our farm mutton, but there is early lamb and late lamb. We have a special-purpose sheep for the early lamb business, which will doubtless receive better recognition with the growth of our cities. This is the Dorset. It is like the special dairy cow in being a good sheep for good lands near the good markets for tender cuts in the large cities. Outside of this there is not any special-purpose sheep among our Canadian classes. Wool is wool, and it is nothing more. Lamb is lamb, and any of our Canadian lamb is easy to take. There is, of course, a species of specialization possible depending on soils, but none on markets so far as breeds are concerned. The heaviest plains sheep should not be put on the hills, while on the other hand the hardy middle-wooled or upland breeds will do well in either the hills or the fields. There is a tendency, which is general rather than being confined to particular localities, to prefer light or medium quarters and cuts to heavy ones. This may be to some extent a matter of quality as well as weight, as the middle-weight breeds have earned the credit of having a more mixed and finer grained meat than the coarser breeds have.

Australian Sheep-rancher Visits Canada.
SOME VALUABLE INFORMATION.

A short time ago, Mr. P. V. Carter, of the Boconne Estate, near Clavin, South Australia, who was commissioned by the Premier of Australia to look into the agricultural and live-stock conditions of Canada while passing through on his way to Europe, paid the "Farmer's Advocate" a visit, which proved to be more than ordinarily interesting. The Boconne Estate is well known in Australia for its pure-bred flock of Merinos, which was established away back in the fifties by Mr. Carter's grandfather, and by careful selection and breeding has become famous for a high quality of wool.

In speaking of the sheep he saw on our ranges, Mr. Carter said he saw a few fine specimens, but that, generally speaking, there was vast room for improvement, and that the improvement could never come until the people commenced to breed scientifically, and established pure-bred flocks, of whichever type they desired to breed, instead of having as many as half a dozen breeds crossed up in one flock, as he says he has seen often. To keep on breeding from such a flock, one can never hope to get anything other than the five to seven pound fleeces usual in the West. For another thing, the close herding done here, he contends, is very derogatory to a flock's development. He considers that it is greatly to be deplored that the Government do not offer some slight fixity of a lease in such districts that are unfarming, but are adapted for sheep, to enable the ranchers to put up wire-netting fences to keep off the coyotes, as is done in Australia. Were this done, the flocks could range at will in their paddocks during the summer months in perfect safety, and in warm weather they could even drop their lambs in paddocks in safety, which would free the rancher and herder from the disagreeable time they have at present. Moreover, he is certain that the sheep will both do better and carry twenty-five per cent. more per acre than they will herded. Mr. Carter is positive that with reasonable assistance the sheep and wool industry has a great future in Canada. To show how it is possible to evolve the grade of a flock and an industry, Mr. Carter said that the first sheep brought to Australia was bought at the Cape by Captain John MacArthur in 1796. In 1805, Captain MacArthur bought several ewes and rams of George III.'s flock of Spanish Merinos, one ram of which was stated to have cut 3 pounds, 4 ounces; he paid \$34 for it. In 1807 the first parcel of New South Wales wool was sent to London, weighing 245 pounds. From that day the industry has been carefully fostered, and has fought its way upwards until it reached its zenith in 1891, when the parcel from the State of New South Wales alone, after local markets were filled, weighed 331,887,720 pounds, and was valued at the enormous sum of \$55,180,090, a wonderful progress for 83 years' growth of the wool-growing industry. Since '91 the disastrous droughts in Australia have checked any further growth of the trade for the present, but Mr. Carter is very hopeful that the worst of the drought is now over. Ranching leases in the north of Australia often average from 100 to 5,000 square miles.

The S. Australian Government charge for 21-year leases 2s. 6d. per square mile, subject to vermin-proof fencing acts, etc., and five per cent. interest on all improvements, such as fencing already done, buildings, etc. These leases give absolute right of ownership during the term of lease, and until the time has expired no one can come in and settle on the property, as they can in North-west Canada.

The progress in individual sheep, too, is just as wonderful. The prize-taking ram in Australia now has to weigh usually between 200 and 300 pounds, and to cut between 20 and 30 pounds, instead of 3 lbs. 4 ozs. Stud rams are sold all the way from \$50 to \$7,500 in Australia. "Such results have been accomplished with very little to start on in Australia," says Mr. Carter, "and I have every confidence that if the sheep-growers in the West invest in pure stock, a little at a time, and then foster these until they have gradually pushed out the mongrels, they will have as great a success as we have had in Australia."

"Regarding cattle and horses, much that I have already said," stated Mr. Carter, "applies with this difference—that the horse and cattle men have already started importing high-class animals, and before long the horses and cattle in Canada will be behind none in the world."

On his way home Mr. Carter intends reviewing the sheep industry in South Africa.

Bacon Pigs Wanted.

We were somewhat surprised to see the following in an American paper, since that country "banks" so heavily on her thick fat hogs:

"In no single thing has there been a greater change in the public taste than in that for bacon and other hog products, and with the change in taste has come an increased demand for bacon and hams prepared by improved processes. The displacement of lard in cooking by preparations of cottonseed oil, and the growing distaste for salt pork and the thick fat sides that used to be in favor, have caused the price of heavy, fat hogs to drop, while there is a sharp demand for light hogs of the bacon breeds, from six to eight months old, and weighing 150 to 175 pounds. Fortunately, these pigs are just the ones that make the farmer the most profit, and the introduction of a good boar of bacon type into a neighborhood, confers a greater benefit and makes the neighborhood more money than any other investment of ten times the amount. The result is successive crops of strong, hardy, thrifty and profitable pigs, that are ready to turn off at six or eight months at the highest market price, or to make good, palatable fresh meat, or bacon sides, hams and shoulders for the farmer's own table. The wants of the farmer and those of the bacon curer are not antagonistic, as many suppose, but are in reality identical. Both require a pig of quick growth and early maturity (and by maturity is meant fitness for market); both want pigs that dress handsomely and with little offal. The bacon curer finds that the best pig for use is one with a long, deep body, wide and square in the hind quarters, and comparatively light in the neck and shoulders. The farmer finds that such a pig is the hardiest, most prolific, most vigorous and most growthy of all the forms known to pig-dom."

Hints to Beginners.

BY T. SPEERS, OAK LAKE.

In breeding beef cattle, the points upon which we should lay most stress are: first, constitution; second, quality; and, third, all the size we can get without losing sight of quality. To have a good feeder we must have constitution. To lead the show, or get the top price, we must have quality, and then the larger the better. I would say to any young beginner, in speaking of Short-horns: Don't be led away by any color craze. Red, white and roan are all good colors. If you are starting to breed Short-horn cattle, go to some reliable breeder and try to select something good to begin with. Feed them well, and breed the females to the best bulls you can find. Should you not have a bull of your own, do not neglect the latter matter, even if you have to send the cows twenty or thirty miles for service. Attend diligently to these matters, and the chances are that in ten years you will have good cattle to show and sell, and the men who want good cattle will come to you to buy animals to improve their herds. Aim to breed to the thick-fleshed, short-legged, good handlers. They always do well. Do not lose sight of having the cows fair good milkers, and do not get discouraged if all your young stock do not come up to your standard. If you get a sire that does not suit your females, get rid of him and look for another. Attend all the fairs and show your stock. You may not make any money, but you will have a chance to be worth money to your neighbor.

Stock-raising in B. C.

ADVANTAGES OF THE LOWER FRASER VALLEY AS A HOME FOR PURE-BRED STOCK.

When we come to take into consideration the smallness of the area of the British Isles, it almost passes comprehension to find that it has been the cradle of the live-stock of the farm, and still continues so to be.

Divergencies have arisen, and will doubtless do so again and again, but the fact remains that to keep up the true symmetrical type of the animal, recourse must be had to the parent strain from the home of original production. In discussing this subject it might be profitable to consider whether that portion of British Columbia called the Lower Fraser Valley does or does not possess both soil and climate which simulate very closely those portions of the British Isles from which have sprung the progenitors of nearly all the live-stock of the farm, and of which the Anglo-Saxon race is so justly proud.

The answer, to my mind, can only be in the affirmative, and under such conditions British Columbia must sooner or later become the cradle for animals which will rival those of the mother country in type, size and quality, and thus make it an imperative necessity for those breeders in other portions of the North American continent, where long, rigorous winters prevail, coupled with extreme debilitating heat in the summer, to come to British Columbia for new and vigorous blood wherewith to keep their animals up to the original type of excellence. It may also follow that the Australasian colonies will find it to their interest to do likewise. The immutability of impress of soil and climate on both man and beast is a stern and unalterable decree, which must be admitted by all who are not wilfully blinded by prejudice. In the not very distant future, British Columbia will be an important factor in the production of the live-stock of the farm, in its most superlative excellence. Hitherto farming in this Province has had but little encouragement from those whose duty it was to foster it, but the time has come when imperative necessity demands that it shall receive the attention and assistance its paramount importance warrants. The laissez faire of past governments has gone, never to return, and the urgency of the agricultural potentialities of the Province will not admit of any further *doce far niente* business to prevail, but requires that a strenuous forward policy of active development be inaugurated on very practical lines.

The development of agriculture in British Columbia is the pressing necessity of the moment, and any man who attempts to hinder that progress, either by implication or overt act, is a direct enemy to his country, and should be treated as such. The lumbermen, the cannery men, the mining men and charter mongers have one and all exploited the public domain of British Columbia to an unwarrantable degree, and in many instances to its detriment, but the time has now come for the farmer to claim his rights and privileges, and demand them in the name of public necessity. The first right of man is the right to live, and as the land is the heritage of the people, bequeathed by the Almighty for man's subsistence, with the proviso that it should be cultivated—for only by the sweat of his brow should he live—therefore to abrogate those laws is flying in the face of Providence, and if continued will sooner or later bring disaster in its train.

"Oh, is there not some patriot in whose power
That blest, that Godlike luxury is pleased,
Of blessing thousands, thousands still unborn
Through late posterity—some large soul
To cheer dejected industry—to give
A double harvest to the pining swain
And teach the laboring hand the sweets of toil."

In conclusion, permit me again to state with all emphasis that the soil and climate of the Lower Fraser Valley of British Columbia are far more eminently fitted for the production of the live-stock of the farm in the greatest perfection of excellence than any other portion of the Dominion of Canada. The combined populations of France and Germany are about 90,000,000, while the area on which they exist is identically the same as that possessed by British Columbia. Truly it is time to be up and doing, that the stigma cast upon Canada by Mr. Carnegie may be no longer true of British Columbia.

J. G. V. FIELD JOHNSON.

Vancouver, B. C.

Teach the boys to show kindness to all the farm animals. It is not only a beautiful trait to display, but it also familiarizes them with the comparative points, types and proportions of the different animals on the farm, and constitutes a grand object lesson in stock judging, which cannot fail to be useful in after-life.

Bogus Bidding at Auctions.

By-bidding at auction sales, or "white-bonnetting," as it is called in Scotland, is a vicious practice which should be frowned down wherever it crops up, and the auctioneer who sets himself to stamp it out deserves all possible encouragement.

There are auctioneers in Scotland who have stopped their sales and ordered prominent men out of their marts. They had detected them bidding up their own stock, or having an agent to do so. No man with a spark of honor does a thing of this sort, or traffics with any one who would be likely to act as decoy in such a transaction.

At a Northumberland county court a case was recently decided which shows how the law stands in relation to sharp practices at auction sales. At a certain farm sale, among other lots put up was a horse, which the plaintiff bid for and eventually bought. He, however, having ascertained that the price was run up by someone acting as agent for the seller, brought his action, and, the running up being admitted, the county court judge gave judgment for the amount claimed, holding that the defendant's action amounted to a secret reserve and caused the sale to become fraudulent. In some conditions of sale it is stated that the vendor reserves the right to bid one or more times, either by himself or his agent, in which case the vendor is within his rights; but if nothing be said, no "puffer" can be employed. It is obvious that if people be employed to run up the prices of different lots, it is not an unreserved sale, and is of necessity fraudulent. The difficulty, of course, in most cases, is to discover culprits of this kind, but the law is definite enough upon the subject.

The Schmidt Treatment for Milk Fever.

To the Editor "Farmer's Advocate":

Sir,—Regarding the results in series of cases with oxygen treatment by udder injection for milk fever, I must say that Drs. Tennent and Barnes have had great success, of which, I for one, am very glad to learn. Nor are they the only ones who have proved the seemingly great value of oxygen in the treatment of parturient paresis. I have not yet tried the oxygen treatment, but intend doing so at an early date. My success with the Schmidt method has been so good that I am not in a hurry to discard it for one with which I have had no experience. The Schmidt treatment is something like the tuberculin test—bad results follow only when not properly administered. The most effective method administered by empirics, or in careless and slovenly hands cannot be expected to produce the good results that may be expected when in the hands of an up-to-date practitioner. The Schmidt treatment has proved a good friend to me and to many of my clients. Drs. Tennent and Barnes' cases seem to have recovered more quickly than my cases, but not more certainly. My cases generally remain down from six to twenty-four hours, and frequently only about eight hours. I first get my patient into as comfortable a position as circumstances will permit, then thoroughly cleanse and disinfect the udder, administer the solution, followed by a large quantity of air; massage well, irrigate the uterus, and give an enema. Then I give the necessary directions to be followed during my absence. I give no other medicine; do not even use the catheter, unless in cases that have been down for quite a time before my arrival. I feel quite safe in leaving my patient, if in good hands, for eight or ten hours after the first treatment, when I generally find bossy on her feet, eating and requiring no further treatment. I never expect any udder trouble following the treatment, as I never had but one case (my first case with this treatment), and that was so slight that treatment was not necessary. Udder trouble is not the result of the infusion, but is due to the manner of administering. I have yet to treat a case with iodide of potassium that was not successful, in so far as milk fever was concerned. I do not mean by this that every case that I have treated recovered. I have had two or three bad results, but only when I had to deal with complications; for instance, one when a very nauseous and severe purge was administered by a quack before my arrival, and which did not operate until the cow had been on her feet twenty-four hours. By this time I was absent from town, and as the case did not receive proper attention, a fatal result followed. This cow was down twenty-two hours before I saw her—most hopeless looking case. Another case developed bronchial pneumonia, no doubt due to the administering of medicine previous to my arrival. Even this cow resumed the standing position some time before she died.

As to parturient paresis, Schmidt holds that the cause of the disease must be located in the udder, which, by the suddenly increased lactation after birth, loosens great masses of old alveolar cells (colostrum), in a sort of cleaning

process. This undergoes decomposition, and forms toxins which are absorbed into the blood circulation, resulting in auto-intoxication. It is a well-known fact that the iodide potassium retarded the secretion of milk. This is what first led Schmidt to adopt the I. P. treatment.

You ask me for my opinion "as to the nature of the action which takes place in this treatment"—oxygen treatment. I am not at present prepared to do so. Some writers claim that parturient paresis is caused by bacteria in the udder. If this is so, and it is quite possible, the bacteria may be anaerobic, which would easily account for the action of oxygen in this treatment. Those advocating—and they are many—carbolic acid and glycerine, tricresol and glycerine, etc., etc., instead of iodide potassium, and claiming just as good results, would tend to bear out the idea that the disease is due to bacteria. The administering of oxygen and ordinary air with such grand results might prove that the disease is due to bacteria, and that the bacteria are anaerobic. I fully believe that the Schmidt method, especially when a large quantity of air is injected and well massaged, will prove just as successful as the oxygen treatment, but may not give as quick results.

Brockville Co., Ont. T. A. ALLEN, V.S.

An Error in Breeding.

For many years now Canadian farmers have had the benefit of pure-bred bulls upon their cows, yet to-day great numbers of our cattle are nondescript in type and only mediocre in utility. This is unfortunate, to say the least, and the loss to the country by feeding poor stock where the best might be kept can never be estimated. It may be far-fetched and extravagant to say that the doctrine of dual-purpose is responsible for our unfortunate condition, but it is nevertheless true that the effort to get a good milker and a good beef combined has done more than any other one influence to interfere with the improvement of cattle in the older parts of Canada. By laying this charge at the door of the advocates of the dual-purpose doctrine, we do not wish to be understood as ridiculing that ideal or denying its practicability, for we believe that the dual-purpose type of cow already exists, and that she can be bred and will be bred more largely in the future, but that her breeding is the work of the most experienced breeders, and should not be indiscriminately attempted by the majority of farmers. That it has been attempted is evident in the shape and color of one-half the herds to be found in the country, and has been observed by everyone who has watched breeding operations during the last fifteen or twenty years. Of whatever nationality or mixture of nationalities a farmer happened to be, the idea has been firmly rooted in his mind that a cow is an animal kept for the purpose of producing milk and beef. The doctrine of specialization of function even yet has not been heard of in many places, and in many others not appreciated. In the past wherever it was found, that cows were losing their milking qualities by being returned generation after generation to neighbor Smith's bull, even though they improved in beef form, a change was made to another bull of the Holstein or Jersey breed, in order to maintain or recuperate the milking propensities of the herd. And so the work goes on, crisscrossing from one breed to the other, in an attempt to secure in the offspring the desirable qualities of two or more breeds, as for instance the milking qualities of the Holstein, the butter-producing power of the Jersey, the gentle disposition of the Hereford, and the beefing proclivities of the Shorthorn.

Much blame cannot be attached to the farmers for this course, for agricultural education has until quite recently been lacking, and the most prominent stockmen in each locality invariably introduced the pure-bred bulls of the different breeds, and where these authorities disagreed, what could the average man do but follow an intermediate course. Quite frequently such a course of breeding resulted in securing a cow of unusual merit, but here another difficulty arose, for to breed her to a beef bull would reduce the milking powers in the calf, and to use a dairy bull would have the same effect upon the beef form. Unfortunately, cows so bred possessed very little prepotency or power to stamp their characteristics upon their offspring, and the good end to which years of effort had been devoted would be lost in one generation by a cross to a poor milking strain of Shorthorn or Hereford, or the splendid form would give place to the impress of a pure-bred Holstein or Jersey.

Markets also forced this indiscriminate breeding. Beef products were cheap for years, and the market for butter and cheese was quite limited, so that farmers stood ready to profit, no matter which way the cat jumped.

Now, however, it is time, and past time, to strike a definite course, to select a breed for dairy or for beef purposes, and to stick to that breed through thick and thin. If a beef breed is chosen, the profits will be made from steers sold for beef. One cannot expect to make as

much at the cheese factory or creamery with beef cattle as his neighbor who keeps a purely dairy herd. Neither can the breeder of dairy cattle expect to sell his steers and surplus stock to as good advantage as the breeder of beef cattle. This, of course, in some cases will have its exceptions, but this is essentially an age of specialization and division of labor, and the practice applies just as forcibly in the work of cattle as in the work of men.

Oxygen Milk-Fever Cure.

In your issue of February 2nd last, page 109, you give new cure for milk fever; again June 1st, page 510; and again June 15th, page 563. Do you think it would be advisable for farmers to procure instruments that are used for that purpose, or would it be advisable it should be used only by a veterinarian? What would be the cost of the instruments? Could the materials used be obtained from ordinary drug stores, and where could instruments be obtained? W. H. L. New Westminster, B.C.

Ans.—It would be better to induce your local veterinarian to procure the necessary equipment, as a farmer might not need to use it once in three years, while within the area of the practice of a V.S. there might be a score of cases in a month or two. A veterinary surgeon would also be more likely to use the outfit with safety to the cow. The outfit may be ordered from W. E. Saunders & Co., wholesale druggists, London, Ont. The cost here for the equipment complete is about \$12, including metal tank about two feet high by eight inches in diameter, filled with 125 gallons compressed oxygen; teat syphon, rubber tube and measuring bottle.

HORSES.

Diseases of the Digestive Organs in Horses.

(Continued.)

ACUTE INDIGESTION—(Acute dyspepsia, sometimes called gastritis).—This is one of the most common diseases of the digestive organs of the horse, and probably causes more deaths than any other. As digestion in the horse takes place largely in the small intestines, it is often impossible for the practitioner to determine in cases of this disease whether the trouble is confined to the stomach or whether the intestine is also involved. This weakness in the veterinarian's diagnosis is not important, as affections of this nature in both organs are concomitant, produced by the same causes and require the same treatment.

CAUSES.—The usual causes are too much food, food greedily swallowed and imperfectly masticated, feeding immediately after severe exercise, severe exercise too soon after feeding wheat, peas or other grain to which the animal is not accustomed, a too-sudden change of food (I may here state that change of diet in horses, and to a great extent in all classes of animals, should be gradually made), drinking large quantities of water soon after feeding. One of the most frequent causes is what may be called mistaken kindness on the part of the owner. For instance, a horse that has been idle and not accustomed to grain, is required to go a journey or do a day's work. In order to fortify him for the unusual exertion required, the owner gives him a full feed of grain, hitches him and starts. The stomach is charged with grain, to which it is not accustomed, and the horse is subjected to unaccustomed exercise. These two conditions in many cases produce acute indigestion; or, if the horse withstand this irrational treatment, he is given a large ration of grain at noon, probably given a drink immediately afterwards and hitched up for the return journey. If he escape an attack of illness under these circumstances, we may reasonably be surprised. When horses under the conditions described are required to work or drive, care should be taken to feed very lightly on grain until after the labor is performed, then, in order to compensate for the extra exertion, he should be fed grain for a few days. Some horses are especially predisposed to digestive diseases, as those with congenitally weak digestive organs, or when the organs have become weakened by disease: weak, anemic, poorly-fed and emaciated animals, very young or very old animals, horses recovering from a serious disease. Among the direct irritating causes may be mentioned green food, food and drinks that are very hot, or that are covered with frost or entirely frozen, unclean or decayed foods and drinks, mouldy hay or grain, matters undergoing fermentation or decomposition, as potatoes, turnips, fruit, grass or germinating grains. In some

cases attacks of this disease occur where there has been no change of food or usage, and the cause is very hard to determine. In such cases we must conclude that there is temporarily some weakness in the digestive organs that, while not producing any visible symptoms, render the horse in that condition in which indigestion is easily produced. At the same time, it is seldom, except in horses predisposed to the disease, that an attack occurs that cannot be traced to carelessness or ignorance in feeding or usage.

SYMPTOMS.—The symptoms of many diseases of the digestive organs simulate each other so much it is often very difficult to say for a few hours just what the disease is. Hence the advisability, when convenient, in sending for expert assistance, as an attack of a serious nature may be mistaken for spasmodic colic, and if not energetically and skillfully treated, may reach that stage in which treatment will be of no avail. The first symptoms of acute indigestion usually are: uneasiness, dullness, stamping of the feet, lying down, rolling, getting up, looking around to the flank, etc. This is usually soon followed by more or less marked fullness (bloating) of the abdomen, more noticeable on the right side. In many cases these symptoms are preceded by a semi-diarhoea, the horse passing semifluid faeces often and in small quantities. The pulse is at first full and frequent, becoming more frequent and weaker as the disease advances. The pain is usually constant, but of varying intensity. When relief is not obtained, the symptoms increase in intensity. In some cases death occurs very quickly, possibly in less than an hour after the first symptoms, the animal evidently dying from exhaustion. In other cases 24 to 48 hours, or even more, may elapse before recovery or death takes place. In such cases the violent symptoms are succeeded by dullness and stupor; instead of the violent symptoms being shown, he will walk around the stall or paddock in a circle, the eyesight evidently impaired, the visible mucous membranes intensely injected, sweats bedew the body, the pulse almost or quite imperceptible, and respirations short and frequent. This indicates that inflammation of the stomach and bowels have resulted, and he will probably remain standing or walking aimlessly about until he falls and expires. In the meantime there is usually little or no passage of faeces, and the intestinal murmurs have a metallic sound. In rare cases there are eructations of gas and attempts to vomit, and in very rare cases small quantities of ingesta are actually vomited. These symptoms always indicate a grave condition of the stomach, and where actual vomiting occurs we are always suspicious of rupture of the stomach, although it may take place where rupture does not exist.

TREATMENT.—Place in a large, comfortable box stall. Do not force exercise, or prevent him lying down, as is often done. Give two to four ounces of oil of turpentine (according to the size of the horse), mixed with a pint of raw linseed oil. Good practice to foment the abdomen with warm water and give injections of warm water and a little soap per rectum. If the pain be severe, give one to two ounces chloral hydrate in a pint of cold water, or two drams solid extract, or an ounce of the fluid extract of belladonna. Do not give opium, as it checks the action of the bowels, which we want to encourage. Watch him, and if he gets fast in the stall release him. If relief be not obtained in an hour, repeat the doses and send at once for a veterinarian, if one can be obtained. If not, continue the treatment, repeating the doses every hour, or as required. Where the bloating is excessive, it is good practice to puncture with a trocar and canula on the right side. This is a critical operation in the horse, and the skill and necessary instruments are possessed by few outside of the profession. There is probably no means of dissipating the gas so safe and effectual as the hypodermic injection of 1 to 1½ grs. of the salicylate of eserine; but here again the professional man is required, as few others have the drug and instruments. This treatment may be repeated in about 1½ hours if necessary. It is good practice to administer a purgative after the acute symptoms are allayed. After a purgative has been given the horse should have nothing to eat but a little bran, and be given water in small quantities and often until purgation commences, and he should not be put to work or exercise until his bowels have regained their normal condition. A purgative should act in from 18 to 24 hours, but in many cases does not act so soon, and it is not safe to repeat the dose sooner than 48 hours, when, if necessary, a smaller dose may be given. Barbadoes aloes, from 6 to 10 drs., made into a bolus with about 2 drs. ginger and sufficient treacle or soft soap to make it plastic, is the most satisfactory purgative. "WHIP."

Mr. T. H. Lowes writes us as follows: "I am very much pleased with the 'Advocate.' I have taken it for years, and although I take two other agricultural papers, the 'Farmer's Advocate' is my choice by far. Wishing you every success, I am, Yours faithfully, T. H. LOWES, Yorkton, Man."

Distinction Between the Shire and Clydesdale.

It need hardly be said that the two breeds resemble one another more or less closely in general appearance, and that they plainly show the fact that they are related to one another. Shire horses are, as a rule, weightier and possess more substance than Clydesdales, and the former are on an average somewhat bigger animals than the latter. It would, of course, be wrong to think that this is invariably the case; this is not so, because a heavy Clydesdale horse may be weightier and altogether bigger than a light and small Shire; but comparing the breeds in a general way, the above holds good. Clydesdales have more sloping shoulders and also more oblique pasterns than the average Shire, Scotch breeders having paid great attention to obtaining a good slope of shoulder and pastern in their animals. The slope of the shoulder and of the pastern is one of the main points of distinction between Shire and Clydesdale. Further, the head of a Shire horse and that of a Clydesdale differ considerably from one another, or, at any rate, should do so in first-class animals of the two breeds. In Clydesdales in which there is a considerable strain of Shire blood, the Shire type of head is often apparent, and may crop up in an animal which is bred from pure-bred Clydesdale parents. The leg-feathering is, on the whole, less abundant in the Clydesdale than is the case in the Shire. Clydesdales are remarkable for their good walking action, which is free and light, and shows good length of stride. This is due largely to the well-placed shoulder and pastern, as if these parts are nice and sloping the walking action of a horse is generally good, provided the animal possesses courage and is of an active disposition.—[Farmer and Stock-breeder.]

A New Fast Mare.

Quite an agreeable surprise has been given the trotting-horse devotees this season in the performance of the very fast mare, Lou Dillon. On July 11th she trotted the mile on the Cleveland track in 2.03½, beating the previous record for trotting mares made by Alix, which had stood for nine years, by one-quarter of a second. This is only three-quarters of a second slower than the record of Cresceus, and one-quarter slower than that of The Abbot. The first quarter was done in 31½, the half 1.01½, the three-quarters in 1.32½, and the mile in 2.03½.

The performance of Lou Dillon calls attention to some of the records made in speed during the last sixty years.

In 1849 Pelham made a mile in 2.28. Four years later Highland Maid reduced this to 2.27. The great Dexter then took a hand at it in '67, and set the record at 2.19. By '74 Goldsmith Maid had reduced it to 2.16. In 1881 Maud S. trotted a fast mile in 2.10½, and four years later reduced this record to 2.08½, and in July, 1901, Cresceus did a mile in 2.02½. Lou Dillon is now only five years old, and her owner, C. K. G. Billings, has given her over to a trainer to try to beat two minutes. This is a difficult task, but there is every indication that Lou Dillon will take some more off her own record, if she does not set a new one for all other trotters, as the great record of this mare was made in her fourth start against the watch, and in her second attempt to lower the record of Alix.

A Hint re the Mare and Foal.

It often happens that a mare nursing a foal has to be put into harness at this season of the year when the rush of harvest is on. When brought from the pasture and put to work suddenly, extra care should be given the mare lest serious consequences result with the foal. Even the best-broken mare when put into harness after having a few weeks' free run in pasture with a foal will become restless and excited when separated from it, and her treatment should be considerate. When brought from the field she will probably be very warm and her udder full, the colt will be ready for his milk, and will take it greedily if allowed. Under such conditions there is always danger of scours or colic. It is always a safe plan to allow the mare to cool off a little before the colt nurses, and to relieve her udder of the very hot milk rather than to let the colt have it. The supply will soon be replenished and will have the advantage of being fresh. Ground grain should also be kept within reach of the colt when in the stall, to satisfy his hunger and keep him quieter.

Runaway Horses.

One can scarcely take up a local paper without reading under the above heading the narration of quite a list of runaways which had occurred during the week. It naturally occurs to one to enquire into the cause of this. The immediate cause is, in nine cases out of ten, carelessness on the part of the driver. But there is a primary cause, also due to carelessness of a grosser nature, which is begun in the training of the colt, or, perhaps, to be more correct, in the omission to train him. To get still nearer the root of the matter, and to begin at the beginning, the boys on the farm should all be taught how to handle and train the colt. If the matter were looked after with the same strict attention which is devoted to other business matters in the ordinary course of everyday life, we would hear little or nothing of runaway horses. A properly trained horse never gets far enough ahead in the "knowledge of good and evil" to discover that he has the power to run away. He may get very impatient and irritable in an uncomfortable position on a cold day, but his pawing and other indications brings any sane driver to his side to remove the cause of discomfort before the animal becomes infuriated to such a degree as to seek refuge in flight. Then if frightened by something which is to him an unnatural phenomenon, he, believing that he is powerless to snap his halter shank, or break away from his driver, may execute some fancy impromptu jig steps, with perhaps a "highland fling" or two thrown in by way of variety; but to gallop madly down the street, while foot-passengers tumble over one another in their fright to get out of the way of the bone-breaking wheels which spin behind him, is an action which has been trained out of his wild free nature, and has no place in his acquired ideas of possibilities. With horses that have acquired a habit of bolting, however, there is no remedy but the constant care, and as nearly as possible the constant presence of the driver; and that should be insisted on both by the owner of the horses and the general public, for runaway horses are a source of very great danger to all property and human life which may come in their way.

FARM.

The Farm Wood-lot.

In a recent paper entitled, "The Use and Care of the Farm Wood-lot," Charles A. Davis, instructor in forestry at the University of Michigan, called attention to the following points:

1. Every farm, however small, should have a well-established wood-lot, from which firewood, posts, poles and other small timber used on a farm may be taken as needed. The wood-lot may be located on a hilltop or hillside too steep for cultivation, or upon any other place which may not be suitable for the ordinary purposes of agriculture. Again, the wood-lot may be so located as to form a windbreak, which will serve to protect the buildings from cold winds and the crops and soil from both cold and dry winds.

2. A wood-lot after it has been established must be kept in good condition. Not infrequently a farmer will so neglect his wood-lot or else so misuse it as to cause it to deteriorate very rapidly. Such deterioration is quite often due to excessive thinning, to pasturing, or to the constant and continued removal of the better timber, and to the leaving of the poorer trees. Correct use would exclude cattle and sheep entirely. The undergrowth should be left to form a soil cover, which adds to the moisture-receiving capacity, or young trees should be planted which will grow in the shade and eventually replace the old growth. Maple, beech, box-elder, ash and many other species are useful for this purpose. In removing trees, only the poorest timber which can be used for the desired purpose should be taken. This is contrary to the general practice, in which tall, straight and vigorous timber is often cut down for firewood when the less thrifty, crooked or branchy trees would serve just as well.

3. The wood-lot should be fenced up to its border. If a margin of grass land is allowed between the border of the wood and the fence, the temptation to use the whole for pasturage may prove too great.

4. If undesirable kinds of trees are present, more desired kinds should be planted, and as soon as these have been established, the others may be removed. It should, however, always be remembered that for firewood, poor and soft-wooded species often yield in the aggregate a greater profit than the slower growing, hard-wood kinds. Thus poplars and willows will pay much better in a given time than the more valuable hickories and hard maples.

5. Some species of trees will produce marketable material such as poles and posts in from fifteen to twenty-five years, while timber of larger dimensions will take from forty to one hundred years to grow.

In the Great West.

Wonderful West—upon whose Prairie Plain
In rich profusion bends the golden grain.
No land so favored by Heaven's smile of grace,
No land that upward lifts such happy face,
In gratitude for gifts of sun and shower
Poured out on Manitoba in rich dower.
Each harvest greater than what yet has been,
Great Prairie Province of all lands the Queen.

In Spring the Farmer plows the virgin soil;
Nurse Nature rears the product of his toil.
Day follows day, and now the fruitful ear
Unfolds in golden beauty, rich and rare.
Summer has come, and crowds the City throng,
The streets resound with mirth and jovial song.
Races, attractions, sports, no room for care
In the vast grounds of Winnipeg's Great Fair,
As all with glad hearts now celebrate,
Lightsome and gay, the City's Annual Fete.

Fondly we hail thee, Wondrous Western Land,
All Nature joins to swell the chorus grand;
In loud triumphant strains our song we raise—
Rich, deep and clear, tribute of love and praise.
HERBERT DORE.

Wasted Fertility.

In recent issues of your interesting journal there have appeared three most valuable letters from the able pen of Prof. Harcourt, of the O. A. C., Guelph, on "Wasted Fertility," which ought to be carefully studied by all who have at heart the agricultural welfare, not only of this Province, but of the whole of this great country. It is to be regretted that the momentous question of the rational manuring or feeding of crops has been lost sight of by the greater proportion of our agriculturists, and overlooked by agricultural teachers owing to the numerous other subjects which have been given undue prominence.

It is most encouraging to find Prof. Harcourt, who we must recognize as an authority on the subject, has drawn our attention to this "Waste of Fertility." In failing to supply the food which plants absolutely require through the soil, all other questions, such as selection of seed, bacterial inoculation, insect pests, noxious weeds, etc., etc.—even stock-raising itself—become of minor importance when the means of producing strong, healthy and profitable growth are neglected.

The importance of a sufficiency of plant food of the right sort is brought home to us by comparing the crop yields obtained from the long-worked soils of other countries, where the mineral constituents withdrawn are replaced by means of artificial manures or fertilizers (concentrated plant food) in adequate quantity and of the right kind. Perhaps this is best shown by taking the case of Great Britain, where the consumption of these aids to fertility, of which a larger proportion per acre is employed than in any other country, and comparing crop yields with those obtained in Ontario. The total area under cultivation in Great Britain is about five times as great as in Ontario, and the weight of stock to the acre is about the same, hence the plant food supplied by the stock may be taken as on equality; and yet the acreage yield of crops is considerably heavier in Great Britain.

Taking the ten years' average (1892-1901) the following are the yields:

	Gt. Britain. Ontario.	
	Bushels.	Bushels.
Wheat	29.89	20.01
Peas	25.63	18.60
Potatoes	220.2	110.3
Mangels	653.3	444.5

Whence arises this enormous difference in the crop-yield, amounting to about 50% on the average? It cannot be from the inherent quality of the soil, for having been under cultivation for hundreds of years in Great Britain, all the original plant food in that soil must have been taken out long ages ago, whilst in Ontario the soil was "virgin" but a generation back. The barnyard cannot have given Great Britain the advantage, as the weight of live-stock carried per acre is about the same in both countries. Climatic difference is certainly favorable to Ontario, consequently we are forced to the conclusion that in the soil-food lies the secret, which half a century ago was grasped by farmers in the "Old Country." They realized that an easy shave was only to be had when a good lather had been put on for a start. In other words: The concentrated plant food, or artificial manures, which are free from weed seeds, were an essential and necessary addition to that supplied by the farmyard manure, which must contain the seeds of noxious weeds. Practice based upon these conclusions has led to the yearly addition of more than one million tons of these artificial manures, and it must therefore be entirely due to this that the crop yields in the Old Country are so enormously heavier and certainly not of inferior quality to those of the sun-kissed Province of Ontario.

G. CAMPBELL ARNOIT,
Agricultural Chemist.

Electricity in Farming.

In the application of electricity to everyday work, Germany has, perhaps, gone further than any other nation. Electrically heated and operated cooking and laundry apparatus is in common use there, but the most striking single development is the electrical farm. Take, for example, Professor Backhaus's estate near Quednau, in Eastern Prussia, which is only one of a large number of German estates run by electricity.

The Quednau farm covers 450 acres, and its dairy handles 1,000 gallons of milk daily. Every part of this farm is lighted by electricity, and is in telephone communication with every other part. The dairy has an electrical churn; the barn contains electrically operated feed and carrot cutting machines, and even the grindstone is turned by a small belt from the shaft connected with the barn motor. The water-pumping apparatus is run by electricity; all the buildings are lighted by incandescent lamps, and there is an electrical pipe lighter at the doors of all the houses. This farm has also its own threshing and grist mill, the machinery of which is turned by a current from the miniature central station, and, finally, there is a small sawmill, which gets its power from the same station. On the farm are all kinds of electrical agricultural machines, including an automobile plow, all run by batteries charged from sub-stations in the fields.

The power for all these various operations—lighting, heating, telephones, churning, cutting, grinding, pumping, threshing and sawing—comes from a 50-horse-power stationary engine moving two dynamos. From this station the power is distributed to the parts of the farm, and the switch-board is so plainly marked that the commonest farmhand can regulate the supply to fit the need. At Crottorf a number of small farms have grouped to support one station, and have their work done by it.

Such plants as these do more than merely lighten farm labor—fewer workmen are needed and greater profits are possible, and the whole business of farming is made more attractive. The barnyard is lighted by an arc light; night work in the fields is possible when it is necessary; the stables are warmed in winter and ventilated in summer by the turning of a switch; indeed, the entire farm runs like a machine at the call of the electric current.—[The World's Work.]

The Seed Control Act.

There is no doubt that some measure is required to insure a better quality of seeds being placed upon the market, and to stop the sale of the seeds of weeds, which are constantly found mixed with those of grains, grasses, and of other farm crops, but the act recently introduced in the Dominion Parliament is decidedly impracticable as it stands at present. Both the grower of grains and grass seeds and the wholesale and retail dealers would unjustly be affected by the act should it become law in its present form. The act at present makes a farmer liable who sells or offers for sale to any person, other than merchants who reclean and grade seed, any seed or cereals that contain specimens of the seed of such weeds as mustard, tumbling mustard, hare's-ear mustard, penny cress, wild oats, bindweed, orange hawkweed, ox-eye daisy, perennial sow thistle, Russian thistle, ragweed or ergot. Clearly few farmers can guarantee their seed perfectly free from all of these weed seeds. The position of seed dealers is even more unpleasant. The restriction of seeds to four grades, the prohibiting of the exportation of inferior lots, upon which dealers make considerable profit, the liability of the dealer for impure seed found in his possession, whether for sale or not, it is claimed by seedsmen is altogether unjust and injurious to the trade. The seedsmen have conferred with the Government with the object of having the bill amended in several clauses, and have also suggested the following:

"That whereas heretofore large quantities of very inferior seed have been brought into this country or shipped in on consignment from the foreign countries, and these importations are largely responsible for the inferior quality of clover and grass seeds which have been distributed in Canada; that a specific duty be imposed upon clovers and timothy seed, the duty to cover crimson clover, trefoil clover, lucerne and white clover, as well as the two varieties specially mentioned in the act (red and alsike). Samples of all clovers and grass seeds might be taken at the Customs Port of Entry, these samples to be sent to the Department of Agriculture at Ottawa for examination. Unless this examination is carefully made at all the ports and outports, we fear that the importation of these inferior seeds will still continue to the detriment of the farming interests of the country, and to the prejudice of the Canadian trade. Shipments of low grade or inferior clover and timothy seed brought into this country for purposes of adulteration or for sale might properly be refused cus-

toms entry, or required to be re-shipped out of the country if after being examined they were found to be of such an inferior quality as to be unfit for distribution in Canada.

Hop-growing in Canada.

Climatic conditions in Canada from the Atlantic to the Pacific may be said to be, generally speaking, favorable to hop culture; yet only small areas have been devoted to this crop in the Dominion. A few districts in Ontario have at one time or another paid particular attention to hops, but most of them are now more or less devoted to some other branch of agriculture.

REASONS FOR DECLINE OR LACK OF GROWTH OF INDUSTRY.

The fact that the flavor of hops is very materially affected by slight or even almost imperceptible climatic conditions is responsible, in no small measure, for the falling off in the area under this crop. Other factors in the decrease in the culture were low prices, due to heavy crops in countries where better hops could be produced. Such hops were, in the years of low prices, brought to Canada in considerable quantities. Prices have gone up, but certain peculiar flavors of certain brands of malt liquors demand the continuance of the import trade.

The principal sorts imported are: East Kent Goldens, Bavarians and Bohemians, and, in addition, a few are brought over from the extensive yards in the State of New York.

FOREIGN MARKETS.

Very little effort has even been made to establish a market for Eastern Canada hops in England, due to the rather inferior quality of the article available. Recently, some considerable quantities of Kent Goldens, grown in British Columbia, have been shipped and met with a ready sale at good prices on the best English markets. In fact, so well were they received as to create quite a stir among Kent and Hampshire hop-men.

British Columbia seems to be particularly well suited in climate and soil in certain parts (the Okanagan and Vancouver, for instance) to grow a good article, but it is necessary, if the English trade is desired, to grow the Kent Goldens, a small yellow hop. The large hops, commonly called Puyallup or Pacifics, command a good Canadian trade, but will not do for export. In Ontario the best hops are grown in Prince Edward County, Prescott district, Kemptonville region, and around Riceville in Prescott County.

VARIETIES.

The varieties considered most suitable for Ontario and the rest of Eastern Canada are the Bavarians and the common Canadian hop.

EASTERN CANADIAN GROWERS.

Some of the best growers in Eastern Canada, from whom good cuttings might be procured in the proper season, are: J. P. Wiser, Prescott, Ont.; Stephen Polite and Judson Polite, of the same place; H. Corby, distiller, Belleville, Ont.; John A. Howell, Rednersville, Prince Edward Co., Ont.; and Ladd, Smallman & Vose, Cazaville, Que.

The principal yards in British Columbia are owned by Lord Aberdeen, on the Coldstream Ranch in the Okanagan Valley.

GROWTH OF INDUSTRY.

The prospects for an increase in the hop-growing area in Canada are small, and on the authority of Mr. Morton, of Toronto, it is not likely to increase, or if an increase is made it will be at considerable risk to the growers. The crop of 1901 showed a surplus of between five and six hundred bales (175 lbs. per bale), which were bought up at from five to nine cents, a most unprofitable price, and were exported to England.

PRICES.

A brief review of the market for the past four years will give an idea of the variation in price, and of the risk run by overproduction:

In 1899 prices ranged from	9 to 12 cents.
1900	10 to 12
1901	5 to 13
1902	12 to 25

And the prices now prevailing are:

Canadians.....	22 to 25
Americans.....	25 to 30
Pacifics.....	25 to 30
English.....	30 to 36
Bavarian and Bohemian.....	35 to 43

This year's crop might be large, however, and prices would then be likely to drop.

But Canada is growing, and possibly the increased demand and higher prices have come to stay. It may be in order, therefore, to give a brief outline of hop culture as practiced in various parts of the world.

SOIL AND CULTIVATION.

In beginning operations it is important that

the area selected for the crop be well drained, well cultivated, and fairly fertile. The last named condition of the soil may, of course, be brought about by the addition of some sort of fertilizer. Well-rotted barnyard manure at the rate of, say, 50 tons per acre, constitutes a sufficient and suitable dressing to be plowed under before putting out the young plants. Or,

150 lbs. nitrate of soda,
350 lbs. dissolved bone or acid phosphate,
and 300 lbs. muriate of potash per acre, applied after hops have started to grow, would likely give good results on a soil fairly rich in humus. The land may be plowed, and then cross-plowed deeply each time, or it may be plowed twice at the same time; that is, the first plow turning a shallow furrow and a second plow following to cover the sod or surface soil with a thick layer of sodless soil. The field should be thoroughly worked, and be in a condition of perfect tilth before planting operations begin.

PLANTING.

The "sets" or cuttings should be planted in hills seven to ten feet apart each way. Every seventh and eighth hill each way should be of male or staminate plants. Three cuttings or sets are considered sufficient for a hill, and they should be five or six inches in length, or long enough to contain at least two eyes or buds.

CUTTINGS.

These sets or cuttings are cut from the runners, which are found near the surface in each hill, and which frequently extend several feet without diminishing in size, and have numerous eyes or buds. The cuttings may be made some considerable time before planting. They should be made at least a few days previous in order to let them dry a bit, and so preclude any danger of bleeding to death after being planted. Care must be taken, however, to protect them from frost or the hot sunshine while waiting to be planted.

In planting, the cuttings should be set separately in hills, with the buds pointing to a common center and upwards, the whole being lightly covered and the earth packed well around them.

SUPPORTS.

The sets once planted, the next consideration is the poles or supports for the vines. A simple method is to plant firmly in the ground in the center of each hill, one or two poles, twenty to twenty-five feet long, and quite independent of all other poles. This method is the one that has been most commonly practiced in Eastern Canada.

Another method of supporting the vine is to plant a picket about eight feet high in each hill, and connect each picket with the four adjoining pickets, and sometimes even with the pickets at the opposite corners of the contiguous squares.

SUPPORTS FOR PERMANENT YARDS.

Where large, permanent yards are being established, the best method is to plant very strong guyed posts, about 20 feet high, at each end of each row, and smaller posts at the same height at intervals of 40 or 50 feet. A strong wire is then stretched tightly from one end of the row to the other, and secured to the guyed posts, being supported at intervals by the other smaller posts. One or more wires or strings are then let down vertically, or at an angle of 60°, and anchored in the center of each hill. This method or modifications thereof, is practiced in England, and in British Columbia.

CULTIVATION.

The plants set and the supports or poles placed, care must be taken to keep the space between the rows well cultivated. Once a week, or once in ten days, it is necessary to stir the surface soil to a greater or lesser depth, and to cut with a hoe all the weeds not reached by the cultivator. The cultivation should be at first fairly deep, and later somewhat shallower.

Cultivation should cease about the middle of July in Eastern Canada, probably somewhat earlier in the West. In England the practice is in Kent County to cultivate till it is impossible to get through between the vines with the cultivators, which are frequently run by steam.

PICKING.

Upon the picking and curing of the hops depends their ultimate value. If the yard is of a considerable area, some part or parts are certain to be further advanced than the rest. These sections should be sought out and picked first, since in the nature of things it will be impossible to pick all at the right stage of maturity. A hop when fully ripe and ready for picking will be well and compactly closed at the point; it will be harsh and crisp to the touch, and make a rustling noise when clasped in the hand. The seed will be hard and dark purple in color. A very considerable loss is sure to arise from too early picking, due to a lack of full development of the lupulin. This loss will vary from five to fifty per cent. of the value of the crop.

DRYING.

Drying is the most particular as well as the

most important and difficult part of hop-growing. Nothing short of the most vigilant and intelligent management will dry the crop, without injury, ready for the market. The reason for this is that the lupulin, the yellow substance found at and near the base of the leaf, is very easily injured by heat, and a temperature over 100° F. is likely to impair the quality of this the active or valuable part of the whole crop.

The Hopkins method, or "fan process" of drying, is supposed to be the best. In this system the floors are double, and there is a suction at the top of the kiln which carries off the warm air and with it the surplus moisture from the hops. The top floor is made of lattice or open work, and the hot air driven up through the hops lying thereon, three or four feet deep. Since hops when picked contain about 75 per cent. of moisture, it is evident that a strong current of air must be needed if the drying is to be done in 10 or 12 hours, and the temperature not to exceed 100° F.; hence the use of the fan process to drive the cold air at a furious rate through the hot furnace and up through the beds of hops in the many small chambers.

No one may hope, however, to succeed in curing hops save by learning from an experienced man, or by long and bitter experience.

The cost of starting a yard might be estimated as follows:

One acre of hop land in Eastern Canada.....	\$ 75.00
Planting per acre	25.00
Poles per acre	50.00
*Building, press, boxes, etc., per acre.....	100.00
	\$250.00

*This item will be affected by the area under cultivation.

COST OF GROWING AND MAINTAINING AN ACRE OF HOPS.

Cultivating	\$ 15.00
Picking	50.00
Hauling and extra help	10.00
Drying, including fuel	15.00
Baling	4.00
Baling cloth and twine	6.00
Interest on investment, 6%	15.00
Breakage and deterioration in poles, buildings, etc.	15.00
	\$130.00

Probable crop per acre, 1,500 lbs. cured hops. It is evident, therefore, that any price less than 10 cents per pound leaves a very small margin for the manager.

J. H. GRISDALE, Agriculturist.
Central Experimental Farm.

Potato Blight.

A subscriber in Oxford County asks what to do in case potato blight makes its appearance this year. This question evolves itself into two simple elements, namely, potato blight is a distinct disease, and Bordeaux mixture is so far the best preventive of diseases in the vegetable kingdom. The blight is carried over from year to year by resting spores, which bear the same relation to the disease that seeds bear to plants, and these spores germinate and cause the disease whenever the weather and other conditions are favorable. The weather itself does not cause the disease, but simply favors its development. To ensure immunity from the disease, the vines of potatoes must be kept covered with the Bordeaux mixture. Unfortunately, this is hardest to do in wet weather, when the blight is most liable to make its appearance. If the mixture is not there when the spores alight the disease will, usually, spread very rapidly. Spraying should extend from about the middle of July to the middle of August, the number of applications depending upon the weather. At the Ottawa Farm last year, eleven varieties were tested. The average increase in yield of marketable potatoes, where sprayed, was 120 bushels per acre, the yield per acre of marketable potatoes from the sprayed being 310 bushels 12 pounds per acre, and from the unsprayed 189 bushels 54 pounds. The cost of the bluestone, which is the principal expense, was \$7.98 per acre, or 114 pounds at 7 cents per pound. In spraying large areas the cost would be less. The vines were kept growing eighteen days longer than those unsprayed. Much of the weather during the last month has been favorable to the growth of fungous diseases, and in those districts where potato blight is common, attention should be given to spraying to insure a crop.

What We Owe to Agriculture.

"In this country the agricultural interests, including the number of people engaged and the amount of capital invested in them, are equal to all others combined; and this being true, they are certainly entitled to the good-will and Godspeed, and to all the assistance and comfort that every man in the State and nation can give them. We will always, so far as I can see, be an agricultural nation; and if this is so, how can we better serve every man, woman and child than by fostering as far as possible the one interest

that is equal to all other interests combined. The first step is to educate practically the farmer to follow his business in a businesslike way that will bring him a reasonably profitable return."—J. J. Hill, President Great Northern Railway.

Macaroni Wheat and the Milling Industry.

At the National Federation convention of millers held in Detroit a few weeks ago, a very interesting paper, on the importance of macaroni wheat to the milling industry was read by Prof. M. A. Carleton, Cerealist of the United States Department of Agriculture at Washington. Although this variety of wheat is comparatively new in this country, wherever tried it has given such splendid yields and appears to be so well suited to our conditions that its possibilities for bread-making as set forth in this paper should be of special interest to grain-growers. Among Prof. Carleton's points were the following:—

"1. Three years ago in the U. S. macaroni wheat was grown only in a few isolated patches; in 1901, 60 to 75 thousand bushels were harvested, while last season one and a half or two million bushels were produced, an increase of twenty-fold or more over that of the year before. It is a conservative estimate to predict a harvest of 15 million bushels for the coming season.

"2. Three years ago macaroni wheat could hardly be sold at any price in the regular market, and was considered a dangerous menace to the elevator interests. It is now a legitimate standard wheat of independent grades on 'change at Minneapolis, and commands a price which is normally about equal to that of No. 2 Northern.

"3. Three years ago no regular brand of macaroni was made from this wheat in this country. Now half a dozen factories, at least, are using the wheat and producing macaroni equal to the best imported, which no American factory could do before.

"4. Three years ago millers were always unanimous in declaring it impossible to grind macaroni wheat satisfactorily, and, even if possible, that it would be an unprofitable business. Now a number of mills are running a good part of their time with this wheat, finding it no more difficult to grind than other wheat, and as three of these mills, at least, have been in the business a year or more, the inference is that it is profitable.

"5. Less than two years ago no baker had yet attempted to make bread from macaroni wheat flour. Several bakers have now found it not only possible, but in some respects the bread is really superior to other kinds from their own standpoints."

CHARACTERISTICS OF THE WHEAT.

These wheats resemble barley somewhat and have sometimes been called "barley" wheats. The heads are compactly formed, much flattened on one side, and are always bearded, possessing the longest beards known among wheats. The grains are very hard and glassy, often translucent, usually yellowish white in color, but are occasionally reddish and are generally rather large. There are many varieties, differing in shape and size of head, color, and amount of hairiness of chaff, color of beards, etc.

ADAPTATION AND YIELD.

This is the very want macaroni wheat will supply. Being very resistant to drouth, it can be grown over so large an area of the semi-arid districts that the cultivation of the wheat will add very greatly to the general wheat production of the country.

Recently several million bushels of wheat have been imported by U. S. millers from Canada. If the macaroni wheat can be used in flour-making in place of this imported wheat, it will be much better than going to the trouble and expense of importing wheat from another country. As a rule, macaroni wheat has yielded far ahead of other varieties.

Half a dozen or more of our own factories are using this wheat for making macaroni, and a number of other factories would also use the new wheat if they knew where to obtain the semolina. The machinery of the mills, as they are now constructed, is entirely suitable for grinding this wheat as well as the common wheat. Some slight rearrangement of rolls may be necessary occasionally, and it is always necessary to use more moisture in one form or another. It would perhaps be advisable to let the wheat stand a while after dampening, and then dry it again before grinding.

Several points are already settled: (1) That we can grow the proper kind of wheat for making macaroni. (2) That the mills are able to grind it; and (3), that the macaroni made from such wheat, when ground, is fully equal to the best imported product.

Some especially interesting results have been

obtained in making the flour and producing bread therefrom at the Dakota Agricultural College. In several towns in North Dakota, a large majority of the population now use the bread regularly, and would not use bread made from any other wheat flour.

The interest in the matter of bread-making having developed so far, an arrangement was finally made with one of the largest bakeries in this country, the Messrs. Corby Bros., of Washington, D. C., for carrying out an extensive comparative test of the macaroni wheat flour and ordinary northern spring wheat flour for making bread.

When the bread was made, two loaves, one of the macaroni wheat and one of the ordinary wheat flour, were sent to each one of 200 persons living outside of Washington and to about 40 different people in Washington for inspection and report as to their relative merits.

The general opinion of the relative value of the macaroni wheat loaf, as against that made from other flour, was 108 to 74 in favor of the macaroni wheat loaf. However, in two particular characters, namely, that of color, and color and taste of the crust, the reports were unfavorable to the macaroni wheat loaf; in all other characters the answers being in a large majority of cases in favor of the macaroni loaf.

Progress in Wheat Breeding.

BY PROF. W. M. HAYS, MINNESOTA AGRICULTURAL COLLEGE.

A few words in a general way concerning the progress of our breeding of wheat may be of interest to your readers. This work was started 14 or 15 years ago, by collecting hundreds of samples of wheats from America, and from other continents. Nothing was imported that proved better than Fife and Blue-stem for the fields of the Northwest. In 1892 systematic efforts were begun to breed these two standard wheats by selection, and also to improve them by hybridizing them with other superior wheats. Out of the first lot of 31 varieties, started from single-mother plants, eight proved to be better yielders than the parent wheats, and the best two varieties have been widely distributed. One of these wheats, Minn. No. 163, bred from a Fife foundation, was distributed by the Minnesota Experiment Station in 1899, 1900 and 1901. In trials by the experiment station for five years it had averaged a yield 2.8 greater than its parent. In trials by farmers all over the State in 1899 this wheat yielded an average of 18.1 bushels per acre, while the wheats it was displacing yielded 16.7. An increase of 1½ bushels per acre is worth \$1 an acre, or an added value of about \$6,000,000 to the wheat crop of the State. The problem of securing the general adoption of superior varieties is quite as important as breeding them. It is estimated that this variety was so widely distributed that 60,000 acres of it were grown in Minnesota in 1902, and that 100 to 200 thousand acres will be grown in 1903, thus demonstrating the wisdom of methods of distribution in vogue by the Minnesota Station.

A variety of Blue-stem wheat also stood out prominently as the best yielder, and was distributed in the spring of 1902 under the name "Minn. No. 169." In five years' test at University Farm this sort averaged nearly six bushels more per acre than its parent. Reports made last season by many farmers show that their common wheats yielded an average, for 89 farms, of 18.2 bushels, while Minn. No. 169 on the same farms gave an average of 21.5, a gain of 3.3 bushels per acre, nearly 19 per cent. Nearly 400 farmers purchased four bushels each of this wheat, at \$1.50 per bushel, and planted it in 1902 to raise seed. Many of them sold some seed; others planted all they raised. Next season many will have it for sale.

Other varieties which have been originated by selection have been taken to the field tests, and some of these promise still greater increased yields, and will, no doubt, be distributed within several years. Still other varieties are just now passing from the nursery selection to the field tests, and from them, in turn, will be selected those which yield the greatest values per acre. The breeding of wheat has been reduced to a regular system, and there is reason to believe that the yields of a State may eventually be increased twenty-five per cent. by breeding alone. Of course, this is separate from the increased yields that come from better rotation of crops and better methods of farming generally.

A farmer he stood on the rain-sodden heather,
And mused as he gazed on an invalid ram—

Just whether the weather would weather the weather,
Or whether the weather the weather would damn.

—[The Globe.

The Nature Study of the Dandelion.

Hodge, in his admirable book, "Nature Study and Life," has said: "The love of a flower in the heart of a child is the highest thing that nature study can hope to develop, and no amount of knowledge about flowers can take its place, nor compare with it in life-value." Keeping the above in mind as a goal toward which our nature work shall travel, let us inquire how it is possible for the teacher to study with the child, so common a wayside weed as the dandelion, that some of this "flower love" may develop by the way.

How has the

"Dear common flower, that groweth beside the way,
Fringing the dusty road with harmless gold,"

been studied in the past? It is not too much to state that in the great majority of instances the dandelion might as well have been fashioned out of clay, so far as the formal description was concerned, for the big thing about this plant, and the big thing about every plant, namely, its life, was never thought of in a point of view that was completely satisfied when the form and the structure had been closely examined. Now, we do not object to such an examination when made by students of botany, though, even here, a greater love for living things could be secured, by retaining much of the nature study spirit, but we do object to dignifying such formal work nature study. There is no nature study about it. There is nothing about it that will secure such a fellow-feeling for the dandelion as the poet has expressed in the following lines:

"But let me read thy lesson right or no,
Of one good gift from thee my heart is sure;
Old I shall never grow
While thou, each year dost come to keep me pure
With legends of my childhood; ah, we owe
Well more than half life's holiness to these
Nature's first lowly influences,
At thought of which the heart's glad doors burst open,
In dreariest days, to welcome peace and hope."

There must be something better about the dandelion for the boys and the girls of our elementary schools than a study of its form and structure. There is even something better than a study of its relation to other plant forms resembling or differing from it, and this something is only grasped when the plant is considered in its relation to the sun, the air, the soil, other plants, etc. It is this point of view that will enable us to see in this despised weed a life-history full of interest and wonder. Such alone can give us patience sufficient to grasp the marvellous adaptations of root, leaf and flower, by which the whole plant is so well able to master its environments. Let us examine a few of these: A dandelion free from mother earth soon dies. Why? What does this mean? A plant in the deep shadows is sickly. How is this accounted for? Sunshine and air are its delight. Have you seen this? The dew and the clouds are welcome. For what purpose? As the dandelion evidently depends upon these, it must be fitted to help itself, but how?

First, the root. Try to pull a sturdy plant up by grasping its many leaves. What is the meaning of this? If you succeed in detaching the large root from the earth, just examine it and notice where you have broken off many branch roots. What are these for? In all these questions, nature should be permitted to answer for herself. Dig up a large plant carefully, wash away all the earth adhering to the roots, and take a look at the magnificence of the root system. Is there any wonder that the dandelion refused to come out of the ground? What do all these rootlets mean? Why are they so crooked? Why does the root go so deeply into the ground? Now press the main parts of the root firmly between the fingers. If the plant has completed its flowering, you will find that this is soft and yielding, and an examination of the interior will reveal a spongy texture quite different from the firm and solid plant that is just ready to put out its flowers. Here is something for your class to think about. Here is something that is worth while discovering. You are not to tell, for you will thus deprive your pupils of the joy attending a discovery. Search is a fundamental element in all life, in all education. Allow the children to gratify this desire by their own endeavors. When the discovery has been made, they will know better than we know, in our botanical days, the meaning of the milky juice, the taproot and the branching of the root of the dandelion. All these may not be discovered in one year, but this does not matter. We are educating, not stuffing with information. In the second place: What do the

leaves do? Why are they alternate? A glance at a fine rosette of dandelion leaves from various points will explain the whole arrangement. Give the children a chance; yes, a half-dozen chances to find this also for themselves. You, as their teacher, must be content to play the part of a supervisor, a position in no wise easy. Why are there dead leaves under the rosette? Why are the lowest leaves the longest? Can you see how the leaves are arranged to catch the rain and the dew, and carry the moisture to the center, where the roots may benefit? How are the leaves able to push away the high grass and the other plants that encroach upon the dandelion? Remove the leaves from the healthiest and biggest plant you can find, and measure the area of bare ground from which the dandelion excluded all competitors. Such an examination will help a child later in life to recognize the importance of keeping the dandelions out of the lawns, but at first young children will see only beauty and wonder surrounding these plants. In other words, a child can not be expected to see in a weed a menace to a field or a lawn, but this should not discourage, for such acquaintance with the dandelion as we are making is bound to produce the best economic results as the days go by, only learn to wait. Why are the dandelion leaves all on the ground? Have the children watch the behavior of the dandelion on the lawns, when the mower or the scythe is going its rounds. Have them also watch the boldness of these plants in braving the cold weather of early spring and late fall. Why are the leaves of the dandelion so beautiful and fresh when all the grass around is scorched? Here is where this plant has reversed a custom recommended to all persons, namely: "Put by something for a rainy day."

In the third place: Let us take a glance or two at the hollow stock bearing the flower. How long is this stalk when the flower appears? Why is this? When the stalk commences to shoot up how fast does it grow? Can you see any reason why the long stem is needed? Why are the leaves all placed about the flower-cluster, and not here and there along the stem? Why do the outer and middle rows of leaves turn back to the stem, while the inner leaves lengthen and stiffen and keep their erect position? Watch this carefully; it is one of the many wonderful things about a wonderful plant. Why is the stem hollow? What becomes of the stem when the seeds have blown away?

Do not pass by the involucre with a word or two of dry description. Keep a close watch upon its behavior, and you will find that its structure embodies a thought. There is a something about it that tells most forcibly of its source. It is only such an examination that can help us to understand and appreciate the thoughts from Tennyson—

"Flower in the crannell wall,
I pluck you out of the crannies;
Hold you here, root and all, in my hand,
Little flower—but if I could understand
What you are, root and all, and all in all,
I should know what God and man is."

If we carry the same patience into our study of the flower, if we are willing to mark several flowers and watch them unfold and tell their own story in their own way, we shall find out why the stock lengthens, why the inner leaves of the involucre guard so well the florets in that critical portion of their history, namely, from fertilization to ripened seed, and why at a certain time the last row of the involucre bends back and rolls away its leaves to prepare for

the final act in the little drama—the scattering of the baby-dandelions. But there are dozens of questions we feel like asking. Why are so many little flowers placed upon the one stalk? Would they not look better if each had its own little stalk? Why are the heads so high? Why has the flower so bright a color? Why is the calyx fringed with silky hairs? Why do so many insects visit the dandelion flower? Here is a something too often overlooked. There is nothing more interesting than watching how dusty these insects get as they move about from flower to flower. Have you ever seen the dandelion pull all its corollas off? How is this done? Have you ever watched how the stigmas push up through the ring of anthers and then slowly open? If you have not, there is something here for you and something for the children.

In the last place: Imagine you have before you the head in its old age. This is the plant's supreme moment, for are not the baby-dandelions all waiting for the leave-taking on the convex stage of the receptacle, each occupying a choice position? No, one seed has any advantage over another. With umbrellas raised, all are waiting for the passage of some friendly breeze. One by one they are carried far away from the mother-plants, borne safely along by means of the little parachute, until by and by each drops slowly or is tossed into some favorable corner, when the grappling-hooks catch and the seed gradually works downward through grass and weeds to mother earth, where a new round of dandelion-life is commenced.

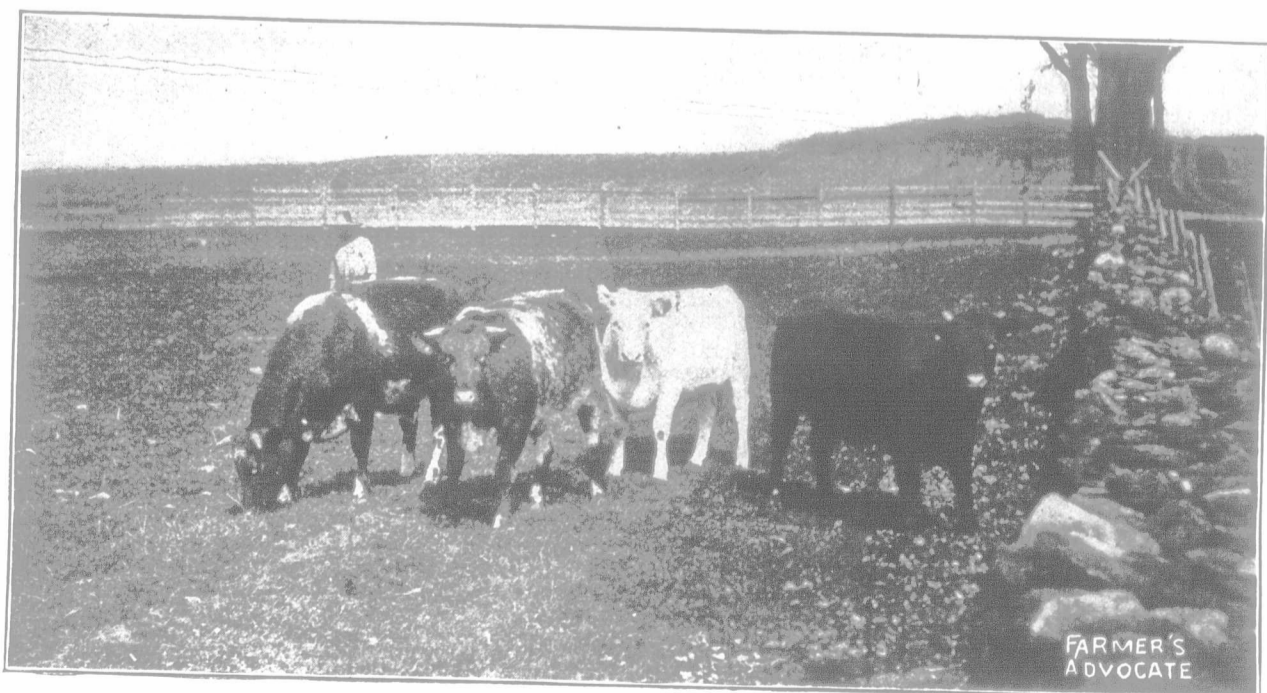
Such are a few of the many wonderful facts of a remarkable plant. To these, scores of other facts may be added by the teacher who has learned to see more in the dandelion than a bare form and structure. ALEX. MCINTYRE,
Vice-Prin. of the Normal School, Winnipeg.

Nineteen Years of Wheat-growing.

The following table gives the acreage, average yield and total number of bushels of wheat produced during the last nineteen years in Manitoba, except 1888*, in which no statistics were taken:

Year.	Acreage.	Yield per Acre.	Total yield. Bushels.
1883	260,842	21.80	5,686,355
1884	307,020	20.11	6,174,182
1885	357,013	20.80	7,429,440
1886	384,441	15.33	5,893,480
1887	432,134	25.7	12,351,724
1888*			
1889	632,245	12.4	7,201,519
1890	746,058	19.65	14,665,769
1891	916,664	25.3	23,191,599
1892	875,990	16.5	14,453,835
1893	1,003,640	15.56	15,615,923
1894	1,101,186	17	17,172,863
1895	1,140,276	27.86	31,775,038
1896	999,598	14.33	14,371,806
1897	1,290,882	14.14	18,261,950
1898	1,488,232	17.41	25,913,155
1899	1,629,995	17.13	27,922,230
1900	1,457,396	8.9	13,025,252
1901	2,011,835	25.1	50,502,035
1902	2,039,940	26	53,077,267

Aunt Dorothy—How many commandments are there, Johnny? Johnny (glibly)—Ten. Aunt Dorothy—And now, suppose you were to break one of them? Johnny (tentatively)—Then there'd be nine!



SHORTHORN HEIFERS.

Imported junior yearlings in the Hillhurst dispersion sale, to be held at Hamilton, Ont., August 11th, 1903. PROPERTY OF JAS. A. COCHRANE, HILLHURST, QUEBEC.

See Ad. on page 707, and Gossip on page 712.

DAIRY.

How to Get More for Milk.

If you are patronizing your own co-operative creamery, and you have a good manager or secretary, and a good buttermaker, and if you trust them, you may rest assured that you will get as much out of the butter-fat in your milk as is possible.

Nevertheless, you may secure what will correspond to three cents per pound of butter more, according to the way in which you realize on your skim milk and buttermilk. If careless, you may make it worth only ten cents; if careful, you may make it worth twenty-five cents or more per hundred pounds. This difference of fifteen cents per hundred pounds, or 13.5 cents for ninety pounds, will correspond to a difference of three cents per pound of butter, if the average yield is 4.5 pounds.

The question is, do you secure this difference; and if not, why not?

We shall in a few words indicate the most salient points necessary to observe in order to get the maximum return from creamery separator skim milk.

1. See that your buttermaker heats the skim milk to 180 or 190 degrees, not by direct steam, which dilutes the milk, but by a proper pasteurizing heater; not by guesswork, but by an automatic heat-regulator. If he hasn't these facilities, urge your officers to get them for him. But in order to get the benefit from this extra work, see to it that you bring the milk in a clean and sweet condition.

2. See to it that the skim milk tank and weigher (if used) are kept as clean as any other apparatus in the creamery, but before asking this, see also to it that your cans are not only clean, but scalded with boiling water, and that you do not use any rusty cans.

3. Having thus got your skim milk back in good condition, remember:

(a) The younger your calves or your pigs are the greater gain do you get in weight from a given amount of milk.

(b) Milk fed with a judicious mixture of grain feed will produce a far greater gain than fed alone. Thus Hoard experimented and found that a bushel of corn produced ten pounds (live weight) of pork, and one hundred pounds of skim milk fed alone produced five pounds, but one bushel of corn and one hundred pounds of skim milk produced eighteen pounds.

(c) Feeding the milk blood-warm, and keeping the animals clean, dry and warm, increases the feeding value of the milk.

(d) Kindness and feeding at regular hours will also count as a dollars-and-cents proposition.

Are you making your skim milk worth ten cents a hundred or twenty-five, and retaining the fertility on your farm; or are you giving it away at fifteen cents a hundred?—[New York Dairyman and Produce Review.

Good Milk-haulers Important.

C. Larsen writes in Creamery Journal: Good milk-haulers are essential. They are the small cogwheels of the creamery machine, and are needed in order to obtain the proper speed or push in the advancement of that creamery, and confidence in the buttermaker or secretary. The writer made butter once at a creamery where good and bad haulers were employed. One good hauler was a man who owned considerable property. He was a thrifty farmer. He had good horses, hauled the milk in a good wagon, and came into the creamery regularly every morning with his cans well covered with a canvas. By reason of being at the creamery every morning with great regularity as to time, he got his skim milk promptly. Whenever he had a chance he spoke a good word for the creamery and its management, and thereby increased the patron's interest and confidence in the factory, and gained a larger patronage for the creamery.

One of the poorest haulers was a man who never progressed himself, and yet he saw and knew (or thought he did) that no creamery could succeed under such management as this creamery. Instead of aiding the patrons in gaining confidence in the management of the creamery, he discouraged them. He would bring back poor milk to the patrons, and tell them it was sour when he got it at the creamery. In reality, the milk soured on the milk wagon, on the street of the city, in the hot sun, while he was sipping the glass or bottle in the "bootlegger's" shop. He never returned with the patrons' milk till about sundown. As soon as the transportation of affairs was learned the old hauler, with his staggering driver were replaced by a new and good hauler for the creamery was a success. The amount of milk on the wagon was double in less than a month, and the demonstration was that creamery that good milk-haulers are essential to success.

Thorough Milking Pays.

Every dairyman knows that "the man behind the cow" has a lot to do with her yield and her well-being—as much so as the man in front. The milker can ruin a cow just as well as a feeder can. It is not only the decreased milk-yield that makes a poor milker an expensive piece of furniture, but the leaving of milk in the udder encourages udder troubles, and in time will make the small yield a chronic habit in the cow. But nearly everybody is surprised when it is learned how much more milk can be gotten from a herd when milked thoroughly. Even such an experienced dairyman as Mr. E. R. Towle, of Vermont, expresses surprise at the statement of a Georgia dairyman that he found "a gain of nine gallons a day from sixteen cows as the result of a change of milkers." Mr. Towle, like the most of us, has noticed that much better results per cow are secured by the owner who personally oversees the work of his milkers—who often is one of them himself. Generally, financial interest in a herd of dairy cows stimulates effort in a comprehensive way, whether it is in the direction of clean milking or something else; and, generally, absence of financial interest other than wages inspires a desire to "get done." But there are exceptions to both statements. And the owner who is an exception wants an exception to do his work. The subject is as broad as the "social question." —[Jersey Bulletin.



AN OLD-COUNTRY MILKMAN.

Feeding Unprofitable Cows.

There is but too good reason to fear that all over the country many farmers are keeping dairy cows at a cost for which the animals do not give anything like a remunerative return. In very many of the herds in the hands of some of our best farmers there are to be met with cows whose produce in milk and butter never pays for the expense of feeding the animals. And the remarkable point about this matter is that the owners of such animals never take the trouble of finding out for themselves whether they are paying their way or not! It is now being found that in order to feed dairy cows to most advantage the food rations of the animals should be regulated by the quantity of milk the animals are producing—the greater the milk flow the more liberal the food allowance, and vice versa. It does not pay to give a cow that is producing say three gallons of milk per day as liberal a food ration as another that is producing five gallons. Yet, how seldom do we find farmers making any distinctions in such matters, and how often do we find worthless cows consuming valuable food that might be employed to great advantage in feeding good milkers. An instructive illustration of how money is thrown away in such cases was afforded by an experiment conducted a short time ago by a transatlantic dairy expert; the same experiment showed the futility of feeding a cow a greater yield than she is giving, with the view of causing her to increase in her flow of milk. In this experiment two cows were compared; one of them came into milk early in the season, and by careful feeding and skilful handling she was brought to her maximum flow in six weeks and to full feed in eight. She yielded each day a little over 4½ gallons of milk per day, and being a Jersey, her milk was so rich that it averaged five per cent. of butter-fat.

When on full feed she received 16 pounds of dry foods daily, but her average daily ration contained 17.75 pounds of digestible matter. Her average daily yield was 31 pounds of five per cent. milk. When the other cow came to calve she was given a similar ration; that is, she was fed for a yield of 31 pounds of five per cent. milk. But the five per cent. ration did not cause her to give five per cent. milk; at the outset her milk tested only 3.3 of fat, and it averaged 3.8 for the season. Though fed for 31 pounds of milk, she yielded on an average only 21.26 pounds! Therefore, though she was persistently fed for a yield of 31 pounds of five per cent. milk, she just as persistently maintained her natural gait and gave 21 pounds of 3.8 milk, so that when her returns were compared with that of the other cow, it was found that a large proportion of the food given to her was being absolutely thrown away.

GARDEN AND ORCHARD.

Homemade Unfermented Wine.

Every year Canada produces a creditable crop of grapes, not all of which find immediate use. A good way to utilize this surplus is to make it up into wine, or grape juice. As everyone knows, grape juice can be kept sweet if the organisms which cause fermentation are destroyed.

This destruction of the organisms, and the prevention of fermentation, can easily be accomplished by the judicious use of heat. The principle is exactly the same as that underlying the canning of fruit. The details of the operation are given in Bulletin 175, of the U. S. Department of Agriculture, and are essentially as follows:

"Use only clean, sound, well-ripened but not over-ripe grapes. If an ordinary cider mill is at hand, it may be used for crushing and pressing, or the grapes may be crushed and pressed with the hands. If a light-colored juice is desired, put the crushed grapes in a cleanly-washed cloth sack and tie up. Then, either hang up securely and twist it, or let two persons take hold, one on each end of the sack, and twist until the greater part of the juice is expressed. Then gradually heat the juice in a double boiler or in a large stone jar in a pan of hot water, so that the juice does not come in direct contact with the fire, at a temperature of 180 to 200 degree Fahrenheit, never above 200 degrees. It is best to use a thermometer, but if there be none at hand, heat the juice until it steams, but do not allow it to boil. Put it in a glass or enameled vessel to settle for twenty-four hours; carefully drain the juice from the sediment, and run it through several thicknesses of clean flannel, or a cone filter made from woolen cloth or felt may be used. This filter is fixed to a hoop of iron, which can be suspended wherever necessary. After this, fill into clean bottles. Do not fill entirely, but leave room for the liquid to expand when again heated. Fit a thin board over the bottom of an ordinary wash boiler, set the filled bottles (ordinary glass fruit jars are just as good) in it, fill in with water around the bottles to within about an inch of the tops and gradually heat until it is about to simmer. Then take the bottles out and cork or seal immediately. It is a good idea to take the further precaution of sealing the corks over with sealing wax or paraffin to prevent mold germs from entering through the corks. Should it be desired to make red juice, heat the crushed grapes to not above 200 degrees Fahrenheit, strain through a clean cloth or drip bag (no pressure should be used), set away to cool and settle, and proceed the same as with light-colored juice. Many people do not even go to the trouble of letting the juice settle after straining, but re-heat and seal it up immediately, simply setting the vessels away in a cool place, in an upright position, where they will be undisturbed. The juice is thus allowed to settle, and when wanted for use the clear juice is simply taken off the sediment. Any person familiar with the process of canning fruit can also preserve grape juice, for the principles involved are identical.

"One of the leading defects so far found in unfermented juice is that much of it is not clear, a condition which very much detracts from its otherwise attractive appearance, and due to two causes already alluded to. Either the final sterilization in bottles has been at a higher temperature than the preceding one, or the juice has not been properly filtered, or has not been filtered at all. In other cases, the juice has been sterilized at such a high temperature that it has a disagreeable, scorched taste. It should be remembered that attempts to sterilize at a temperature above 195 degrees Fahrenheit are dangerous, so far as the flavor of the finished product is concerned.

"Another serious mistake is sometimes made by putting the juice into bottles so large that much of it becomes spoiled before it is used after the bottles are opened. Unfermented grape juice, properly made and bottled, will keep indefinitely, if it is not exposed to the atmosphere or mold germs; but when a bottle is once opened it should, like canned goods, be used as soon as possible, to keep it from spoiling."

Preparing Fruit for Exhibition.

At our annual fall fairs the fruit exhibit should be one of if not the most attractive. But at the time the fairs are usually held, many of our most attractive fruits are out of season and past, and we find the prize-list contains only those that are in season at the time the fair is held.

This is not as it should be, and the prize-list should include all fruits that are grown for commercial purposes in the locality. The fruits that are past their season should be preserved and shown in solution. This idea is strongly commended for consideration of fair boards throughout the country.

The modus operandi of preserving these fruits in perfect condition is very simple. It is not necessary to procure fancy bottles, the ordinary glass sealer will do very well—the pint size for small fruits, and the quart and half gallon for larger kinds. There are several solutions that may be used. For strawberries the most satisfactory is kerosene (coal oil). The fruit must be free from drops of rain or dew.

For red and black berries, currants and cherries, a solution of boric acid in water, in the proportion of one per cent.—a half-pound of boric acid dissolved in fifty pounds of water—agitating it occasionally until the solution is complete, then let it stand and settle until the liquid is clear.

For white, yellow and light-colored fruits, a solution of zinc chloride in water, in the proportion of two per cent.—one pound of zinc chloride in fifty pounds of water. This mixture should also be allowed to stand until clear. The sealers should have new rubber rings, and the tops well tightened down; after standing a few days tighten again, so they will be perfectly air-tight. When gathering the fruit, select the finest specimens as to size and form. Handle carefully, so as to avoid the least bruising or breaking the skin, and place them in the jars, arranging so as to show the fruits on all sides. A short piece of the stem should be left attached to the fruit. Fill each bottle or jar to the top, and then pour on the liquid until the fruit is entirely covered, and then seal tightly. Place the jars in a cool cellar, and keep them entirely excluded from the light until taken out for exhibition.

These formulas are the ones recommended by Dr. Saunders for preserving the fruits for the Columbian Exhibition at Chicago, and may be relied on.

A Preferential Spirit.

Charles F. Ferguson, a wealthy fruit-grower of Los Angeles, California, who has been in Great Britain for six months selling California fruits for shipment via Boston and New York, reports that the market for grapes, peaches and oranges, which California growers formerly controlled in the Old Country, is not now as good as it used to be, and he accounts for this by the fact that English fruit-dealers seem to prefer the Jamaica or the Florida orange, and are learning to buy their other fruits, such as peaches and grapes, from growers in the Ontario Peninsula.

He found a good deal of difficulty in disposing of California fruit to dealers who formerly purchased that article almost exclusively, and he says that if the present rate of progress continues, Canada will, in the near future, supply Great Britain with all the varieties of fruit grown here, as she does now with cheese. Canada is exceptionally well thought of in Great Britain, and the representatives of United States firms, in consequence, labor under a very considerable difficulty.

"English buyers," said Mr. Ferguson, "will patronize a Canadian firm in preference to an American firm every time, and therein is our principal difficulty."

Prospects for Fruit in Europe.

The Department of Agriculture at Ottawa have received the following reports:

E. A. O'Kelly & Co., of London, say: "We are glad to state that prospects are very favorable this year for the importation of Canadian fruit, as crops throughout Europe are a total failure. We anticipate that prices will be satisfactory all round for apples."

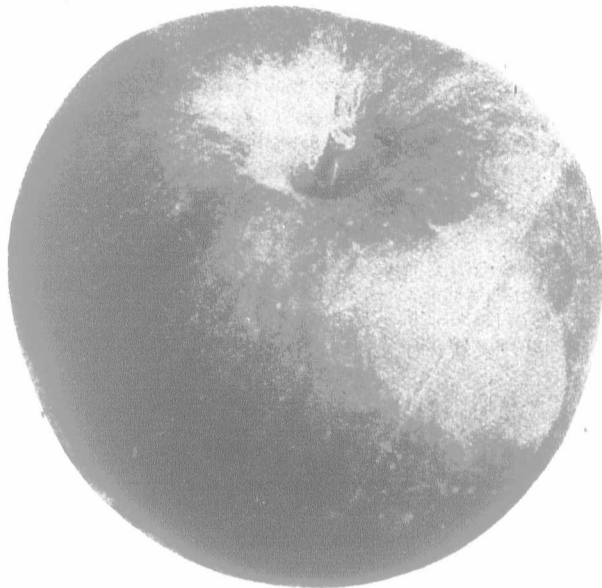
From Hamburg, Germany, Edward Jacobs & Sons report: "The fruit crop in Europe is this year, generally speaking, short. Should there be no duty on apples the prospects for Canadian are very promising."

Garcia, Jacobs & Co., of London, state: "There has been an almost total failure here of plums and pears, and this year there will be a good opportunity for the shipment of Canadian pears. The latter should be packed in cases similar to those sent from California. That there is a fair crop of early varieties of apples is a certainty, but they will all be cleared off the market before your fruit is ready for shipment. France, Belgium and Germany are large growers of apples, and the crop this season is fairly large, but the quality is so poor that they can not really compete with Canadian fruit."

W. A. CLEMONS,
Publication Clerk.

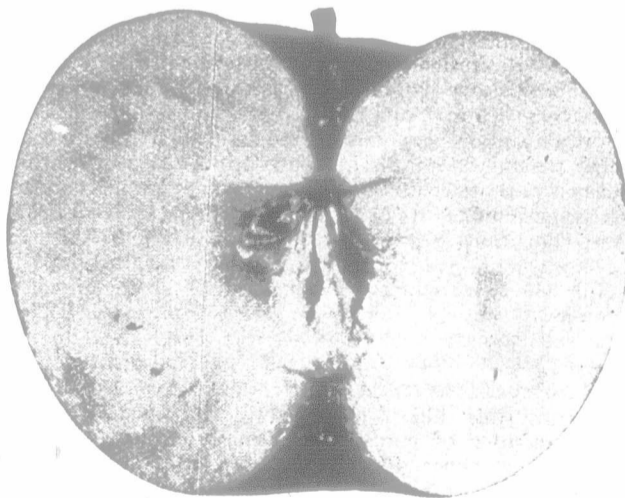
The Ontario Apple.

There is an old saying that the man who causes two blades of grass to grow where only one grew before is a public benefactor. How much more so is the man who produces a new variety of fruit of prime quality and excellence? The late Chas. Arnold, of Paris, Ont., who originated the Ontario apple, has left behind him an enduring monument that will perpetuate his memory and his work for generations to come. The Ontario is the result of a cross between two apples of high quality—the Spy and the Wagener—and it possesses some of the characteristics of both parents. When fully matured it closely resembles the Spy, except that it is not so conical in shape. It has the color and size of the Spy



THE ONTARIO APPLE.

and the shape of the Wagener. In flavor it does not come quite up to either of its parents, but it is an excellent cooker, clean, handsome, uniform in size, and in season from November to April; another valuable quality is its early bearing and productiveness. The writer has trees five years planted that have as much fruit as they are able to carry this year. It inherits this quality from the Wagener. It also inherits from the Wagener a trait that is not quite so commendable—that is, a rather scraggy appearance of the trunk. The habit of growth of the Wagener is slow, making a small tree, and not of a smooth, vigorous appearance. It bears young and produces great crops, but is not, as a rule, long-lived. To some extent the Ontario shows some trace of these defects, but is far ahead of the Wagener in vigor of growth. It does remarkably well top-grafted on any good healthy stock. It is, no doubt, one of the very best of our commercial varieties. It will be, in the years to come, one of the most profitable apples to grow for the Northwest trade; and it can be recommended to intending planters with the greatest confidence. Our home market will in the future be able to take the most of our apples, as well as other fruits, and it is with apples of this class that our home trade should be supplied. Those who have been planting almost entirely of



CROSS SECTION OF THE ONTARIO.

Ben Davis for some years past will find that it is overdone; the market will demand an apple of far better quality than Ben Davis. It will call for such apples as Spy, Ontario, King and Fameuse. These make a splendid quartette, and when well grown will always sell well in any market in the most plentiful years.

The Ontario is thus described by Woolverton in his "Fruits of Ontario":

"Tree—Fairly hardy, moderately vigorous, somewhat spreading, very productive, an early bearer.

"Fruit—Large, 2½x3½ inches; oblate, slightly ribbed; skin yellowish, nearly covered with bright

red, with a few small white dots, and a bluish bloom; stem, seven-eighths of an inch, set in a deep russeted cavity; calyx closed, in a moderately-deep corrugated basin.

"Flesh—White, with green tint, yellowing slightly as it ripens. Texture, fine grained, tender, juicy flavor, mild, subacid, sprightly, aromatic.

"Season—January to April."

The Northwest as a Market for Our Perishable Fruits.

There is a large quantity of early apples wasted every year, and of the very best quality. The reasons are not far to seek, and are such as should be overcome—the local markets in our cities and towns are not able to absorb them. The rates of freight on this class of goods, in less than carloads, is practically prohibitive, so that when sold at a comparatively low price, there is nothing left for the grower. This fruit should find a good market in the Northwest and in the British markets. Just at the time when this fruit is ready for market, the Western farmers are busy with their harvest. This is the time when they want those apples, through the harvesting and threshing, when a large force of men are employed, and they would be glad to get them and would willingly pay a good price for them.

What are the difficulties in the way, and how are they to be remedied? The first and greatest is the freight charges. We have given millions in money and land to the C.P.R. New projects for transcontinental lines are occupying the attention of the Dominion Parliament and asking for public aid, and it is more than likely they will get it.

Surely the time is opportune when our legislators at Ottawa should see to it that our products shall be carried at a reasonable rate. In reading the discussions on the transportation question, one is led to believe that the one sole object of these lines is to get the Western wheat to the seaboard, but a transcontinental line should facilitate and make possible a profitable exchange of commodities between the Provinces of our Dominion. This should be one of the main objects of its existence, but the C.P.R. hauls empty cars to the West to be loaded with wheat, and if you want to put some fruit into one of these cars the rates are almost prohibitive.

We want better facilities in the way of service. Much of our fruit, such as plums, peaches, pears and early apples, is of a very perishable nature; they ripen when the weather is warm, and require a good refrigerator service and quick transport. The California fruit-growers have this, and why should not we? If these fruits can be sent from California across the continent, and landed in good condition, we ought to be able to send them from the Eastern Provinces to the West if provided with the same facilities.

In order to supply the Northwest trade with our perishable fruits, a regular system should be organized. This would include cold storage houses at the principal points of shipment. The fruit should be thoroughly cooled before starting on its journey. Ice-storage on the Hanrahan system would do, and would not be so expensive as mechanical refrigeration. Then a good system of refrigerator cars—the Hanrahan car would fill the bill in this respect; then a system of distribution in the West, including cold storage depots at the principal towns and villages along the lines of railway. These places should be provided with one separate chamber, where fruit that was to be sold and delivered at once—or whenever any of the fruit was to be delivered—could be placed in this chamber, which should be provided with facilities for gradually raising the temperature. The fruit would then be delivered in prime condition. Fruit taken from cold storage at once into a high temperature causes moisture to be precipitated upon it, and it becomes wet, but if the temperature is gradually raised, it will come out dry and all right.

This state of things can only be brought about by joint action and co-operation. Then one essential feature remains in the control of the grower and shipper—to see to it that the quality is first-class.

The Nova Scotia Apple Crop.

In a letter to the Fruit Division, Ottawa, Mr. J. W. Bigelow, of Wolfville, N.S., gives the following estimate of this season's apple crop in Nova Scotia: According to present prospects, there will be a full crop of superior apples, giving over 400,000 barrels for export. Varieties are about as follows: Nonpareil, 60,000 barrels; King, 50,000; Gravenstein, 50,000; Ribston Pippin, 40,000; Golden Russet, 30,000; Baldwin, 60,000; Rhode Island Greening, 30,000; all other varieties, 80,000.

Twig Blight on Apple Twigs.

Attention was called in the "Farmer's Advocate" for July 1st, to a serious form of blight on apple trees, very prevalent in Western Ontario, where it was observed by members of our staff and many readers. Thousands of trees have been affected, and are yet to be seen spotted over with bunches of dead leaves among the green foliage. Several samples were collected and diagnosed as twig blight, a bacterial disease, for which the remedy recommended (see page 608) was cutting off and burning the affected portions. The following on this subject has just been received from the Publication Division of the Department of Agriculture, Ottawa:

"It is difficult to explain the origin of this trouble, but it is evidently of a bacterial nature. It appears to live over the winter just in the margin of the affected part, near the healthy wood, and not in other parts of the tree or in the soil. Mr. W. T. Macoun, of the Experimental Farm, agrees with Mr. MacKinnon, Chief of the Fruit Division, that the only remedy is to cut out the blighted branches well below the affected part, say one foot below any appearance of blight. The knife used for this purpose should be thoroughly cleaned or sterilized before being again used on healthy wood. It is fortunate that the disease sometimes dies out of its own accord, especially in the case of the body blight. It is said to be conveyed from tree to tree by bees and insects, which would account for the great increase at blossoming time. The blight appears to develop very rapidly, and the maximum amount of damage is done almost as soon as the attack becomes noticeable. It will probably be found that the fall is the best time to cut out the affected wood, as the damage will not be much, if any, greater than at present, and in the fall one may make sure of getting all the blighted portions. As anything which stimulates an undue growth of succulent wood is conducive to blight, it would be well for the orchardist to cultivate and manure so as to produce a medium growth of strong, healthy wood."

Fruit for St. Louis.

F. W. Taylor, Chief Department of Horticulture at the St. Louis World's Fair, has just issued a circular of forty pages, which gives very complete information with regard to every possible question which may arise with relation to that Department. A part of the pamphlet is devoted to a statement as to the importance of placing a large amount of fruit in cold storage this fall, in order that the space to be assigned any State may be covered at the opening of the Exposition and kept covered during its entire period. Accompanying this are very full instructions for collecting, packing, wrapping and handling the fruit, in order that the best results may be obtained. Those who have given the subject no thought will be surprised when they study it to learn the great advance which has been made along this line within the past ten years. As a matter of fact, the refrigeration of fruit in a commercial way may be said to have grown up within that very brief period. In order that every person interested may be able to participate in an intelligent way in the fruit exhibit at St. Louis, the Chief of the Department, Mr. Taylor, will be glad to mail a copy of this pamphlet to any one who asks for it.

Apples versus Strawberries in England.

The folly of keeping Canadian apples until late in the spring, with the hope of selling them for export at an increased profit, is shown by a recent report to the Fruit Division, Ottawa, by Mr. A. W. Grindley, one of the agents of the Department of Agriculture in Great Britain. Mr. Grindley says: "Prof. Waugh, of the Massachusetts Agricultural Experiment Station, and myself, were looking at some States apples in barrels, arrived 29th June in cold storage. They were soft when discharged, and did not bring much, as they will go on very quickly; besides, who wants poor apples when the market is swamped with English strawberries at their best."

The Enemy of the San Jose Scale.

Several years ago an American entomologist discovered that the natural food of certain species of ladybird beetles was the San Jose scale. He accordingly brought several pairs of these beetles to Washington, and propagated them. Last year several of the States were given some of these ladybirds for introduction into orchards on their experimental farms. The State of Georgia received twenty pairs, and placed them in a large wire cage built over a peach tree which was infested with the scale, and now the State of Georgia owns about 10,000 of these beetles. Wherever they have had a chance to get after the scale they have almost annihilated it, and the authorities are very much delighted with the success of the experiment.

APIARY.

About Queens.

BY MORLEY PETTIT.

Every text-book, bee journal and practical apiarist dwells on the fact that each colony must have a good queen. It is an axiom in bee culture, yet it bears infinite repetition.

On two occasions in her career, each queen endangers her life by leaving the shelter of the hive: First, to take her mating flight, and again when she accompanies a swarm. After each of these events the careful apiarist makes it his business to learn whether she still lives, and if not, to replace her as soon as possible.

A necessary part of the summer's work is to examine the brood chamber of every swarm as soon as possible after it has been in the hive a week or ten days. If worker-comb is being built, and eggs and young larvæ are present, all is well with the queen; but if there is only drone comb, with no brood or eggs, we suspect queenlessness. We then examine the super, as she may have got through the excluder, and if no eggs are there, a comb containing eggs and young brood from another hive is inserted in the brood chamber.

In the same way a parent hive is examined, about three weeks after the issue of the first swarm, to be sure they have a young queen successfully mated. A very little experience enables one to detect the hollow roar and unreasoning savageness of queenless bees, and the forsaken appearance of their combs. To make no mistake, give them the eggs and young brood and await developments for a few days.

In about a week we may find fresh eggs in the combs, and be thankful to know that the queen has been in the hive all the time without having started to lay. She needed the presence of that young brood to in some way induce her to go to work. Often, however, the comb of brood which had been given is seen dotted over with queen cells. Then we are sure there is no queen in the hive.

Two courses are now open. One is to break down all except the best-looking cell, and leave that for the new queen. The other is to give a ripe cell from your queen-rearing hive, enclosed in a cell protector. A laying queen would give the quickest returns, but bees that have been long queenless do not readily accept a queen when introduced in the regular way. Again, this young queen must risk her life by flying out to be mated, and we must look again about four weeks after the young brood was given. If she is lost this time the queenless bees may as well be united with another stock.

Notes on August Management.

August management depends largely on the nature and extent of the fall honey flow; in other words, it narrows down to the hackneyed term, "locality." A good fall flow can be used to get foundation drawn out in supers. It is all right for wintering purposes, does not command the same price as white honey, and so can very economically be turned into worker-combs, filled and sealed for winter feeding.

As soon as the white honey is removed from the hives all brood chambers are made "correct." That is, dummies and combs containing much drone comb are replaced by good worker-combs. It is very important to have good combs in the brood chamber, especially in early spring, when every worker counts in the upbuilding of the colony, and each drone larva not only is a useless consumer, but occupies so much space that often the comb opposite cannot be used.

Those who practice tiering up extracting supers during the white honey harvest will have a great number of empty combs to care for now. The only really safe way is to leave them in charge of the bees. They will not forget to look them over for wax worms. Of course, comb-building hives can only be given one super at a time, but the remainder of the combs can be piled on the other hives three or four supers high until the middle of September. After that there is no fear of moths if the combs are kept in a cool place.

August is the time for scraping sections and getting honey in shape for market. If only I could reach the ears of the many smaller producers and the few larger ones who market their honey without getting it in shape, I would say "Escape your sections until they shine, and see how the people will buy for the appearance's sake." Put them in clean 12-section glass front sections which show the honey off to advantage. Don't take your supers to the store just as they come from the hive, daubed with propolis and leaking honey. Appearance is not everything, but it goes a long way in selling comb honey. There is plenty of campaign work for the new Honey Exchange.

M. P.

POULTRY.

Eggs and Eggs.

Eggs usually come down to a very low price in summer, when they are coming in freely, and everyone gets the same price (at least, this is the usual way) whether the eggs are brown, white, clean, dirty, large or small. Should this be so? I think not. Eggs should be sold by the pound, or at any rate a fair advance paid for large, clean eggs.

The person raising good eggs, fresh, of fair size, and presenting them clean, is handicapped in the market by the raiser of poor eggs. I believe clean eggs alone would do wonders in improving the egg trade, and it is a virtue which every poultryman who has the least respect for the trade should practice.

Why not have a score card, or a scale of points, as is used for judging poultry, and have eggs exhibited for prizes at the fall fairs. This method ought to reach the farmers, as it is manifest that the supply of reliable, fresh-laid eggs is insufficient to meet the demand, which is increasing more rapidly than the supply. There is encouragement in this fact, for only in the increased supply will there be found a solution of the problem. The utility poultrymen who give serious thought to these matters will act wisely. More and better eggs ought to be the motto for the up-to-date poultryman.

PROGRESSIVE.

Shipping Eggs for Setting.

W. P. Gray, in American Poultry Advocate, says: "From my observations among breeders, I have found it is the general opinion that selling eggs for setting, to be shipped away, is in the majority of cases unsatisfactory both for the shipper and the receiver. The shipper may send the very best eggs he can possibly produce, and have their hatching possibilities ruined by carelessness during transportation or the inexperience of the receiver. While the buyer finds that the breeder very often takes advantage of him and does not send eggs that produce what he represents his stock to be.

"You may ask, if there are so many disadvantages in shipping eggs for incubation, why do so many breeders advertise them? Simply because there is a demand for them. The beginner thinks he sees a possibility of raising forty or fifty chicks from one hundred eggs, instead of getting but a half-dozen or so of matured stock at the same price of the one hundred eggs, while, in fact, the breeding stock is in the majority of cases of more actual value. But as long as buyers are willing to pay for 'possibilities' at five times their actual market value, of course they will find plenty of breeders willing to sell to them."

Poultry Fences.

During the last year we have completed permanent fences around our main poultry building, and from our experience offer a few suggestions. Some permanent form of fencing is desirable and necessary about all poultry buildings, and essential where pure-bred stock is kept and pens are kept separate during the breeding season. Poultry-netting, well galvanized and 72 inches wide, is the only satisfactory fencing material, and in order to stretch it properly a scantling should be mortised on edge in the top of the posts for a top rail. Posts are best set eight feet apart, using 2x4s sixteen feet long for tops. In order to make the fence as lasting as possible we charred the butts of the posts, and filled in the holes with rock and cinders, also put about six inches of rock under each post. The posts should be sawed off five feet and a half from the ground, and the netting buried six inches. This prevents fowls scratching and getting under the fence, and also does away with a bottom rail or base board. In putting on the netting one end should be made fast with a double row of staples, and the other end clamped between the 2x4s with bolts, and with a small wire stretcher attached to the middle, stretched up tight. The top wire should be then stapled on securely, and then by pressing down the bottom wire at each post and stapling to the post, the netting is deeply and tightly secured. In making gates, time and labor can be saved by stretching the wire on the fence and then setting the frame for the gate against the netting, when it can be stapled to the gate without further stretching.—[Montana Experiment Station.]

Canadian Poultry in Britain.

According to the London Canadian Gazette, Canadian poultry is now capturing the best trade in fashionable London suburbs, the specially-bred Canadian chickens having a great demand and realizing from \$1.75 to \$2.00 per couple, retail. Their highly-finished appearance and flavor has demolished all prejudice on the score of "foreign produce."

Why Hens do Not Lay During the Summer.

A writer in Commercial Poultry says that the reasons chickens do not lay through summer and fall are due to the heat, the lack of shade and the lack of nourishing food. Extreme heat closely followed by moulting weakens the birds and leaves them unfit for laying. The pullets that begin to lay early in winter are now entering their moulting season, and moulting is a severe drain on the hen's system. It requires a great amount of rich food to produce that new coat of feathers. Hens will not lay unless there is a surplus amount of food with which to manufacture the eggs. For this reason the hens must be extra well fed if we expect them to lay during moulting and the hot days, when actually the poor things dare not venture out to get the amount of feed necessary to keep themselves alive, let alone laying eggs. Many farmers along about this time or before, stop feeding the hens, claiming that now is the time for them to hustle for themselves. They may hustle, but it is only for themselves, and to save their lives for future not present use to the farmer. The lack of grain so exhausts the fowls that they are victims for any disease of their kind going. Furnish plenty of feed, shade, pure water and grit, and the hens will prove a profit each week.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to the "Farmer's Advocate" are answered in this department free.
2nd.—Our purpose is to give help in real difficulties; therefore, we reserve the right to discard enquiries not of general interest, or which appear to be asked out of mere curiosity.
3rd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer, as a guarantee of good faith, though the name is not necessarily for publication.
4th.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

Veterinary.

[Answered by our Veterinary Editor.]

Subscribers are kindly requested to read the conditions at the head of this department before writing or mailing their enquiries.

BURSAL ENLARGEMENT ON LEG OF BULL.

Pure-bred Shorthorn bull has an enlargement on both hind legs inside of hock, supposed to be caused by rough usage in shipping. A. J. M. Victoria Co., Ont.

Ans.—Cattle occasionally develop bursal enlargements on hock, somewhat similar to bog spavin in horses, but as they do no harm they are seldom treated. It would be a mistake to open the enlargements. Apply the following mixture once every day: Binioidide of mercury and iodide of potassium, of each six drams, and mix with eight ounces of water. Clip off the hair before applying, and continue the treatment for five or six weeks. Enlargements of this kind are often difficult to remove.

AZOTURIA.

Two of our horses had azoturia four months ago. They are now well, except that each is lame in one hind leg, and the muscles around the stifle seem to have fallen away. Will they recover? How can we hasten recovery?

R. H. W.

Ans.—Atrophy (wasting away) of the muscles of one or both quarters occasionally appears as a sequel to azoturia. Recovery will be slow, and can be hastened by repeatedly blistering the atrophied muscles to stimulate the growth of the ligaments. Take 1½ drs. each of binioidide of mercury and cantharides, and mix with 2 ozs. vaseline or lanoline. Clip the hair off the parts, and rub the blister well in. Tie so that he cannot bite the parts. In 24 hours rub well again with the blister, and in 24 hours longer wash off and apply a little sweet oil. Let his head down now, and apply some oil daily. Repeat the blistering monthly as long as necessary.

CHRONIC INDIGESTION.

Will you give me a remedy for chronic indigestion in a horse? Patient is on pasture, eats well, but is failing. J. G. D. Algoma District, Ont.

Ans.—The disease is caused by improper food, irregularity of the teeth, debility of the stomach, etc. Remove the cause first. If there is no diarrhoea, give a purgative of about six ounces of aloes and two ounces of ginger, made into a ball with soap or syrup. After this has operated, give one dram each of the following, twice a day: Bicarbonate of soda, gentian, sulphate of iron and nux vomica. If results are not satisfactory, give one to two drams of muriatic acid twice a day, and be careful of the feeding. Give plenty of salt and good water.

Miscellaneous.

REINVIGORATING AN ORCHARD.

Could you advise me as to the best method of handling my orchard? It consists of seven acres, principally Spys and Russets. I bought it last spring. The trees are thrifty looking, but small. They have been out twenty years, and have not borne any fruit of any account yet. I have been pruning them vigorously since the first of June, as the tops were very dense. Is there any danger of too excessive pruning? Would you recommend seeding the orchard down as a means of checking growth and stimulating fruit-production? The soil is inclined to be a heavy clay, and naturally well drained. C. N. Wellington Co., Ont.

Ans.—The fact of the trees being twenty years planted, and yet small and unfruitful, indicates that they have not been properly treated, although the Spy and Russet are varieties that do not bear early. It is quite probable that the orchard has been cropped to grain and never properly pruned. Your summer pruning will have the effect, if properly and judiciously done, of promoting the formation of fruit buds. Give it clean cultivation every year until about the middle of July, then sow some kind of cover crop, to be plowed down the next spring. This will improve the mechanical condition of the soil, and protect the roots in winter. Give it a moderate annual pruning in early June, thin out the small branches around the outside, and avoid cutting out large limbs. It should also be thoroughly sprayed every year.

HERD REGISTER.

Will you please tell me through the columns of the "Farmer's Advocate," the name and address of the Secretary of the "American Branch of the North Holland Herdbook," or if the association is not in existence now, the name and address of its last secretary; also, do you know where a copy of their herdbook can be procured? Westmoreland, N.B. J. R. T.

Ans.—Write N. F. Sluiter, secretary the American Branch Association of the North Holland Herdbook, Brooklyn, N.Y.

QUESTIONS OF CULTIVATION AND FEEDING.

1. I have a sandy farm, when very dry and in a steady hard wind it drifts badly. It was covered with sugar maples originally; it is splendid now for fall wheat, clover, roots and corn. How is the best mode to cultivate this soil? Should it be fall-plowed or not; deep or shallow?

2. Would sod be all right to sow rape for fall feed, plowed say in June? Would it pay to buy lambs to finish in fall and winter, and should they be shorn when put below a barn? W. H. Bruce Co., Ont.

Ans.—1. This is a condition that prevails on all sandy soils. In clay soils the same trouble has different symptoms. It is simply a case of exhaustion of humus. On all lands, with the possible exception of swamps, the virgin soil is the ideal condition. In this state there is a varying depth of decaying vegetable matter, the refuse of thousands of years of forest or prairie crop. As a result of this layer of humus or decaying vegetable matter, the land never bakes, and seldom becomes excessively dry, as the humus checks evaporation and acts like a sponge to retain moisture. With cultivation comes a change.

Conditions are made favorable to the rapid decomposition and subsequent exhaustion of the humus. By plowing the crude soil is mixed plentifully with the rich black mould, thus diluting its strength and spreading over a larger area the food it contains. Nor is there under average conditions sufficient manure or other vegetable matter returned to the soil to compensate for the loss of the original stuff by decomposition. A few years of such treatment and a sandy soil is almost altogether pure sand, and a clay soil a hard clay-bed. The best soil consists of a liberal amount of vegetable matter, mixed with the crude earth of whatever class it may be. Now on this soil we would try and re-

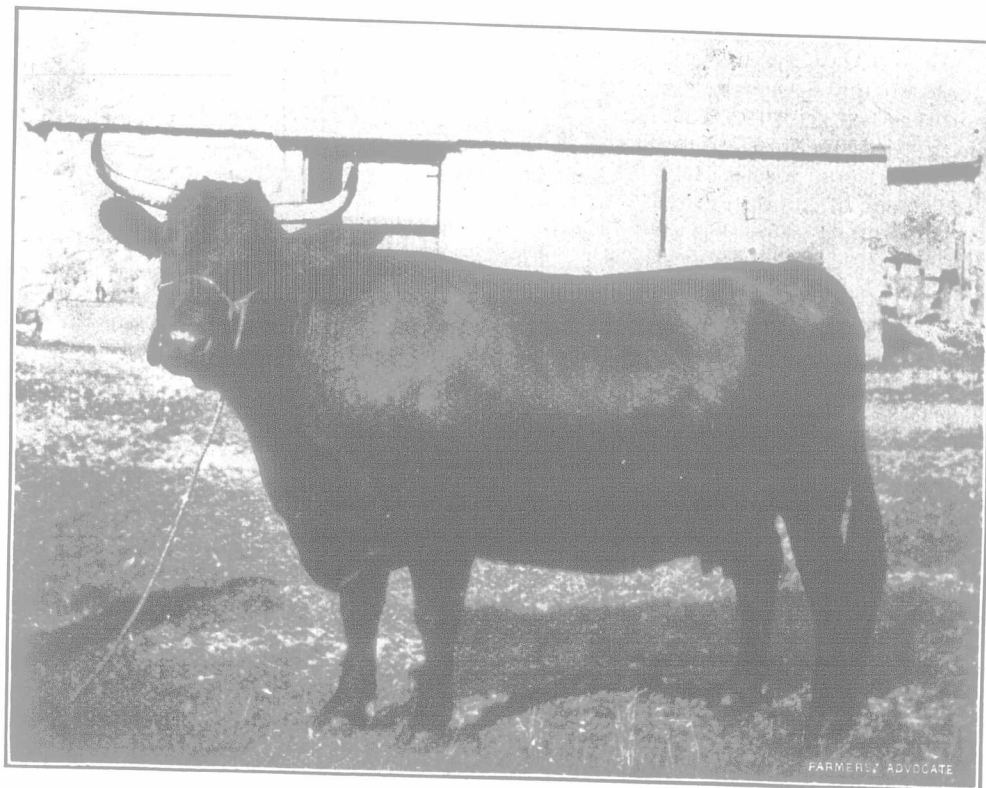
tain all the manure and green crops, which we would plow down near the surface, plowing about three or four inches deep, preferably in the fall. For crops, would grow as much of the deep feeders, like red clover, alfalfa, roots, etc., as possible. The continual growing of shallow feeding cereals and deep plowing have been the great agencies in the past in depleting American soils of their vegetable matter. We would not plow as often as is generally done on such land, but would use the disk or cultivator instead.

2. There would be no objection to growing rape on sod, provided a deep seed-bed were worked up. As for fattening lambs, that depends on so many conditions that no one can say with any assurance whether it will pay a certain individual or not. Better keep the temperature down than to shear the lambs and then have to keep a closed pen.

SEVERAL QUERIES.

1. Can you give me the addresses of two or three firms that manufacture small cheap sawmills, not necessarily portable, suitable for use on a farm having plenty of timber, but distant from a sawmill?

2. In deciding upon the value of a heifer, it is necessary to form some idea of what quantity of milk should be expected of her as compared with a fully-matured cow. If, for example, we take as a standard the quantity of milk given by a cow from eight to ten years old, what percentage of that quantity should be given by an equally good cow, say two years old, and what should be given by one three, four, five or six years of age? Probably the actual quantities



WELSH COW, GELLIE II.

Owned by T. Roberts, North Wales, and considered one of the best Welsh cows living.

CLYDESDALE MATTERS.

1. Was the Duke of Edinburgh a registered Clydesdale stallion? If so, what was his registered Canadian number? He was owned by Clark, about 1882.

2. Who was the breeder of Ashburn Hero; his sire being Tannahill; dam Jess of Brooklyn?

3. Who was the breeder of Tannahill, Imp. [1205] (4745)?
SUBSCRIBER.
Lanark Co., Ont.

Ans.—1. Duke of Edinburgh, alias Bonaparte, was a horse imported by Powell Bros., Springboro, Pa., U.S.A., in 1874, and afterwards became the property of Jos. Vance, of New Hamburg, Ont. His Canadian number is [1047], and his British (1074). This is the only Duke of Edinburgh registered in the Canadian book, but there are several registered in the British and a few in the American books.

2. Ashburn Hero [2093] was bred by Job White, Ashburn, Ont.

3. Tannahill (Imp.) [1205] (4745) was bred by John Cassie, Westerton, Rothie Norman, Aberdeenshire, Scotland. He was foaled in 1884 and imported by R. Beith in 1885.

STRAWBERRY BLITE.

Enclosed find a plant that came up on some land that had been burnt over. It has a white taproot. What is it?
Grenville Co., Ont. C. W. B.

Ans.—This is strawberry blite (*Chenopodium capitatum*), of the same genus as lamb's-quarters. It is never troublesome as a weed.

of milk given year after year by certain well-known cows can be stated.

3. Can you give me the addresses of any persons in Canada who raise Angora goats?

4. What is the cheapest and best way of preparing a liquid-manure bed? Would a very large box made of three-inch planks and lined with galvanized iron or zinc prove satisfactory?

Montreal, P.Q. T. B. M.
 Ans.—1. H. E. Clant, corner of Common and Nazareth streets, Montreal, handles this line of machinery.

2. It is very hard to tell just what percentage of the value of a cow her value as a two-year-old would be. Probably some dairymen have records such as you mention that would throw some light on the subject. Generally speaking, we should think at two years old a heifer would be worth about sixty per cent. of her value as a mature cow.

3. Jas. Bray, Longburn, Man.

4. Cement concrete is the best material to use for this purpose; galvanized iron or zinc would not last long. Unless in very rare cases, and we have never seen such, a liquid-manure tank should not be used. In practice, they never receive the necessary attention that they require, and they are continually getting out of order. It is by all means a better plan to use some kind of absorbent, such as straw, sawdust, road-dust, forest leaves, etc., to carry the liquid manure to the fields.

HOLSTEIN COWS—STABLE ARRANGEMENTS.

1. We have a pure-bred Holstein heifer that aborted three months before her time to calve. She is milking, and gives twenty pounds of milk per day, but the two front teats do not give more than two pounds of milk per day. We bred her about four months after abortion. Would you advise us to keep this cow? Can we do anything to the two poor teats to make them better?

2. Kindly give me pointers re crowding Holstein cows to make them give a big flow of milk for a short time (two days or one week).

3. The floor of the basement for holding manure underneath our barn is made of clay and gravel. This place is so wet in the spring that we want to make a good floor and provide for drainage of liquid manure, from the roof, soakage through walls from upper yard, and the overflow from the water tanks, which are located in the basement. At present we have a well in the yard twenty feet from barn, but this well fills up every heavy rain and backs the water up in the basement, as well as overflowing the yard. We have a good fall towards the public road, which is ten rods distant. What is our best plan to follow? What material for floors? How can we manage the drainage system so as to utilize the liquid manure?
 R. H. W.
 N.H., U.S.A.

Ans.—1. There is little you can do to stimulate the secretory glands in those quarters of the udder. Manipulate those teats at each milking, especially after she drops her next calf. She may not be a profitable producer of milk, but may be a useful member of herd as a breeder. Of course, you can not decide this definitely until you test some of her offspring.

2. The best method of crowding a cow to produce liberally for any length of time is to keep her in the best possible condition. Give all the good food she can handle, pure water and salt. Make her quarters comfortable, protect from flies, and give sufficient exercise to stimulate appetite. A cow generally makes her best record from three to four weeks after calving.

3. Your best plan would be to put in two or three three-inch tile drains, running through the basement, to carry soakage away from the barn. Then fill under the barn to sufficient height to turn off surface water, and put in a cement floor one part cement to five or six of clean gravel. There is no better way to utilize liquid manure than to use plenty of absorbent.

TURNIP LICE.

Could you please inform me what would kill turnip lice, and how to apply the same?
 Norfolk Co., Ont.

Ans.—There is very little to be done with turnip lice, in the way of insecticides, they reproduce so rapidly and withstand poisons so well. Dust of some kind, so long as it chokes up their breathing pores, is about the only thing that can be applied to the plants to reduce the lice, but this is such an enormous job that it can hardly be recommended. Perhaps the best thing to do is to apply a quick-acting manure, such as nitrate of soda, to stimulate growth and so grow a crop in spite of lice. Keep the fields free of mustard and other cruciferous weeds, as the lice feed upon plants of this order.

HOME CHEESEMAKING.

Could you outline a method of making cheese at home?
 Manitoulin, Ont.

Ans.—See our June 1st and 15th issues.

CORN AS ENSILAGE.

On reading D. Munroe's interesting article in the "Farmer's Advocate," "On the Advantages of Corn-growing," I resolved to write and ask if you will kindly give me some more information about this valuable crop.

I have been very much interested in farming for the last three years. I have a large farm, and I have started a creamery. I have raised a considerable amount of corn, but I always cut it green in summer for cows. I had almost made up my mind to build a silo, until I had got such an amount of information of such a varied nature that it has resulted in placing me in an undecided state of mind as to how to proceed. One system experimented on in the States is that of allowing corn to ripen to maturity, then separating the corn from the husks, and shredding the stalks and husks to be used as fodder. My farm is in Maitland, Hants County, Nova Scotia. We very often have wet weather in the fall, and at that season making such fodder would be rather a precarious undertaking. Would not the pulped part spoil if put wet into the mow, and would not the corn have to be thoroughly dried to prevent it spoiling?

Will you kindly enlighten me on the subject, and also let me know where I can procure the variety of corn you recommend.
 JAMES S. CROWE.
 Hants Co., Nova Scotia.

Ans.—Your questions cover a very important field of inquiry, but, briefly, I understand it to mean a question of silo vs. allowing the corn to fully ripen, then husking it and cutting or shredding (which latter is probably meant). In view of the facts, as you state that in your locality you are subject to a great deal of wet weather about the time of corn harvest, it would be certainly difficult to have this fodder (properly called stover) in dry enough condition to be shredded in any considerable quantity, unless it is to be used very quickly, as it is sure to heat and spoil if at all damp. Also, the very large majority of reports from those who have handled ensilage for years as compared with any other method of disposing of the corn crop to the best advantage is very largely in favor of the succulent food which good ensilage provides. The great majority of the evidence is in favor of the silo as being the cheapest possible way to make the entire corn plant available, as the husking, handling and grinding of the ripened grain is a question of added cost without adding materially to the benefits derived over the feed of the same grain through the silo, while the advantage of the succulent nature of this food, especially to milking cows, is recognized as being one of importance.

You very truly refer to corn as a valuable crop; indeed, it is doubtful if we know any other food which in all respects is so valuable as corn. The silo is also recognized as the cheapest means of handling this crop, and the round silo, with the present methods of construction is so very much cheaper than the old form of construction that the cost is brought within the reach of ordinary means.

The man who writes that he thinks he gets two crops in one by husking his corn is laboring under a mistake, for husking makes neither more or less, and he gets the whole product of the plant from the silo if he puts the whole into it. The variety of corn which we are best pleased with for our location is called Longfellow, a flint corn. However, this may not be suitable for your locality.

Trusting I have fully answered your queries, I remain,
 D. MUNROE.
 The Munroe Pure Milk Co., Winnipeg, Man.

IDENTITY OF OATS.

Enclosed you find a sample of oats, which I have found scattered among the rest of mine. I think it must be a very early oat, which would make it suitable to sow with barley. Will you please give me the name of it, and how it yields? Do you know where there is any raised?
 Waterloo Co., Ont.

Ans.—At this stage of the grain it is practically impossible to say with any degree of certainty what variety of oat the submitted sample is. As this variety is early, and has a promising-looking head, we would suggest that enough of the heads be gathered to make a peck of grain. When they have been cleaned the variety may be decided by comparing them with other known varieties. If you will send us an ounce or so we will identify them, if they are a known variety, and give you any information regarding them. It is just possible they are a new variety, and would prove valuable.

THE STALLION "HARD FORTUNE."

Was the stallion Hard Fortune a Clydesdale or Shire, and what was his number?
 H. M. D.
 Grey Co., Ont.

Ans.—The stallion Hard Fortune is a Shire, and is recorded in the first volume of the Shire studbook as number 132. He was also recorded in the second volume of the American Clydesdale studbook, the appendix without being numbered. It is noted that he is a Shire. He was bred by the late Messrs. York and imported by the late Messrs. Lambton, Ont.

H. WADE, Registrar.

BEE MANAGEMENT.

When do bees quit rearing brood and start storing honey, and how can I get the brood into the lower story and use the upper one for stores?
 Waterloo Co., Ont.

Ans.—You understand that brood-rearing and honey-gathering both go on together in the hive, but in the early part of the summer special attention is given to strengthening the colony. By the time the heavy honey flow is on, the colonies are generally pretty strong; in fact, so strong that they frequently swarm before that time. When nectar becomes plentiful, the workers make good use of their time, but brood-rearing goes on just the same, as the life of a worker is very short in the busy season, and new stock is constantly required. However, the hive will become crowded during a good flow, and the bees will need more room or they will swarm. Then is the time to put on the supers, just as the lower story becomes filled with brood and some honey. The reason you have brood in the upper story is because you have not used a queen excluder to keep the queen down with the brood. When the excluder is used, only the workers can get to the upper story, consequently only stores are found up there. If there is already brood above, just put it below and get on the excluder.

A BAD WEED.

Please find enclosed a piece of a strange weed I found in the field to-day. Kindly let me know the name, and also if it is very hard to get rid of? I have just seen one plant as yet.

Stormont Co., Ont.

SUBSCRIBER.

Ans.—This is a branch of the tumbling mustard. It has nearly all the bad qualities of the common mustard, except that its seed is smaller and its flowers inconspicuous. It leads the family in the number of its seeds; a single plant has produced over a million of them. It is a bad weed in some parts of the Northwest, and is occasionally found in Ontario. There is considerable of it in rubbish heaps and waste places around Toronto.

MORE BLADDER CAMPION.

I am sending you by this mail a sample of a weed which threatens to give trouble on some farms in this district. Kindly give name and particulars how to destroy it and keep it from spreading. The weed is called wild live-for-ever around here.

Ontario Co., Ont.

Ans.—This is another specimen of bladder campion. See last issue of the "Farmer's Advocate." Judging by the numerous inquiries, this weed must be very widespread in this Province. Cultivation, and growing such crops as roots, corn and red clover, are the best methods of eradicating it. See illustration on this page.

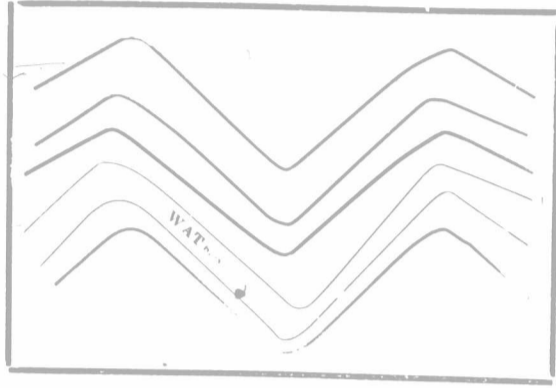


BLADDER CAMPION

DRIVING WELLS.

Could you tell me anything about these driven wells? I want to put one in a loamy soil. Could get water at fifteen feet, but would like to go thirty in hope of getting purer water. Pontiac Co., P.Q.

Ans.—We presume our correspondent has in mind artesian or flowing wells. These are obtained where the "lay of the land" is such that a supply of water under the ground is subject to pressure sufficient to maintain a good supply of water in the pipe. Such a formation is thus roughly illustrated. Water under the ground is generally found in gravelly soil, lying on an impervious stratum, and when the land lies in such a position as that in the illustration, that in the lower levels is under the pressure of that on either sides. It is then at once evident that if a



pipe from above is driven into this water supply the water will rise to a certain height in the pipe. It may be to the top, or only a short distance. When the water comes to the top there is then nothing more to do, but if it only rises a few feet, or even within a short distance of the top, it will have to be raised the rest of the distance with the pump. Unfortunately, the only way to tell whether or not a well of this kind can be secured is by experiment. Judging by our correspondent's letter, the source of supply is the ordinary soakage water found in soils, not a spring or an underground current. In such a case we very much doubt the supply would keep a pipe full as fast as it would be pumped out. Very often the source of supply in an artesian well is close to mineral or oil, or some offensive tasting substance which renders the water unfit for use. In most cases, however, where water is got by driving from fifty to several hundred feet, it is of the very best quality. Three-inch pipe is commonly used, and is driven by a weight and derrick.

FITTING AND SHOWING A HORSE.

1. What is the best way to give a horse a fine skin and fatten him in two months' time? I feed him hay and four quarts of oats regularly. He is on grass at nights. I wish to show him in the fall.

2. Colt is three years old; weighs 1,500; is rather leggy, and has not much feather. Whether should I show him, in the heavy draft or agricultural class?

Wentworth Co., Ont.

Ans.—1. If the horse has no chronic disease, then good feed with exercise should fit him for the fairs. First be sure he is in good health. The feed you give is pretty liberal, if he is not working. If working, you might add a little bran to his oats, and give a little oil cake about once a week, to sleek his skin. Also give plenty of grooming, and wash him occasionally. Give some variety in the ration, but do not make sudden changes. Stimulants or drugs should never be given in fitting up a horse, neither should he be over-fat for showing.

2. A three-year-old weighing 1,500 could not be expected to lead a strong class of heavy drafts, neither would a leggy fellow suit well in the agricultural class. However, it is hard to tell which class he would do best in without first seeing him. Ask some good horseman who is familiar with types, and take into consideration the strength of the classes shown in previous years at the fairs which you intend to visit.

DIVERTING STREAM FROM NATURAL COURSE.

A's and B's lands join. A creek rises on A's property and used to flow through B's, but A changed its course so that now it does not flow through B's.

1. Can B make A give the creek its natural course?

2. Would the lapse of twenty years since its alteration constitute ownership?

Peel Co., Ont.

Ans.—1 and 2. A had no right, without the consent of B and other lower riparian owners, to alter the natural course of the creek and so deprive B of its enjoyment and use, and B could at the time have compelled him to restore things to their original condition, but it is possible that a delay of twenty years, or even less, and a tacit consent to such change, would now be a bar to his doing so.

ALSIKE CLOVER FOR SEED.

Can I get a successful crop of seed from alsike clover if left the second year? Middlesex Co., Ont.

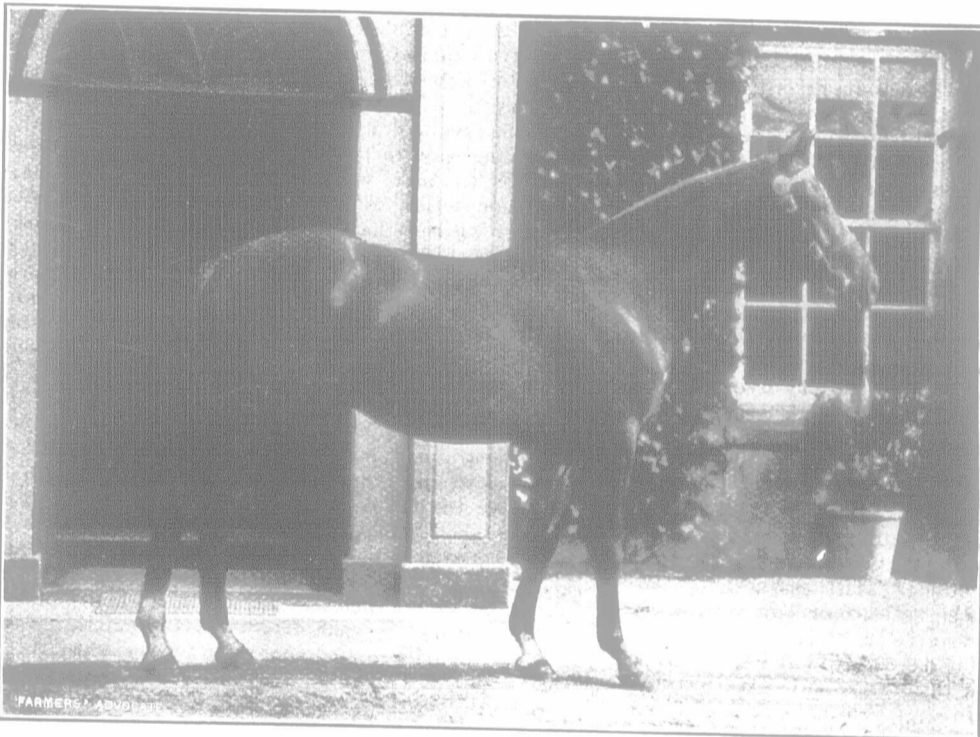
Ans.—The best yields of alsike clover seed are got when the plants cover the ground fairly thickly, are not too long in the straw, are of even growth, and are free from weeds or other plants. Such a condition is generally had in a greater degree the first year of cutting—if the catch has been thick enough—than the second. The plant is a perennial; that is, it grows from year to year without reseeding, but the first year's crop generally leaves considerable seed upon the ground; this starts a new growth, and makes the second crop somewhat uneven. In such cases, if the season is not too dry, it is a good plan to cut over the field early in June, when the clover is a few inches high; this gives all the plants an even start, and the crop will head out evenly. If the weather is very dry it may not be practicable to cut it off, in case the second growth is too short to handle. If a field is intended for seed the second year, do not crop it close after harvest the first year, but give it a chance to establish itself.

HERBAGEUM.

Where can I get the Herbageum advertised in the "Farmer's Advocate," as I would like to try it?

Carleton Co., Ont.

Ans.—It is to be found in general stores in most villages, and in provision and seed houses in cities and towns. If none of your local dealers have it, apply to the Beaver Manufacturing Co., Galt, Ont.



A TYPICAL POLO PONY STALLION, COMBINATION, BY ROSEWATER.

First as a three-year-old at the Bath and West of England Show, 1903. Second three-year-old Polo stallion, London Spring Show, 1903.

THE PROPERTY OF J. OSCAR MUNTZ, GOODAMEAVY, SOUTH DEVON, ENGLAND.

BUFFALO MOTHS—RAISING COLT.

1. We have Buffalo moths in the house. What is the best remedy for them?

2. Mare died, leaving a colt seven weeks old. Would it be well to wean the colt now, or feed him awhile on cow's milk? If so, what quantity should be given? Should he be kept in the stable?

Huron Co., Ont.

Ans.—1. See April 15th issue, page 373.

2. Milk is the best and most natural food for the colt until he is about five or six months old; therefore, it would be best to keep him well supplied with it for some time yet. Dilute the cow's milk with a little water, and teach the colt to eat ground oats, bran and a little oil-cake. He would do best on good grass, but should not be far from the barn, as his milk would be neglected. Always be sure to feed him in a clean dish, scald it out after each feeding. He can, gradually, be accustomed to three feeds a day.

Be Up-to-Date.

James Herr, of Westwood, when renewing for his paper, says: "I am well pleased with the 'Farmer's Advocate,' and consider any farmer who does not take it not up-to-date."

The United States census of 1900 shows that the total number of pounds of cheese made in the United States was 298,344,654, and that 130,010,584 pounds were made in New York State, approximately one-half of the total make.

NOTES AND NEWS.**Dominion Exhibition.**

An early harvest and prosperous times are two of the indications that promise to swell the attendance at the Dominion Exhibition in Toronto from August 27th to September 12th. The exhibits and attractions for this popular event will be on a larger scale than ever before. Special rates on exhibits have been arranged for the railway companies. Excess of freight on exhibits from over one hundred miles from Toronto, extending to Port Arthur on the west and Montreal on the east, will be paid by the Exhibition Association. All freight coming from east of Montreal and west of Port Arthur will be paid in full by the Association on the production of the freight bills. A cat show on September 2nd, 3rd and 4th will be a feature, and will be followed by the dog show on the 7th. Relics of the old pioneer days of Canada will also be on exhibition, and parties having such relics are requested to correspond with Mr. Meyer, of 408 Spadina Ave., Toronto. The Dominion Exhibition time is the vacation spell for farmers living in all parts of Canada, and it is worth while making an effort to attend.

The Fair at London.

Great preparations are being made for the entertainment of visitors to this year's Western Fair. An unusually fine list of attractions is being arranged for. The management have been busily engaged since the early spring looking up new and original features, and success has so far rewarded their efforts in a marked degree. A startling and unique programme—the very best in the land—is guaranteed. The fireworks display will include a magnificent spectacular representation of

the battle of Alexandria, a triumph of modern pyrotechny. A parachute drop and balloon ascensions will be seen each day. With the Western, improvements are always in order. The already beautiful grounds are being made more so. Better accommodation for stockmen in live-stock buildings, space rearranged in other departments, and a general brightening up all around is the order of the day. Enquiries from the U. S. continue to come in. Canada and the Western Exhibition are evidently attracting considerable attention over the line; not only the machinery, but live stock also will be well represented from that quarter. Greater interest is also being taken by our own people. It is expected that a number of our leading manufacturers who have not shown for some years will exhibit this year. With good crop prospects and fine weather, the success of the Western is assured beyond peradventure. It is Western Ontario's holiday outing, and the people are bound to come.

The Exhibition at the Capital.

Ottawa Valley people are justly proud of the Central Canada Exhibition, which will be held this year from September 11th to 19th. Farmers in the Ottawa district have been making splendid progress since the general inception of cheese factories in Eastern Ontario, and can show other parts of the Dominion paragons in certain lines of agricultural products. Besides the exhibits of products, the management of the fair has provided for the entertainment of visitors to the city in the form of fireworks, whirling the loop, parachute drop, etc. September is a particularly opportune time to visit the capital city, and no doubt larger numbers than ever before will avail themselves of the opportunity of seeing the great Central Canada Exhibition, and the seat of government of the greatest of Britain's colonies.

U. S. Hogs Barred.

London, July 3.—A new order of the Board of Agriculture was gazetted to-day, revising previous orders, and prohibiting the landing in Great Britain of any hogs from the United States, besides prohibiting the importation of cattle from New England. The order goes into effect August 1st, and will prove advantageous to Canada.

Farm Railway Crossings.

A decision of much interest to farmers was lately handed down by Mr. Justice Street at Toronto. The case was tried at St. Thomas, Ont., in April last. It was brought by a farmer named Palmer, of Yarmouth Township, in the County of Elgin, whose lands are crossed by the Michigan Central Railway. Years ago the company built an overhead crossing on the farm, so as to provide for the passage of vehicles and general traffic from one part of the farm to the other. In building the crossing, it was necessary to encroach on the farmer's land to construct the approaches. On August 26th, 1902, Palmer was crossing with a load of oats, and, owing to the worn condition of the approach, within his own fence, the wagon turned over and he sustained severe injuries, for which he asked \$5,000 damages. At the trial, the learned justice submitted questions to the jury which were answered favorably to Palmer, they finding that the company was guilty of negligence, that the accident was caused by the crossing being out of repair, that Palmer was not guilty of contributory negligence, and they assessed his damages at \$800. The company had asked for a non-suit, on the ground that they were not supposed to keep that portion of the crossing in repair, and no request to repair it had been made. This point was reserved at the trial, but the court now grants the application, and dismisses the action with costs.

The liability of the defendant company is based on the 191st section of the Railway Act, 51 Victoria, Cap. 29 (Dominion), by which railways are compelled to give farmers a right of way over their property. There is no duty on the railway company to keep in repair the portion of the crossings on the land of the farmers. There was, therefore, no evidence to leave to the jury.

Colonial Trade Ascendant.

Alarmists have affected to see in the possible reversal of its free trade policy by Great Britain the danger of sacrificing a vast foreign trade. The truth is that the colonies are by far the larger importers of British products and manufactures. According to the most recent statistics available, for a population of over 77,000,000 the Americans take something over \$90,000,000 worth of goods from Britain. Germany also, with twenty millions less people, imports over \$115,000,000 worth. The United States, Germany and Russia are the largest foreign importers, but Russia, with 140,000,000 inhabitants, is credited with only \$40,000,000 of imports.

These figures, though unquestionably large, are not so formidable, when subjected to comparison. Australasia, for instance, with only five millions of people, takes from Britain forty-five million dollars' worth more than the United States, and twenty millions more than Germany; while one million and a half of white people in South Africa import almost as much as the United States. Canada, which, with its proximity to the United States and the number of its own industries, is peculiarly placed, yet imports as much as Russia, and the trade is still growing. We see, therefore, that the self-governing colonies alone, with less than twelve millions of people, actually import goods to the value of over \$260,000,000 in round figures, or \$10,000,000 more than the three foreign countries, with a population of 274,000,000, and the alarm is baseless.—[Toronto Globe.

South Perth, Ont.

Copious rains fell shortly after haying commenced, and for once the tardy farmer scored a point, inasmuch as the crop, which promised to be light, commenced growing rapidly, and in ten days had increased the bulk considerably, and while most of it was secured in good condition, a small percentage was badly injured. The light showers have still continued, resulting in great growth of roots, meadows, clover and pasture, but scarcely enough to make the sod plowing for fall wheat a pleasant task. It has, however, been very favorable for the maturing of the grain crops. The moist, cool weather has caused the wheat to "fill" extra well, so much so that it had better been cut a little on the green side to prevent shelling. However, in most cases this has not been done, and the result is that with such plump varieties, such as the Dawson, considerable loss will occur. The apple crop will likely be somewhat below the average, though small fruits are exceedingly plentiful and plums likewise. The new potatoes are being dug and are turning out well. The beetle is not as severe as some years, and, so far, there is no appearance of blight. All together, the prospects for the agriculturist are quite good for this season. Two of the delegates to the Women's Institute sent out by the Department of Agriculture visited our riding last week, and held successful meetings at about half a dozen different places. The movement seems to be meeting with general favor, and it seems to be taken for granted that there is a place for instruction in household science and the other subjects on which they lecture.

Inquiry from India.

The M. Campbell Fanning Mill Co., of Chatham, Ont., under date of July 25th, 1903, writes us as follows: "We enclose you herewith an enquiry which we have just received from India. It shows the wide circulation of the 'Advocate,' and we are pleased to notice that our advertisement attracted attention in that far-off land."

Farmers' Telephones.

HOW TO ORGANIZE—HOW TO CONSTRUCT.

Frank B. Reiter, of Mt. Cory, Ohio, writes in the Farm Journal:

I am proud to say that my neighborhood is pretty well connected up by farmers' telephone lines now in course of construction.

Our plan of operating is as follows: An enterprising town or village is selected for the central office, and all company meetings are also held there. Lines are running in all directions from the central office, each line being a party line, with from four to seven parties on each line, although five and six is the number set by our by-laws for each line except in extreme cases.

The patrons on each separate line represent a company, which selects one of its stockholders—each party being a stockholder—to represent the company to the general company, which is formed by one member from each of these small or line companies, and all line companies are controlled by the general company.

In our general company we have a president, vice-president, secretary and a treasurer, also a board of trustees composed of five members.

In the matter of construction, it is the duty of the board of trustees to have all lines measured and staked where poles are to go and thus determine the number of poles, cross-arms and pins or brackets required to construct all lines, and then determine the number of poles, etc., each man must furnish to construct the entire system. In the matter of wire, this can also be divided up equally among all; or probably a better plan to let each line or individual company furnish the wire for its own company, each party sharing alike. A good plan is to have each individual company furnish the general company at least 100 pounds of wire, to be held in reserve for the purpose of constructing connecting lines to connect the central office with the central office in other towns.

Free exchange is given between all these central offices, thus completely connecting large districts, and any patron of any individual company can talk with a patron of any other individual company free, though they may be a hundred or a thousand miles apart.

By having say five patrons on each individual line, and having say forty or fifty such lines, it gives one a chance to talk with 200 or 250 different parties, and if connection is established with say from five to ten other villages having a like number of 'phones one can talk with from 1,000 to 2,500 people.

Practical use has demonstrated that where there are no trolley or electric-light wires or iron pipes to influence lines, that ground circuit lines with bridging 'phones installed will give a thoroughly practical service, but where the above-mentioned influences exist only metallic circuit lines and bridging 'phones will prove satisfactory. The metallic circuit requires two wires, while the ground circuit requires but one.

To assist any who may wish to figure on such lines I will give the following figures:

Allow about thirty poles the mile, and if more than one line goes on the poles you will need about thirty 2, 4, 6, 8 or 10 hole cross-arms, according to number of lines to go on poles. Then allow thirty pins and glass insulators for each line. In the matter of wire, use No. 18 office or annunciator wire when in dry places, and No. 18 rubber-covered wire when in damp places. For outside wiring use nothing smaller than No. 12 galvanized-iron wire. No. 12 galvanized-iron wire requires about 165 pounds to the mile.

It might be well here to caution against using series 'phones, as they will not give satisfaction on farmers' lines.

A switchboard must be provided for the central office, and I would recommend the ringer pattern, as it gives better satisfaction than the simple drop pattern.

After a system is once installed the only expense to keep it up is to pay some party to tend the switchboard and make the necessary repairs.

Peace River District.

Two prospecting pioneers, Messrs. G. E. Martin and J. B. Macher, have just returned from a four months' tour in the Peace River county. They left Strathcona early in March, going via Athabasca Landing, Lesser Slave River and Lake on the ice, making the trip to Peace River landing in nineteen days. They traversed what is known as the Spirit River prairie, south and east of Dunvegan. They speak very highly of this tract of country as a location for either ranchers or farmers. A few settlers are already located there, and find a very ready market for all their products with the H. B. Co. Wheat brings \$1.50 per bushel at the company's mill or at any of the trading posts along the river. The Grand Prairie, which has been very highly spoken of by travellers, and which is of much greater area than the Spirit River prairie, is further west and has not received more than two or three white settlers yet. Old Johnnie Grant, formerly of Bittern Lake, is one who went in there this spring. Messrs. McEachern and Martin believe there is a great future in store for that district when it is tapped by a railway, especially when the mining properties in the mountains directly west of it are opened up.—[Strathcona Plaindealer.

Take a thorough look all over the farm, now that just life is in full bloom, and locate all your breeding weeds. Take the very first opportunity of killing them. "A stitch in time saves nine" in the case of weed-killing.

P. E. Island.

Since July came in we have had some rain, but it came too late to help the hay much. Hay will be the lightest crop for many years. Though there was plenty of clover, it has not grown much, and much of the timothy on the second-year meadows has not shot at all. Oats will not be heavy in straw. They are just heading out now. Wheat is pretty good.

The root crop is largely a failure all over the Island. Grubs have taken mangolds and turnips, making a clear sweep of them on most farms. Many fields have been re-seeded with turnips, but so late that the crop will not yield much.

We are just beginning hay here, and the weather is favorable for saving it. Pastures have been good the last month, and the dairy stations are getting considerable milk.

Potatoes are doing better than any other crop, and the bugs are not very plentiful yet.

If we do not have rain soon, water for stock will be scarce, as the springs are failing very fast.

The annual meeting of the P. E. Island Agricultural Mutual Fire Insurance Co. was held a few days ago. This company takes risks only on farm property, charging six dollars on the thousand to insure for a three years' term, and has during the sixteen years that it has been in business accumulated a surplus of \$15,770. Last year it paid losses to the amount of \$5,645.67. The expenses for management for a year, including agents, was \$2,019.29. The business for the year amounted to 1,198 new policies and renewals. This company has stood the test of time, and has been a great boon to our farmers in the matter of insuring their buildings against fire and lightning, and though doing business at so cheap a rate has never had to make an assessment, but, instead, accumulated the above named surplus. It is managed entirely by farmers, every policy holder being a member of the company. We want more such companies in Canada to put insurance within the reach of all our farmers. W. S. July 20th, '03.

Our Export Grain Trade.

The present season promises to be a record-breaking one for the St. Lawrence route, as far as the exportation of grain is concerned. The season has already seen a remarkable growth in the quantity of grain exported, and the increase is all the more remarkable when it is considered that New York, Boston and other grain export ports have not developed their trade on a corresponding ratio. According to statistics furnished by the Board of Trade, the total grain exports via Montreal from the opening of navigation until the end of June are as follows:—

	Bushels.
Wheat	5,259,360
Corn	1,647,574
Oats	239,403
Barley	140,419
Rye	250,121
Total	7,436,877

Wheat is the principal cereal to be exported, and from Montreal this season there has been exported more than five and a quarter millions of bushels, as compared to New York's export of above two millions of bushels for the same time. The great bulk of wheat going forward is Manitoba grain, and as far as can be estimated, there is still about fifteen millions of bushels of old crop in the wheat country awaiting transportation to the yard.

St. Louis World's Fair Notes.

On the 37 acres of ground devoted to the live stock department at the World's Fair at St. Louis are being built 2,800 stalls. Two thousand four hundred of these are open stalls, five by ten feet. The remaining 400 are box stalls, ten by ten feet. In addition, four octagonal dairy barns will provide 140 open stalls and 28 box stalls.

The American Jersey Cattle Club is preparing to install a herd of Jersey cows at the Louisiana Purchase Exposition that will eclipse all previous Jersey exhibitions. New England, New York and Eastern States have all already shipped 15 cows to Jerseyville, Ill., where they will be held until the opening of the fair. It is the intention to select the best 40 Jersey cows in the world to take part in the dairy test.

A million roses will bloom at once in the vast rose garden at the World's Fair. Four acres are set to strong and vigorous rose trees. Thirty of the largest exhibitors have sent their choicest stock, and each will strive for first place in the judgment of the jury and people. This vast rose garden with its 50,000 rose trees lies east of the great Palace of Agriculture. The planting was begun early in April. The center of the garden is at the main entrance to the Palace of Agriculture, a grand structure 1,600 feet long and 500 feet deep.

Binder Twine Legislation.

The Dominion Government has decided to pay a bounty to any corporation, firm or person manufacturing binder twine in Canada, which shall be equal to the amount paid as export duty in the Philippine Islands on manilla fibre produced in such islands and used in making binder twine in Canada. Such bounty shall only be payable in respect of binder twine made on or after the 1st September, 1902, provided, however, that the bounty shall not exceed $\frac{1}{2}$ of 1c. per lb. on the manilla fibre so used in making binder twine.

List of Fairs for 1903.

CANADA.

Regina, Assa.	Aug. 11 and 12
Lacombe, Alta.	Aug. 20
Dundas, Morrisburg, Ont.	Aug. 26, 28
Toronto Industrial	Aug. 27 to Sept. 12
Sherbrooke, Quebec	Aug. 29 to Sept. 5
Winchester, Winchester, Ont.	Sept. 2, 3
East Elgin, Aylmer	Sept. 7, 11
Russell	Sept. 8
Stonmont, Newington, Ont.	Sept. 8, 9
Grenville, Prescott	Sept. 8, 10
Kingston, Kingston, Ont.	Sept. 8, 11
Brome, Brome Corners, Que.	Sept. 9, 10
Alexandria	Sept. 9, 10
Nova Scotia, Halifax	Sept. 9 to 17
Western Fair, London	Sept. 11 to 19
Ottawa Central	Sept. 11 to 19
Wellesley, Wellesley	Sept. 15, 16
Guelph, Guelph	Sept. 15, 17
Hamilton, Hamilton	Sept. 15, 17
Ontario and Durham, Whitby	Sept. 15, 17
Brockville	Sept. 16, 18
Perth	Sept. 16, 18
South Lanark, Perth, Ont.	Sept. 16, 18
Frankford	Sept. 17, 18
Eldon, Woodville	Sept. 17, 18
East Simcoe, Orillia	Sept. 17, 19
East Hastings	Sept. 18, 19
Lansdowne	Sept. 21, 22
Almonte	Sept. 22, 24
Fredericton, N. B.	Sept. 21 to 26
North Hastings	Sept. 22, 23
Petrolia	Sept. 22, 23
North York, Newmarket	Sept. 22, 24
Great Northern, Collingwood	Sept. 22, 25
Peterboro, Peterboro	Sept. 22, 24
West Kent, Chatham, Ont.	Sept. 22, 24
Renfrew	Sept. 23, 24
Amherstburg	Sept. 23, 24
Hay Agricultural, Zurich	Sept. 23, 24
Yarmouth, N. S.	Sept. 23, 24
Charlottetown, P. E. I.	Sept. 22, 25
West Middlesex, Strathroy	Sept. 23, 25
Campbellford	Sept. 24, 25
Center Wellington, Fergus, Ont.	Sept. 24, 25
Hilton, Milton	Sept. 24, 25
Metcalfe	Sept. 24, 25
Mornington, Milverton	Sept. 24, 25
North Brant, Paris	Sept. 24, 25
Lindsay, Lindsay	Sept. 24, 26
Springfield Union	Sept. 25, 26
Shannonville	Sept. 26
Carleton, Richmond, Ont.	Sept. 28, 30
Richmond	Sept. 28, 30
Ridgetown	Sept. 28, 30
Marmora	Sept. 29
Arran Tara Fall Show	Sept. 29, 30
Berlin	Sept. 29, 30
Blenheim, Drumbo, Ont.	Sept. 29, 30
Center Bruce, Paisley, Ont.	Sept. 29, 30
Haldimand, Cayuga	Sept. 29, 30
Tilsenburg	Sept. 29, 30
North Middlesex, Ailsa Craig	Sept. 29, 30
L'Amable	Sept. 30
Shedden	Sept. 30
Southwestern, Essex	Sept. 29, 30, Oct. 1
Coe Hill	Oct. 1
Peel Co., Brampton	Oct. 1, 2
West Elgin, Wallacetown	Oct. 1, 2
Beachburg	Oct. 1, 2
Galt	Oct. 1, 2
South Norwich, Otterville	Oct. 2, 3
Ameliasburg	Oct. 2, 3
Tilbury West, Comber	Oct. 5, 6
Rodney	Oct. 5, 6
Chapeau	Oct. 5, 6
Moore Township, Brigden	Oct. 6
Netherby Union, Netherby	Oct. 6, 7
Blyth and Morris, Blyth	Oct. 6, 7
Sault Ste. Marie	Oct. 6, 7
Warkworth	Oct. 6, 7
Sarnia Reserve	Oct. 6, 7
West Durham, Bowmanville	Oct. 6, 7
Alvinston	Oct. 6, 7
Castleton	Oct. 7, 8
Leamington	Oct. 8
Wooler	Oct. 7, 9
Prescott, Vankleek Hill, Ont.	Sept. 10, 12
Welland	Oct. 13, 14
World's, Rockton	Oct. 13, 14
Norwood	Oct. 13, 14
Woodbridge, Woodbridge	Oct. 13, 14
Norfolk Union, Simcoe, Ont.	Oct. 13, 15
Ontario Winter Fair, Guelph	Dec. 7, 11
Maritime Winter Fair, Amherst, N. S.	Dec. 14 to 17

STATE AND GENERAL.

Missouri, Sedalia	Aug. 17, 22
Iowa, Des Moines	Aug. 21, 29
Ohio Columbus	Aug. 31, Sept. 4
Minnesota, Hamline	Aug. 31, Sept. 5
Maine, Lewiston	Sept. 1, 4

New Hampshire, Concord	Sept. 1, 4
Wisconsin, Milwaukee	Sept. 7, 11
Michigan, Pontiac	Sept. 7, 11
Nebraska, Lincoln	Sept. 7, 11
Pennsylvania, Bethlehem	Sept. 8, 11
New York, Syracuse	Sept. 7, 12
Indiana, Indianapolis	Sept. 14, 18
Kansas, Hutchinson	Sept. 14, 19
Oregon, Salem	Sept. 14, 19
Kentucky, Owensboro	Sept. 21, 26
American Institute, New York	Sept. 22, 24
Illinois, Springfield	Sept. 26, Oct. 3
New Jersey Interstate, Trenton	Sept. 28, Oct. 2

The Greenway Pure-bred Sale.

The sale of pure-bred stock held by Hon. Thos. Greenway at Crystal City, on June 25th, brought together a large number of representative farmers and stockmen of Manitoba and a few from the Territories, Minnesota and Dakota. A special train left Winnipeg at seven o'clock, and when Crystal City was reached at mid-day over three hundred were on board. The representatives of the American agricultural press, who were returning from their Western trip, found it convenient to spend the day at Prairie Home, and went away pleased with what they had seen and the acquaintances they had made.

The sale began at one thirty, with Mr. T. C. Norris, Griswold, in the stand, and supported by Mr. S. W. Paisley, Lacombe, Alta. Although the bidding was slow and the sale lacked that enthusiasm that is common to pure-bred sales in the United States, yet on the average satisfactory prices were realized. There were no sensational figures recorded, and in a few cases the bidding advanced even further than was anticipated. A noticeable feature was the fact that the stock, with but one exception, will remain in Canada, and much of the best found its way into the hands of men who have hitherto been practically unheard of in live-stock circles. One could not fail to be impressed with the fact that this country is soon to make rapid strides in the production of live stock. The Prairie Home herd has been a credit to this country, but since we have new men that are aggressive enough to come forward and pay for the best stuff there is every reason to believe that in the immediate future the number of those in the ranks of the stockmen of this country who are deserving of honorable mention will be swelled to a great extent. The thirty-six females offered brought a total of \$8,165, or an average of \$266.70. Eleven bulls, including three which were sold at the dams' foot, brought a total of \$2,170, an average of \$197.27. The sale of cattle all together amounted to \$10,335, or an average of \$219.90 for 47 head sold.

Shorthorns for All.

The importance of the Hillhurst dispersion sale can scarcely be too forcibly impressed upon the public. What Canada needs badly now is a larger number of pure-bred herds, and no better opportunity to secure foundation for such herds could be found than the sale of Shorthorns at Hamilton on August 11th. Young breeders particularly will find it to their advantage to purchase something from Hillhurst, for if there is one feature of this herd of more significance than another it is its ability to produce winners. Much depends upon the foundation of a herd, and the man who secures good ones from Mr. Cochrane can be assured that he has made a good start.

The Biggest Harvester.

Last year there was in operation in the San Fernando Valley of California the largest combined harvester in the world. It consisted of a traction engine capable of hauling seventy-five tons, and which takes the place of sixty horses; a header or mowing machine which cuts a thirty-six-foot swath, and a complete threshing machine. The header and threshing machine are run by a separate thirty-horse-power engine getting its steam from the same boiler as the threshing engine. The drive-wheels of this monster traction engine are eight feet in diameter, with tires forty-eight inches wide, on which are ridges an inch and a half high. It can average three and a half miles an hour in good grain. The thresher has a capacity of 100 acres a day. Eight men are employed on the thresher. The grain is threshed clean and finally carried to a bin from which it is sacked. When twelve sacks have been filled they are allowed to slide off the cart to the ground. This huge machine will work equally well on level or hilly country, having sufficient power to take a twenty per cent. grade without difficulty. It is sixty-six feet long, half as wide, and weighs more than 100 tons. Oil is used as fuel. This harvester has been successfully used for shelling peas and beans as well as grain.—[World's Work.]

Canadian Fruit in Europe.

W. A. MacKinnon, Chief of the Fruit Division, Ottawa, calls attention of Canadians to the market for fresh and evaporated apples in Germany, Belgium and Holland. The fresh fruit is wanted in boxes, and is admitted free, but only fancy grades of the evaporated article are wanted, and these must pay an entry duty, varying in the different countries. The Canadian agent in Belgium, Mr. D. Treaw de Coeli, 75 Marche St. Jacques, Antwerp, will be glad to answer enquiries and to give all the assistance in his power to enable Canadian shippers to make satisfactory connections in that country.

How May the Pupil Aid the Teacher?

To the Editor "Farmer's Advocate":

It is now several years since I was a school-girl, and possibly I may have forgotten, to a great extent, the trials of school life. However, at that time I thought that teachers were all autocrats, and had a special license to make life miserable for the pupils. Time has changed not only the methods of teaching, but our own horizon, and if we can only say something that will lead the boys and girls of to-day to consider the opportunities which, perchance, they are allowing to glide past, we will have accomplished something.

With the experience of riper years we can readily see that the cause of much of the wasted time and neglected opportunities was not traced directly to the teacher. We realize that if we had only consulted our own best interests and exercised our privileges in the proper direction the relationship would have been entirely different. When taking a reminiscent view of life it is strangely curious how, as schoolgirls, we were so blind to our advantages, and placed so much importance in having a good time. How many precious hours we wasted when we might have been laying broad and deep the foundation upon which our future success depended?

If the teacher closed the door at four o'clock with a sigh of relief, it is little wonder. Yet we know that she did not then dismiss us from her mind, and while, perchance, we were airing our childish grievances, she was studying the best methods and plans for making our work interesting, attractive and beneficial. Could we have understood the cares, the perplexities, and the feeling of utter loneliness which beset the teacher, we could not have persisted in our thoughtless ways. In a year or two that teacher is gone, and, perhaps, almost forgotten. We may have had our fun, but have we received the benefits which we should have for the outlay of time and money? We have infinitely more to gain by the success of the school than the teacher has. It is our school, it was established for our benefit; it is our future that is dependent upon the use made of our schoolgirl days. Then why take a course of opposition, or of passive carelessness? Why hesitate to do what we know is best? The pleasure and enthusiasm aroused in us by the consciousness of having contributed something toward our own advancement and that of others will have a far more abiding influence on our lives than the fleeting pleasures derived from our senseless pranks and thoughtless annoyances.

We look back with pleasure to the times when we had a "good teacher," but forget that most of our teachers would have been good teachers had we tried to understand them aright or given them a chance of knowing our better qualities and our real natures. Our "good teachers" had the happy faculty of taking the initiative in promoting that fellowship and understanding of each other which makes so much for success. All persons are not blessed with this faculty, but there still is hope if the pupils will take the initiative. Here is an experiment worth trying:

Let the pupils decide, under the guidance of their leaders, to be upon their best behavior for a whole week. Stifle the desire to giggle and whisper; chat with the teacher if she shows the least disposition to do so, you will learn many valuable things from her, and she will enjoy the talks with you, for it gives her an opportunity of knowing something of your better nature; besides, you will be overcoming the lack of self-confidence and will be schooling yourself in the ability to talk sensibly on matters of immediate interest. Bring flowers to school if you can get them; the teacher will appreciate them as showing your thoughtfulness and better qualities. Invite her to take part in your games. She, perhaps, thinks you do not want her, and she hasn't yet forgotten her own schoolgirl days. Invite her to spend the evening at your home. Most parents in rural districts think that the teacher should consider herself invited and come whenever she wishes. Leave no room for doubt. Be part and parcel of the school; join in everything in which you can be of service, especially games, music and calisthenics. You are looked up to by the smaller girls, who consider what you do is right for them to do.

If you find any subject difficult, tell the teacher about your deficiency in that line and she will not only help you, but attribute your failure to its true cause rather than to indolence. Sometimes you will be misjudged; instead of feeling vexed and irritable, give her an explanation. It is impossible for a teacher to always be in the right, and should you be the unfortunate one, nothing will so raise you in the estimation of

the teacher as a cheery temper, even under unfavorable circumstances, and a straightforward explanation. There is no use holding a grudge against the teacher; she has none against you, but your sullen disposition fails to show up your better qualities or call forth hers. There are very many ways in which the thoughtful boys and girls can arouse enthusiasm, and we are confident that if the pupils do their very best for one week, their efforts will meet with such a response from the teacher as will encourage them to keep on. The teacher will be more enthusiastic, and, after all, enthusiasm counts for more in school than almost anything else. A desire to be of mutual help will dominate both teacher and pupils and the true end of all education attained.

NELLIE NICHOLSON.

Death of Mr. T. C. Douglas.

The "Farmer's Advocate" announces with deep regret the recent sudden death of Mr. T. C. Douglas, of North Dumfries, near Galt, in the County of Waterloo, Ont. After a day's work in the hay field he lay down for rest in the cool of the evening, upon the veranda of his residence. Mrs. Douglas had retired to her room, but becoming alarmed at his non-appearance, went down at about 11 o'clock, to find that her noble husband had received the final summons, death having occurred from apoplexy. A son of John Douglas, a Dumfries pioneer, he was born in that township some sixty years ago, and in early manhood married Miss Christina Malcolm, who survives him. Of their family of three sons and two daughters, four reside at home. He was well-known as an intelligent and progressive farmer, being President of the South Waterloo Farmers' Institute; for many years a township councillor and reeve; a county councillor, and a worthy and efficient member of the courts of the Presbyterian church. To stockmen and agriculturists he was most widely known as a breeder and exhibitor of Southdown sheep, his flock winning many honors at the leading exhibitions of the country. To the duties of both public and private life he devoted himself with unselfish zeal and integrity, occupying with honor every position within the gift of the people of the community in which he lived, and the best interests of whom he ever sought to promote. A vast concourse of people attended the interment at Mount View cemetery.

Government Crop Report.

The crop bulletin issued by the Manitoba Department of Agriculture shows an immense increase in acreage, satisfactory growth of the dairying industry and greater interest in mixed farming on the part of the Western agriculturists. This year there are 3,757,173 acres under crop, as compared with 2,039,940 last year; of this 2,442,873 acres are under wheat, as compared with 2,039,940 last year; 855,431 are under oats, as compared with 726,069; and to flax 55,900 acres are devoted, as compared with 22,005 in 1902. There are similar increases in all coarse grains, with the exception of barley, which shows a decrease of 3,253 acres. This is accounted for by the fact that many farmers have gone largely into the growing of spelt. Expansion is shown in all districts of the Province. Increased population accounts for the increase in the newer sections, and increased acreage in the older.

Last winter the farmers fattened 13,986 head of cattle, and carried through 126,846 milch cows. Of the cattle, about two-thirds were used for home consumption. The number of milch cows has been increased since the advent of spring, and indications point to a profitable dairying season and a large output of butter.

Just about one-half as many extra male farm hands will be required to garner this season's harvest as last year, the reason being that farmers are profiting by the experience of other years, and have engaged help before it is really required; 5,158 extra men will satisfy the demand. Already 11,744 are employed. Female help is still greatly in demand; all together, it is estimated that 3,960 could be employed, and 3,153 are now wanted.

Crops never looked better at this season of the year than now. Reports from correspondents in all sections of the Province are to the effect that grains were sown under favorable conditions, and the weather since has been all that could be desired. From the time that farmers commenced spring work the seeding weather has prevailed. It was warm, but not too hot for work by men and teams. The result has been a perfect seed-bed and work well done. The rains that commenced in the second week of May were general all over the Province, and reports of correspondents on crop prospects on July 1st are repeated many times in the brief expressions "never better."

Hillhurst Shorthorns for Exhibition.

Anticipating that some of the purchasers at the coming Hillhurst Dispersion Sale would be anxious to exhibit at the Dominion Industrial Exposition, Mr. Cochrane wires us to say that he will enter all his show animals in their respective classes. Interested parties will appreciate the foresight of Mr. Cochrane, and doubtless there will be several buyers at the sale who will avail themselves of the opportunity of strengthening their herds for the test at the Industrial.

MARKETS.

The Toronto Cattle Market.

Under the generalship of Commissioner R. J. Fleming, recently placed in charge by the City Council, Toronto has entered the lists to fight for its cattle market franchise, as against the new Union Stock-yards Company at Toronto Junction. He has been granted \$30,000 to make necessary improvements and to meet the efforts being held out to dealers by the new competitor. Mr. Fleming now proposes that the Board of Control throw off the market fees, and provide the stockmen with feed at cost.

The Globe says: "Commissioner Fleming does not pretend that the cattle market is a great revenue-producer, but he knows that a private corporation would give several hundred thousand dollars for the franchise; he knows that the cattlemen would rather deal in a public than a private market; he knows that it is a considerable advantage to Toronto to have the cattle trade of Ontario centered here; he knows that a few years ago Montreal made a great effort to secure the market, and he is out now to hold it for Toronto. Mayor Urquhart is with him, and we believe the herdsmen are with him too. During the past four weeks he has given much time to the problem. The citizens and council have confidence in his judgment, and should be prepared to back him up."



THE LATE T. C. DOUGLAS.

Montreal Markets.

Montreal, July 27.—Prime heaves, 4½c. to 5c.; medium cattle, 3½c. to 4½c.; common stock, 2c. to 3½c. Calves, \$2 to \$10 each, or 3c. to 5c. per lb. Sheep, 3c. to 3½c. per lb., and lambs at \$2.50 to about \$4 each, or about 4½c. per lb. Good lots of fat hogs sold at from 5½c. to 6c. per lb.

Chicago Markets.

Chicago, July 27.—Cattle—Poor to medium steers, \$4 to \$4.15; stockers and feeders, \$2.50 to \$4.35; cows, \$1.50 to \$4.50; heifers, \$2.25 to \$4.75; canners, \$1.50 to \$2.75; bulls, \$2.50 to \$4.25; calves, \$3 to \$6.30. Hogs.—Mixed and butchers', \$5.30 to \$5.60; good to choice heavy, \$5.40 to \$5.55; rough heavy, \$5.15 to \$5.45; light, \$5.30 to \$5.70; bulk of sales, \$5.45 to \$5.55. Sheep.—Good to choice wethers, \$3.60 to \$3.90; fair to choice mixed, \$3 to \$3.60; native lambs, \$3.25 to \$6.25.

British Markets.

Liverpool, July 27.—(Special)—Canadian cattle are unchanged at from 11½c. to 11¾c. per lb. (dressed weight); American, 11½c. to 12½c., and 12½c. for "tops"; refrigerated, 9½c. to 9¾c. per lb.; sheep, 11½c. to 12½c. per lb. (dressed weight).

Toronto Markets.

Receipts of live stock at the Western Cattle Market have been light—about 300 carloads for the week ending July 25th, with only 3,000 hogs. Thick, fat hogs are culled closely at a reduction from the advanced prices.

Export Cattle.—Best export cattle sold at from \$5.00 to \$5.15. Medium to good sold at from \$4.75 to \$4.90. Owing to cable reports being unfavorable, export cattle declined from 10c. to 15c. per cwt., and as exporters have been losing money for the last month, they are not disposed to take any chances of losing more at present.

Mr. E. Snell purchased ten loads of cattle, 1,400 lbs., at from \$4.50 to \$5.00 per cwt.

Butchers' Cattle.—Butchers' cattle lower, dull and slow of sale. Choice picked lots of best butchers', weighing from 1,000 to 1,100 lbs., are quoted at \$4.65 per cwt.; medium quality sold at from \$4.40 to \$4.50 per cwt.; rough inferior sold at from \$2.65 to \$3.25.

Bulls.—Choice quality of export bulls sold at \$4.00 to \$4.25; good to medium sold at from \$3.60 to \$3.80.

Feeders.—Short-keep feeders, weighing 1,100 to 1,200 lbs., are worth \$1.25 to \$4.50 per cwt.; steers of good quality, 800 to 900 lbs., are worth \$3.50 to \$4.00. One carload of best quality feeders sold at \$4.25.

Stockers.—Not many on offer. One-year-old stockers are worth \$3.50 to \$4.00; mixed colors, 400 to 700 lbs., sell for \$2.50 to \$3.00 per cwt.

Milch Cows.—The demand for cows is good. About twenty on offer, at from \$30 to \$55 per head.

Calves.—The demand for calves good. All choice stock on offer sold at firmer prices, at from \$4.00 to \$5.50 per cwt., or from \$2.00 to \$10.00 per head, according to size and quality.

Sheep.—The heavy run of sheep made prices a trifle easier. Export ewes sold at \$3.65 to \$3.75 per cwt.; bucks sold at from \$2.75 to \$3.00 per cwt.

Lambs.—Deliveries good and prices remained steady at \$2.50 to \$4.00 per head, or at from \$4.50 to \$5.50 per cwt.

Hogs.—The run of hogs was large, farmers coming on with a rush after a long hold-off. The consequence is that there are too many fat and heavy. Best selected bacon hogs, singers, not above 200 lbs., not less than 160 lbs., live weight, off cars, not fed or watered, sold at \$5.00; light and thick fat at \$4.60; sows, \$4.00 to \$4.25 per cwt.; stags, \$2.00 to \$3.00 per cwt. The last of the farmers' packing houses closed its doors last week.

Dressed Hogs.—Prices firm at from \$7.25 to \$8.00 per cwt.

Dressed Meats.—Beef, fore quarters, per cwt., \$5.50; beef, hind quarters, per cwt., \$9.00; mutton, per cwt., \$7.50; spring lamb, each, \$4.50; spring lamb, dressed, per cwt., \$10.50; veal, carcass, per cwt., \$8.50.

PRODUCE MARKET.

Board of Trade reports: Manitoba first patents flour, \$4.10 to \$4.20; Manitoba second patents, \$3.80 to \$4.00.

Wheat.—Red and white are worth 75c., middle freights; goose, 66c.; Manitoba No. 1 hard, 93½c.; No. 1 northern, 92½c. In Toronto, 100 bushels of red wheat sold at 77c. per bushel.

Barley.—No. 3 extra for export, 44c. to 45c., and No. 3 at 42c. In Toronto, barley sold at 44½c.

Oats are quoted at 32c., north, and 34½c., Toronto. In Toronto, oats sold at from 37c. to 38c.

Bran.—City mills sell bran at from \$16.00 to \$17.00, and shorts at \$18.00 per ton, car lots, f. o. b. Toronto.

Hay.—Thirty loads sold at from \$12.00 to \$14.00 per ton. New hay sells at from \$7.50 to \$9.00 per ton. Straw.—Sheaf, \$8.00 per ton.

Potatoes.—Offerings of new are fair, and prices steady. Loads are quoted at from 60c. to 65c. per bushel; from farmers' wagons, 75c. for single bushel.

Butter.—Receipts are large, and prices unchanged. Choice rolls, 15c. to 16c.; dairy tubs, 14½c. to 15c.; creamery prints, 17½c. to 19c. per lb.

Eggs.—Market unchanged, 14c. to 14½c. per dozen from farmers' wagons; new-laid, 18c. to 20c. per dozen.

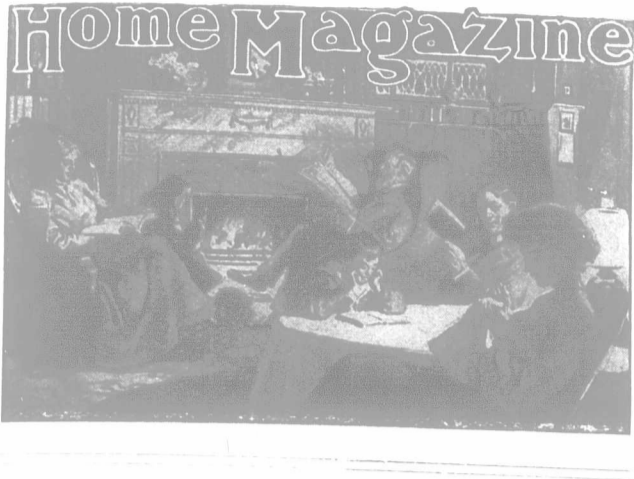
Cheese.—Market quiet, and prices downward. Finest is quoted at 10c. per lb. at Brockville, Kingston and Tweed. The prices range from 9c. to 9½c.; salesmen looking for 9½c. per lb.

The local fruit market is good. Deliveries by boat and rail combine to make business better. Berries are offered freely. Raspberries are worth 7c. to 7½c. per basket; blackberries are quoted at 6c.; cherries, \$1.00 to \$1.25 per basket; blueberries, \$1.00; cucumbers, 60c.

Hides and Wool.—Hides, No. 1, inspected, per lb., 8½c.; hides, No. 2, inspected, per lb., 7½c.; calfskins, selected, per lb., 9c.; lambskins, 35c.; pelts, 30c.; wool, per lb., 16c.

MARKET NOTES.

The Toronto Junction Union Stock-yards commenced business in real earnest Tuesday, July 28th, and if reports prove true, more than half the present commission men intend going out from the Western Cattle Market. It need hardly be said that the city authorities are not losing any sleep on account of these threats, because, while the Junction Yards are offering big inducements, farmers and drovers will still continue to do trading at the old stand, where the charges are known and facilities are the best.



Wherever you stay or wherever you roam,
In the day while you live in clover,
You should gather your honey and bring it home,
Because the winter will surely come,
When the summer life is over."

Lashed to the Topmast.

Stranger to Canada, I think you said? First visit to Ontario? Well, you're heartily welcome to Indian Creek. Take a chair on the piazza till dinner's ready—we dine early in these New World parts.

Fine farm? Well, yes; Indian Creek is a nice place, if I do own it. All, as far as you can see—grass-land, corn-fields, woods and creeks—all belong to it. Stock, too—they call it the best-stocked farm in Ontario, I believe, and I dare say they're right. All mine, and yet I came to Canada twelve years ago, without even the traditional half-crown in my trousers' pocket. You look surprised. Would you like to hear the story? There's a good half-hour to dinner-time yet, and it's a story I never tire of telling, somehow.

I began life as the son of a village carpenter in the south of England. You know that class pretty well, I dare say, and what a gulf was fixed between me and the vicar of the parish. And yet—and yet—from the time she was seven years old and I eleven, and she fell down in the dusty road outside the carpenter shop, and cried, and I picked her up and smoothed the little crumpled pinafore, and kissed the dust out of her golden curls, I loved but one girl in the world, and that was the vicar's daughter, Winny Branscome.

Madness, you say. Well, perhaps so, and yet a man is but a man, and a woman a woman; and love comes, whatever one may do. There's no class distinction recognized by childhood, and we were playmates and friends till she went to boarding school. If Miss Winny had had a mother, no doubt things would have been very different; but we were alike in never having known a mother's care, and the old vicar was blind to everything but his theological treatise.

But when she came back from London boarding school, a beautiful young lady, all smiles and laces and little lovely ways—then I knew. I had tried my best to study and work and make myself more like the men she would meet, but what can a lad in an English village do? I just had enough education to make every other lad in the place hate me, and beside the men of her world I suppose I cut rather an astonishing figure. Yet the love of her was so beyond all else in me, that mad, hopeless as I felt it, I had no power over myself, and the first time I caught her alone in the woods—she avoided me, I saw, and I had to wait for a chance—I told her the whole story, and waited for her answer. She grew scarlet—a rush of color that dyed her fair sweet face—then deathly white.

"Dick," she said, and she was trembling from head to foot. "You know it can never, never be. You know you are wrong even to dream of such a thing. Some girls would think it an insult. I know you better. But if my father heard of this he would say you had abused his kindness to you. He would never forgive you. Forget your madness." And she ran from me.

I let her go. I had seen the blush and the tremor, and I guessed that if I had been Mr. Loftus, the young squire, instead of Dick Hawtry, the carpenter's son, her answer might have been different. A great resolve sprang up in my soul, and I took a solemn vow in those June woods. That very night I sold the old shop (my father was dead, and I had taken to the business), and with the money I bought an outfit, and started straight for Canada. It was pretty rough work at first, but I worked like a galley slave—starved and pinched and saved, and never spent a penny on myself, except for the books I sat up half the night to read and study. Well, in this country the man who works and doesn't drink is sure to get on, and I had a mighty purpose in my head. By-and-bye, I bought some land dirt cheap, and sold it for three times what I gave for it. Then I began to make money fast, I should call my luck wonderful if I believed in luck and didn't prefer to think I was helped by a power far above than my own. At last, ten years to the very day after I had set foot on Canadian soil, I bought Indian Creek Farm, and began to build this house. All the neighbors thought my good fortune had turned my brain, for I fitted it up and furnished it for a lady, down to the little rocking-chair by my study table and a workbasket with a tiny gold thimble in it. And

when all that was finished, I took the first ship for Liverpool.

Ten years builds a city over here. It doesn't make much change in a Devonshire village. The gates were still half off their hinges, as I left them, only the people were a little older and a trifle more stupid, and there was a new vicar. Old Mr. Branscome had been dead six months. Died very poor, they told me. There was nothing left for Miss Winny. My heart gave one great leap when I heard that. And Miss Winny? Oh, she had gone governessing with some people who were just off to Canada, and the ship sailed to-morrow from Liverpool.

The Liverpool express never seemed to crawl so slowly before. I got there to find every berth taken on board the Antarctic, and the captain raging at the non-appearance of two of the crew. Without a second's pause I offered for one of the vacant places. I was strong as a horse, and active enough, and though the captain eyed me rather askance—I had been to a fashionable tailor on my way through London—he was too glad to get me to ask any questions. So I sailed on the ship with my girl, little as she knew it. I saw her the first day or two, looking so pale and thin that she was like the ghost of her old self, and yet sweeter to my eyes than ever before. The children she had charge of were troublesome little creatures, who worried and badgered her till I longed to cuff them well. But there was a gentleness and a patience about her quite new to my idea of Miss Winny, and I loved her the more for it. After the second day out, the wind freshened, and I saw no more of her.

We had an awful passage. It was late in November, an early winter, and the cold was intense. It blew one continuous gale, and some of our machinery was broken, the screw damaged, and we could not keep our course. As we drew near this side of the Atlantic, we got more and more out of our bearings, and at last the fogs told us we were somewhere off the banks of Newfoundland, but where, no one was quite sure. It seemed to me it had all happened before, or I had read it or dreamed it. At all events, it was hardly a surprise to me, when on the tenth night, just after midnight, the awful crash and shock took place—a sensation which no one who has not felt it can imagine in the least—and we knew that the Antarctic had struck.

It's a fearful thing, if you come to think of it—a great steamer filled with living souls in the full flow of life and health, and in one moment the call coming to each of them to die. Before you could have struck a match the whole ship was in a panic—cries, terror, confusion, agony. O, it was awful! I trust never to see such a scene again. I made my way through it all as if I had neither eyes nor ears, and got to the stateroom I had long ago found out belonged to my girl. I knocked at the door with a heavy hand. Even at that awful moment a thrill ran through me at the thought of standing face to face with her again.

"Winny!" I cried, "come out! Make haste! There is not a moment to lose!"

The door opened as I spoke, and she stood just within, ready dressed, even to her little black hat. The cabin light had been left burning, by the doctor's orders, and it fell full on me as I stood there in my sailor's jersey and cap. I wondered if she should know me. I forgot the danger we were in, forgot that death was waiting close at hand, forgot that the world held anyone but just her and me.

"Dick!" she cried, "oh, Dick, Dick!" and she fell forward in a dead faint on my shoulder.

All my senses came back then, and I threw her over my arm and ran for the deck. A great fur-lined cloak had been dropped by the door of the ladies' cabin. There was no light now, but I stumbled over it as I ran. I snatched it up and carried it with me.

Up above, all was in the wildest chaos; the boats overfilled and pushing off, the ship settling rapidly people shouting, crying, swearing. One hears tales of calmness and courage often enough at such times, which makes one's heart glow as one reads them, but there was not much heroism shown in the wreck of the Antarctic. The captain behaved splendidly, and so did some of the passengers, but the majority of them and the crew were mad with terror, and lost their heads altogether.

I saw there was not a chance for the overcrowded boats in that sea, and I sprang for the rigging. I was not a second too soon. A score of others followed my example, and with my precious burden I should not have had a chance two minutes later. As it was, I scrambled to the topmast, and got a firm hold there. Winny was just coming to herself. I had wrapped her round like a baby in the fur cloak, and with my teeth I opened my knife to cut a rope which hung loose within reach. With this I lashed her to me, and fastened us both to the topmast. The ship sank gradually. She did not keel over, or I should not be telling you this story now. She settled down, just her deck above water, but the great seas washed over it every second and swept it clean. The boats had gone!

One or two of the crew, floating on loose spars, were picked up afterwards—no more. The rigging was pretty full, at least in the upper part; down below, the sea was too strong. The captain was near me. I felt glad to think he had been saved. He was no coward, like some of the others.

How long was the longest night you ever knew? Multiply that by a thousand, and you will have some idea of that night's length. The cold was awful: the

spray froze on the sheets as it fell. The yards were slippery with ice. I stamped on Winny's feet to keep them from freezing. Did you notice that I limp a little? I shall walk lame as long as I live. Sometimes there was a splash in the black water below, as some poor fellow's stiffened body relaxed and he fell from his place in the rigging. There was not a breath of wind—nothing but the bitter bitter fog.

How long could we hold out? Where were we? How long would the ship be before she broke up? Would it be by drowning or by freezing? We asked ourselves these questions again and again, but there was no answer. Death stared us in the face. We seemed to live ages of agony in every minute; and yet, will you believe me, all that seemed little in comparison to the thought that, after all the struggles and the sorrows, after all those ten weary years, I held my girl in my arms at last!

She had pulled one corner of the cloak around my neck (I stood on a level just below her), and her hand lay there with it—it was the hand that warmed me more than the cloak—and her cheek rested against my own. Often I thought its coldness was the coldness of death, and almost exulted in the thought that we should die together. And then I would catch the murmur of the prayers she was uttering for us both, and knew that life was there still, and hope lived, too.

Well, well! Why should I dwell on such horrors, except to thank the Mercy that brought us through them all? Day dawned at last, and there was the shore near by, and soon rockets were fired and ropes secured, and one by one the half-dead living were drawn from their awful suspension between sky and sea, and landed safe on shore. They had to take Winny and me together, just as we were, and even then they had hard work to undo the clasp of my stiffened arms about her. I knew nothing then, nor for long after, and it is wonderful that Winny was the first to recover, and that it was she who nursed me back to life and reason.

And how did I ask her to marry me? Upon my word, now you ask, I can't remember that I ever did. That seemed utterly unnecessary, somehow. (Caste distinctions look small enough when you have been staring death in the face for a few hours, and words were not much needed after we had been together in the rigging that night. Somehow I was glad it was so; glad my girl had taken me, in my cap and jersey, for a common sailor, and yet loved the old Dick through it all; glad she never dreamed I was owner of Indian Creek Farm, and the richest man in this end of Ontario, and had wealth and position higher than Mr. Loftus, the young squire at home. The people she was with had all gone down on that awful night. She had no one in the world but me. We were married at Montreal—the captain of the Antarctic gave her away—and then I brought her home to Indian Creek. To see her face when she saw the rocking-chair, and the workbasket, and the thimble. Heaven bless her!

There she comes, with her baby on her shoulder. Come in to dinner, friend, and you shall see the sweetest wife in the new country or the old—the girl I won amid the ocean's surges.

Domestic Economy.

Try using a little borax in the water in which white clothes are to be washed, and you will be delighted with the clear, sparkling color thus produced.

Frosting can be whitened with lemon juice. Cranberry will color it pink, and grated rind of an orange, strained through a cloth, will color it yellow.

When sour milk is to be used in cooking, a few vigorous whisks with the egg-beater in the bowl or pitcher will mix the curd and whey so thoroughly that it can be poured as easily as cream, and will obviate the unpleasantness of finding the cakes or muffins interspersed with particles of curd. Soda used with sour milk should not be put into milk, but be sifted into the flour like baking-powder.

Custard pies or puddings will require only half the usual time for baking if the milk is scalded before being stirred into the beaten eggs and sugar. Custard puddings and cup custards may be steamed instead of baked, if the oven is not in the right condition.

To keep the yolk of an egg fresh, when only the white is to be used: Make a hole in the shell large enough for the white only to run out, then stand the egg in an egg-cup, and keep it in a cool place. The yolk will stay in color, and be good for two or three days.

A pail of water standing in a room that has been newly-painted will quickly absorb the disagreeable odor of the paint.

When knife-blades come out of their handles, they may be easily mended by filling the hole in the handle with powdered resin, and replacing the blade after making its shaft red-hot in the fire. When cold, the blade will be found to be firmly fixed.

THE QUIET HOUR

Hold the Train.

"Madam, we miss the train at B—"
 "But can't you make it, sir?" she gasped
 "Impossible, it leaves at three,
 And we are there a quarter past."
 "Is there no way? Oh, tell me then,
 Are you a Christian?" "I am not."
 "And are there none among the men
 Who run the train?" "No—I forgot—
 I think the fellow over here,
 Oiling the engine, claims to be."
 She threw upon the engineer
 A fair face, white with agony.
 "Are you a Christian?" "Yes, I am."
 "Then, O sir, won't you pray with me,
 All the long way, that God will stay,
 That God will hold the train at B—"
 "I will do no good; it's due at three,
 And ——" "Yes, but God can hold the train:
 My dying child is calling me,
 And I must see her face again.
 Oh, won't you pray?" "I will," a nod
 Emphatic, as he takes his place.
 When Christians grasp the hand of God
 They grasp the power that rules the rod
 Out from the station swept the train,
 On time, it swept past wood and lea,
 The engineer, with cheeks aflame,
 Prayed, "O, Lord, hold the train at B—"
 Then lung the throttle wide, and like
 Some giant monster of the plain,
 With panting side and mighty strides,
 Past hill and valley swept the train
 A half, a minute, two are gained,
 Along those burnished lines of steel
 His glances leap, each nerve is strained,
 And still he prays with fervent zeal.
 Heart, hand and brain, with one accord,
 Work while his prayer ascends to heaven—
 Just hold the train eight minutes, Lord,
 And I'll make up the other seven."
 With rush and roar, through meadow lands,
 Past cottage home and green hillsides,
 The panting thing obeys his hands,
 And speeds along with giant strides.
 They say an accident delayed
 The train a little while, but He
 Who listened while His children prayed,
 In answer, held the train at B—
 —Presbyterian Review.

When Two Agree.

"The Christian Herald" has lately published a great many answers to prayer, many of which may be explained by the world as simply coincidences—like the incident described above. This question of whether God answers prayer or not is a very important one. If He does not answer the earnest, believing prayers of His faithful children, then the Bible must be untrue from cover to cover. If He does answer them, why do people so often struggle on alone, without the help they might have for the asking? No one who calls himself a Christian would like to say or think that prayer is of little use in the everyday difficulties of life, but we have all found that it is not a magical charm like Aladdin's lamp. If we have any practical experience of prayer, we must know that all the things we ask for are not showered down on us immediately. If we are honest, we must confess this to be a fact. Shall we then say, like those who deny God's watchful care over us, that prayer is of no use? It would indeed be a terrible thing if all the prayers which are uttered day by day, by weary, troubled souls, were wasted; if no one listened to them, and no one cared about them. But I fancy it would be even more disastrous if we could get everything we wanted, without effort and without delay, simply by asking for it. The whole human race would be spoiled by such unwise treatment. The virtues of courage, endurance, patience and unselfishness would vanish at once, for they could not live in such a hothouse climate. If men are to grow into the likeness of the perfect Man, they must, like Him, learn to suffer and endure, and no one can learn patience and endurance without practice. Prayer is an absolute necessity to a soul that hungers and thirsts after righteousness. If God does not at once give what we ask for, let us pray on, pray for the earthly gift if we still desire it, but also set ourselves to win the higher gift of loyal submission to His will. Very soon we may thank Him for not sending the release from pain and sorrow we had asked for. Like our Master in Gethsemane, we have been strengthened to endure instead of escaping trial, then our prayers have been grandly answered even when they seemed to be refused.

But I did not intend to write to-day about God's way of answering many prayers for earthly gifts by giving higher, spiritual gifts. My

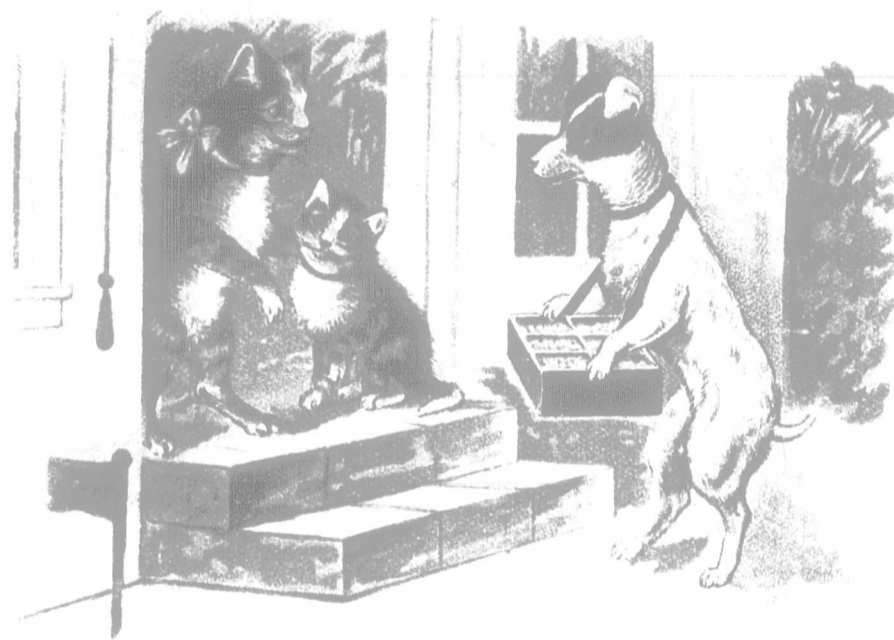
pencil ran away from me as usual. Our Lord says: "If two of you shall agree on earth as touching anything they shall ask, it shall be done for them of my Father which is in heaven." The poem given above describes such united prayer, but why is this agreement so rare? Why were the disciples sent out "by two and two?" From the very beginning God has declared that it is not good for a man to be alone, and Solomon showed his wisdom when he said, "Two are better than one; because they have a good reward for their labor. For if they fall, the one will lift up his fellow; but woe to him that is alone when he falleth; for he hath not another to help him up.....and if one prevail against him, two shall withstand him; and a threefold cord is not quickly broken." When two agree in prayer it makes a threefold cord, for where two or three meet in the name of Jesus, "He makes, unseen, a third." Try this plan and see if it is not satisfactory, remembering always that God answers prayers for our real and lasting good, not only to give us a momentary gratification.

"Then first we conquer, when we bow
 To Thine Almighty will,
 And each desire resigned to Thee
 Thou lovest to fulfil.
 For only into yielded hearts
 Thy blessing Thou canst pour
 And empty vessels are the ones
 Thou fillest evermore."

HOPE.

THE CHILDREN'S CORNER.

What Will You Buy?



"What will you buy to-day, my friend?
 Just see my stock-in-trade.
 I've all the things that kittens love,
 Yes, everything that's made.
 Here is some 'Corticelli' silk,
 With which all kittens play—
 I've seen them in the magazines."
 Said pleasant old dog Tray,
 "I've marbles, tops and colored balls,
 A mouse that runs about—
 It's got machinery inside,
 Which makes it look so stout—
 I've tiny cats that say 'meow,'
 And dogs that jump and bark
 If you but squeeze a rubber ball;
 And look at this fine lark!
 You wind it up, and set it free—
 How swiftly it can fly—
 It flaps its wings like real birds
 That soar up to the sky.
 What will you choose, dear Mrs. Puss,
 To please that fine young cat?
 I've ribbons, lace and candy, too,
 And even a white rat."
 Kind Mrs. Puss exclaims, "Come in!"
 And buys up everything.
 Then Tray goes home so light of heart
 That he could laugh and sing.

COUSIN DOROTHY

In Grumbling Lane.

"How are you getting along with your Latin, Herbert?" asked Mr. Burton at the dinner-table.
 "Oh, tolerably, father," said Herbert, with a half-sow, which was becoming very familiar.
 "I don't like Latin much myself. I wish I was in some other class."
 "Will you have some more potatoes, Herbert?" asked his mother.
 "Well—I don't think I want any, this isn't a

very good way of cooking potatoes. We used to have them a great deal nicer."

"Can you spare a quarter of an hour after dinner to help me with my sums, Herbert?" asked his sister.

"Oh, I suppose so. I did want to speak to Jack Lee about that book of mine he borrowed and hasn't returned. I wish folks wouldn't borrow; but if they will borrow, I wish they'd return things. What sort of sums are you doing?"

"Least common multiple."
 "That's easy enough, I'm sure. I'm afraid you're not very bright at arithmetic, Lill? But of course I'll show you. Seems to me this steak is tough."

"While you are helping your sister with her sums, Herbert," said his mother, "I'll put a stitch into that necktie if you'll hand it to me. Something about it seems to be wrong."

"It's a miserable fitting thing, scarcely worth mending. I wore it last night, and it bothered me all the evening."

"By the way, did you have a pleasant time last night?"

"Oh, rather. But I expected to hear something finer. I could have done almost as well myself."

Herbert's father folded up the newspaper he had been reading, laid it beside his plate, and, turning towards his boy, gazed at him so fixedly and so critically that Herbert, becoming frightened, exclaimed with concern, "What ever is the matter, father?"

"Well, Herbert," said his father, "I really am afraid that life is becoming a most burdensome, unhappy thing to you. Of the half-dozen matters which have been spoken of within the last fifteen minutes, every one has been met by you with either a direct or indirect complaint or fault-finding."

"Oh, you are mistaken, father," said Herbert, with rising color. "Life is not in any way a burden to me. I really don't mean to keep up a scowl and a growl about things. I don't think of it."

"Then," replied his father seriously, "isn't it time you were thinking, not only of your own happiness, but that of others? Do you ever reflect how a spirit of fault-finding casts a shadow upon those who are entitled to something better than shadows from you—how a complaining voice and a scowling face take away all the sweetness and beauty from the hours which should be highly prized—hours in which we who love each other are together?"

"Indeed, father, I never looked at it in that way before. But I will—from this very moment."

There are many boys in the homes all over the world. Wouldn't they do well also to keep out of Grumbling Lane? SYDNEY DAYRE.

Sir Dan de Lion.

Sir Dan de Lion rode forth one day,
 With his Hore-hound at his heels,
 His mettlesome Colt's foot pawed the turf,
 And the Blue-bells rang glad peals.

And many a lady fair rode too
 Her Sorrel that beautiful day,
 There was Pimper-Nel and little Prim-Rose,
 And Violet, and Whin, and May.

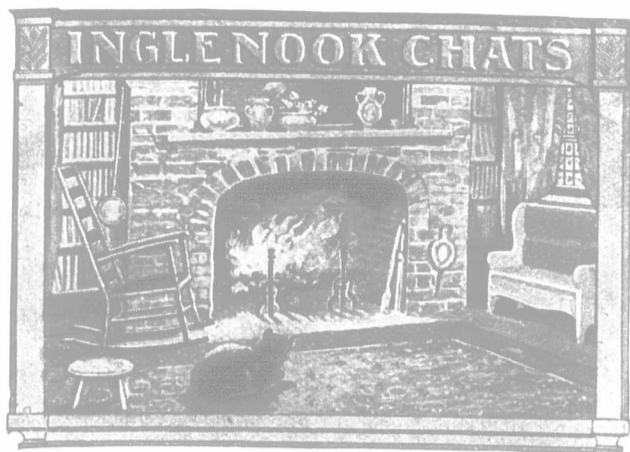
A Man drake told them the Mountain thyme,
 So they ate Bread and cheese on the spot;
 And Creeping-Jenny came up and cried,
 "I pray you Forget-me-not."

They saw the Bull-rush down to the lake,
 And they saw the Cow-slip up;
 And they sat on Toadstools and drank bright Mead
 From a Golden Butter-cup.

They heard the Crows and donned their Furze,
 In the besky Asphodel

And they all rode home to their flower beds
 As the choicely Night shade fell

—Henry Eldon



Dear Friends,—With to-day's issue we have the privilege of announcing the names of the prizewinners in the last competition, "Why I am proud to be a farmer." The subject has proved to be a popular one, even beyond our most sanguine expectations, and we have been delighted, not only with the number of essays received, but with their quality. Common-sense, up-to-date-ness, enthusiasm, love of nature, have been characteristics by no means lacking to the great majority. On the other hand, careful writing, spelling and punctuation have been universal. In fact, there was not a badly-written letter in the whole collection. Best of all, in reading the essays, one could not but be impressed with the fact that by far the greater number of competitors had written, not only for the sake of the prize, but because the competition afforded an opportunity for giving expression to opinions which had proved helpful to the competitors themselves, and so had become worthy of being "passed along." In short, it was quite evident that nearly all the competitors entered the competition in the spirit of public benefactors. We thank them, one and all.

However, in every competition there must be a "best," and this time the award in Class I. goes to Leman A. Guild, Kingston, Ont., whose most excellent article appears in this number. A special award in Class I. is given to F. W. Porter, Thamesville, Ont. Mr. Porter's delightful poem will be published in the issue of August 15th. In Class II. the prize was won by A. T. VanNest, Solina, Ont. Mr. VanNest's essay is certainly a credit to himself, and one of which the whole army of "Advocate" boys may be proud.

Very especially worthy of mention, although not prizewinners, are: J. Wenham, Sunny Brae, A. K. Kenyon, K. C. McDiarmid, A Farmer's Wife, Bettina, Maud Jose. Others who did well are: Highland Willow, M. Ebercouser, J. G., Mrs. Buchanan, Clover, R. Lyons, F. G. O., Ethel Jose, A. McDiarmid, Winnie Learn.

The subject for the next competition is: "What we have done to beautify our home surroundings." This, of course, refers to the "outside" part of the home, porches, lawns, flower-gardens, etc. Beauty, practicability, economy, will be the points chiefly looked to. Four prizes will be given: Class I., married people; II., unmarried people over 18 years of age; III., boys and girls between 14 and 18; IV., boys and girls under 14.

In writing be sure to state to which class you belong, otherwise your essay cannot stand so good a chance of being considered. All essays must be in by September 5th.

Trusting, then, to receive a goodly number of letters upon this most useful and interesting topic, I am still,
Your friend,
DAVE DURDEN.

FIRST-PRIZE ESSAY.

Why I am Proud to Be a Farmer.

"Why am I proud to be a farmer?" The reasons are so numerous that it would require much space to set them all down; they are so conclusive that they prove, beyond doubt, that to be a farmer is something to be justly proud of. Many a boy, grown discontented on the farm, seeks the attractions and activities of the city. Thousands of them would have been better off had they remained on the homestead. Let me tell you why, and in doing so I shall have answered, in my imperfect and cursory way, the question which our esteemed hostess, Dame Durden, has propounded.

1. Farming is an independent life. Come bad times or good, the man who tills the soil is always sure of three square meals a day and a good soft bed to sleep upon at night. He is not the slave of a foreman, an overseer or a boss; He is his own master. Although he works hard, he has the liberty to take a day off when he feels like it, and nobody "docks his pay."

2. It is a pleasant life. There is abundance of hard work on the farm, but so there is in every other legitimate kind of labor. But how glorious to work in the open fields, under the bright, blue sky, where the air is always pure and the kind breezes fan his perspiring brow! 'Tis sweet to look upon the fair and open face of heaven, as the agriculturist is every

day privileged to do. The life of the farmer is fed by the bounty of earth and sweetened by the airs of Heaven. Could it be aught but a pleasant life? It is pleasant to know that, no matter how hard the times may be, his wife and little ones are beyond the reach of hunger. He can draw on his granary or his stock pens, and their hunger is appeased.

3. It is a profitable occupation, and a careful man, if he understands farming, can in a few years make himself independent. All he has to sell to-day commands a good price, and there is no surer road to prosperity to-day than that which follows the farmer's furrow. Mother Earth always amply repays her sons, the men who till the soil.

4. It is invigorating work. There is no other occupation that breeds such strong and sturdy men as farming. The pure air that expands his lungs, the bright sunlight that falls upon his head, the free, open life in the fields, all tend to develop his muscle and his manhood simultaneously. The best and bravest fighters which Canada sent to South Africa were those who came from the farms of the East and the prairies of the West.

5. It is the greatest of all industries, because it is the basic industry. God Almighty first planted a garden. The first farmer was the first man, Emerson tells us, and all historic nobility rests on possession and use of land. Over ninety per cent. of our population are employed in agricultural pursuits. When men forsake the farm for the crowded mart and factory, depression sets in. Only as the great mass of the nation stick to the tilling of the soil can that nation be sure of stability and progress.

6. It is a noble and exalted calling. Holy Writ pays a generous tribute to the tillers of the soil. Ancient kings were not above holding the plow. Farming is the forerunner of all industries and arts; it paves the way to development and the spread of civilization. Daniel Webster once said: "When tillage begins, other arts follow. The farmers, therefore, are the founders of human civilization."

7. The best men have come from the farm. It is there that the boy is provided with a sound, strong constitution that is inestimable to him in after-life, that enables him to outstrip his city cousin in the race of life. He unconsciously draws into his own being some of the wide expansiveness of the fields, some of the calm and quiet dignity of the woods, some of the sanity of the rocks and lofty ruggedness of the hills. Many of the men who stand at the head of our railway, financial and industrial concerns to-day were born on a farm.

8. The farm is the best place to raise a family. Nowhere else can children be so free from contaminating influences. Nowhere else are the little ones so rugged and strong. They are free from the temptations and evil allurements of the city streets. By giving them a plot of ground, a calf or a colt, and allowing them to retain the profits therefrom, the farmer can teach his children a practical lesson in the necessity of work and the value of money. Thus habits of thrift will be formed. The moral and religious tone of the countryside is far above that of the best-regulated city.

9. The farm supplies the tables of the world. Were



A GOOD DAY'S SPORT.

Five maskinonge, 118 pounds; Ste. Anne de Bellevue, P.Q., Grand Trunk Railway System.

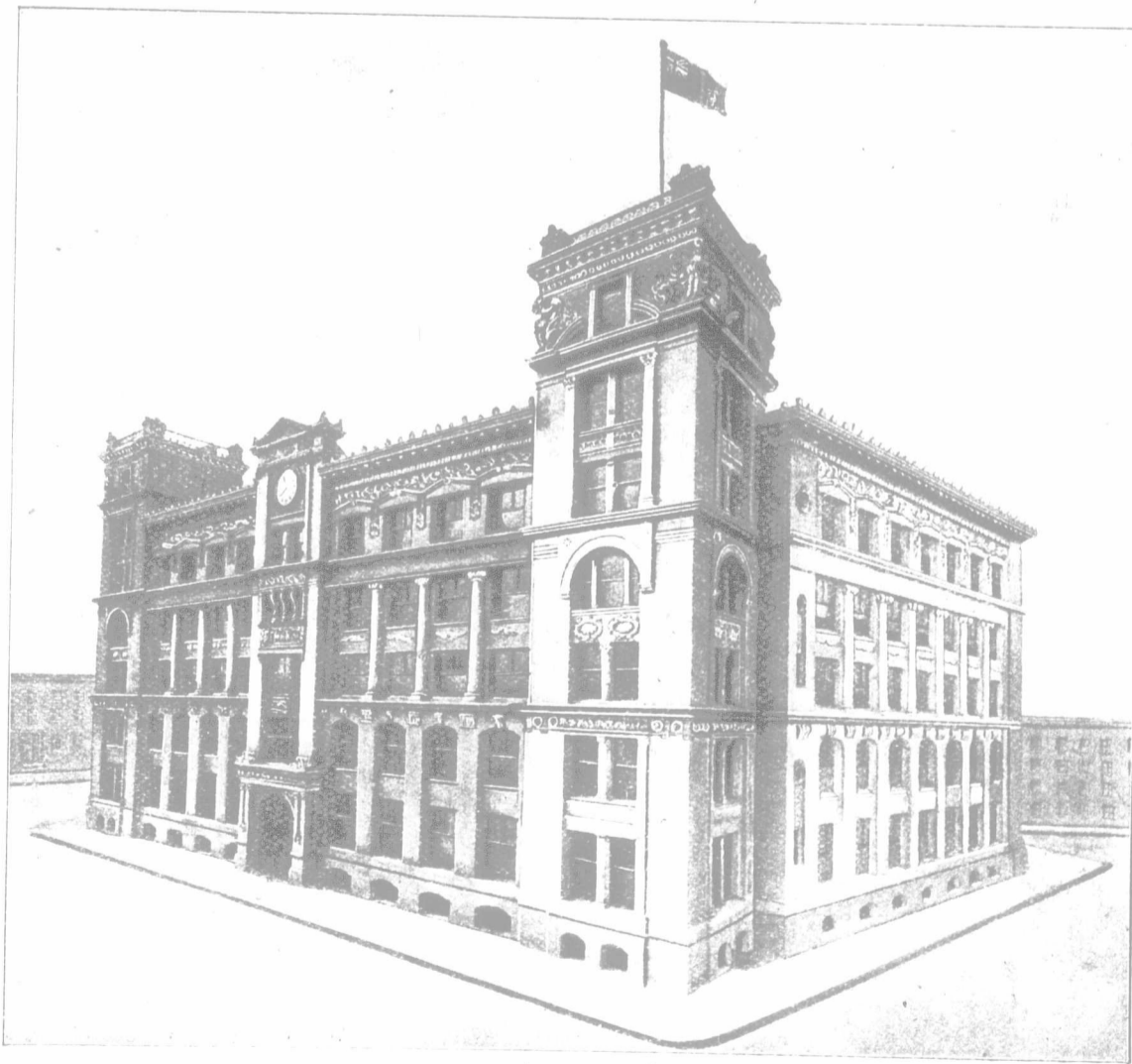
farmers to cease selling their products, the wealthiest as well as the poorest residents of village, town and city would starve. Upon the toil of the farmer depends the sustenance of human life.

These are the primary reasons why I am proud to be a farmer, while many secondary reasons could be advanced. Surely the above are claims no one can gainsay! Proud to be a farmer? Who would not be? Then, here's to the strong, manly, independent, big-fisted and big-hearted Canadian farmer, to his good, industrious, thrifty wife, and to the happy, rosy-cheeked children that sport about his knee in winter or hide his garden tools in summer. May kind Heaven prosper them all!
LEMAN A. GUILD,
Kingston, Ont.

Preserving Children.

The following amusing "recipe for preserving children," written by Miss Mignone Lincoln, aged sixteen, of New Orleans, and which won the prize for the best answer sent to "St. Nicholas" magazine, will be relished by all women, whether mothers or not:

Take one large grassy field, one-half dozen children, all sizes; three small dogs, one long narrow strip of brook, pebbly if possible. Mix the children with the dogs, empty them into the field, stirring continually; sprinkle with field flowers. Pour brook gently over the pebbles. Cover all with a deep blue sky. Bake in a very hot sun. When the children are well browned they may be removed. Will be found right and ready for setting away to cool in the bath-tub.



GENERAL OFFICES, GRAND TRUNK RAILWAY SYSTEM, MONTREAL.

Jottings from the Isles of Scilly.

NO. III.

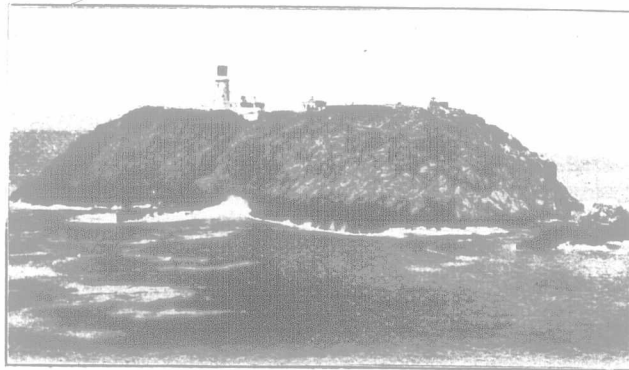
It seems to me almost incredible that I could actually have filled more than two columns of our Home Magazine without one reference to Besant's story of "Armored of Lyonesse," which gives, woven in between the very evident fiction, a great deal of most reliable fact, and many very accurate descriptions. It is some time since I read the book as a whole, but had my old-time longing to revisit Scilly lost any of its intensity. Besant's picturesque setting for his romance would most certainly have revived it.

He tells of Armored and Roland Lee "sailing among the channels and over the shallow ledges of the outer and Western Islands, whither no boat may reach except on the very calmest, quietest day; of their wanderings from island to island, coming upon unexpected places, where they met no one, either visitor or native. They roamed over strange and beautiful beaches of dazzling white sand, finding here a logan (or rocking stone), a barrow, a carn, a cromlech, for Samson is not the only island guarding the tombs of the Great Departed of the past. They crossed the broad sound to St. Agnes, and saw St. Werna's wondrous cave, so seldom visited. They stood on the desolate Gugh, and the lonely Annet, beloved of Puffins. They climbed every one of the Eastern Isles, and even sailed, when they found a day calm enough, amongst the Dogs of Scilly. They clambered up the big boulders of Rosevean, and scared the astonished Cormorants from wild Goreggan. They found a landing place at Mincarlo, with its four peaks and a 'down' in the middle, somewhat in shape like an old-fashioned sofa, and they clambered up its steep and rocky sides." "Everywhere," says Besant, "except where men come and go, the wild sea-birds make their nests; the shags stand on the ledges of the highest rocks in silent rows, gazing upon the waters below; the sea-gulls fly and shriek, the curlews call, the herons sail across the sky, and in spring millions of puffins swim and dive and fly about the rocks, and lay their eggs in the hollow places of these wild and lonely islands." Armored takes Roland Lee through the Outer Islands, which "lie tumbled about in the water west of Bryher and Samson, some close together, some separated by broad channels, where the sea is never calm, for at the foot of the rocks are ledges, some bare at low water, showing angry teeth of black stone, white eddies, broken water and flying spray.....They sailed around Maiden Bower too, where are clusters of granite forts defying the whole strength of the Atlantic, rocks which will want another 100,000 years to grind them down." Armored and Roland, under the skipper'ship of the boy Peter, venture, he being weatherwise and a master of seacraft, and she a sea-maiden to the manner born, amongst the Seal Rocks dark and threatening, even landing on Ilyswillig. Passing by the narrow channel, hardly broad enough to let a boat pass through, the water raced like a foaming torrent, rushing boiling into whirlpools, foaming and tearing at the sides. Here Peter relates that "a ship was once driven by a monster wave into that channel, and went to pieces in ten minutes, held in a vice whilst the water beat her into sticks." Another writer says of this group of the Outer Isles, "Each rises stark from the sea; each has taken its toll of ships and of lives." It has been said that probably not a man exists who has explored all the Isles of Scilly; who has stood upon every hill, and searched every barrow for its hidden treasures. The inhabitants are content with their own islands, going only to Hugh Town for the necessities of life, or to church at St. Mary's, Tresco, or Bryher. "Justinian Tryeth," says Besant, "had been to St. Agnes to get his wife, and to Bryher to marry her, but the rest of that island, though so nigh to Samson, was as unknown to him as Iceland. As to St. Martins, Annet, or great Ganilly, he saw them daily, but he had no desire to visit them. They were a name to him, but nothing more."

I will make no apology for my copious quotations, for without them I could only have told you of these parts of Scilly which I have been able to visit myself. Naturally, I have limitations which were unknown to Armored, who was, of course, blessed with every advantage which youth and environment, to say nothing of those unlimited powers with which the eloquent pen of fiction can endow its heroine. For instance, fancy beautiful, lithe-limbed, glorious-eyed Armored, mounted on a donkey, or being drawn by that patient, long-eared beast in a two-wheeled trap! Well, neither was I, but that was because the donkey had levanted and gone to enjoy the succulent thistle, where even an agile Roland could not have caught him. I wanted that donkey dreadfully to convey me to Bar Point, at the extreme end of St. Mary's, and I am glad to say that I got there in spite of that faithless steed, and was richly rewarded for the extra exertion. Nor, again, could one picture Armored, who could handle the ropes, and, with masterly hand "right-about" her little sailboat as by a magic touch, being thus addressed by a careful

and cautious boatman, but one who had his views about women as passengers in a yacht of limited accommodation: "Now, ma'am, when I says one, two, three!—over you goes, not a second afore, and not a second after," an order which meant ducking not only our heads, but conveying our whole persons bodily over to the opposite seat, whilst the big sail was whisked across to the spot we had just vacated, a bit of drill to which we had before we landed become quite accustomed, so often were we called upon to perform it, as the exigencies of wind and waves demanded it. We did not so much mind the "over you goes" part of the performance, for we could realize under the stress of storm that the "over you goes" would have had a far more disastrous meaning had we disobeyed the mandate, but it was the grumbling asides of the "able boatman" himself, about "not being able to handle a craft in a ticklish sea when women was aboard of her. You can't tell where they be; t'aint like as if t'were clear fore and aft"; and "I've got my 'reputation' to keep up," etc., etc., which had its sting, especially as neither the old lady nor the dear young mother with her sleepy little daughter in her arms, in the least deserved his aspersions. Smart! I should think we were smart, as even crabbed old Molton, the ex-pilot, had grudgingly to admit. We forgave him, for he knew the dangers which beset a light skiff in a squall and we did not, and, anyway, he brought us safe to land. The Scilly boatmen are all very cautious and reliable, so much so that never mind how eager you may be to visit any especial point of interest, they simply refuse to take you if the wind is "agin the landing," or "the tide don't sarve." They know how to charge too, for a boat for the day—i.e., a few hours—is 10s. 6d., besides the lunch at the little inn at Tresco or Bryher; or 5s. just to Tresco and back. Sometimes negotiations are permitted, but as they are managed usually on the plan of the Cornish cabman who had no rival, "I'll leave it to your curiosity, sir," it is seldom to the disadvantage of the owner of the boat.

H. A. B.



ROUND ISLAND, SCILLY.

The Man Who Clipped.

I saw him, take the paper, and
Turn to the Household page,
Then scan the columns up and down,
As one who would all gauge.

"Ala!" he muttered to himself,
"Here's 'How to Make Rice Fritters,'
And 'How to Utilize Cold Beef,'
And 'Home-made Stomach Bitters.'"

Then from his pocket forth he took
A pair of scissors small,
And severed from the printed page
The helpful hints, and all.

He clipped "The Way to Scramble Eggs,"
And "How to Make Peach Butter,"
As well as half a dozen more,
"That's all"—again he muttered.

"A thoughtful man," at once I mused
"A man who cares for things!
Who loves the calm, contented song
The home tea-kettle sings."

"Do you," I asked, "preserve those notes,
So that your wife may eye them?"
"Not much," he growled; "I cut them out
So she won't get to try them."

—[Baltimore American.]

Grease and Oil Stains.

Grease and oil stains in white goods may be removed in the following manner: Dissolve a quarter of a pound of sal-soda in half a pint of boiling water. Spread the fabric on a board, dip an old toothbrush in the soda, and gently rub the stains with it, wetting thoroughly. Let the stains rest ten minutes, then wash them in hot soapsuds, scald them, and rinse carefully.

A Chapter of "Don't" for Parents.

1. Don't forget that you brought your children into the world without their knowledge or consent. You have no right to embitter the life you have thus thrust upon them. I have known parents to make absolute slaves of their children, compelling almost constant attention, under the popular delusion that young limbs are never tired; and, like the old slave-master, giving nothing in return but food and clothes.

2. Don't laugh at and deride your children's hobbies. Remember how much brighter life has seemed to you when you could realize some cherished dream, and treat them accordingly.

3. Don't forget that youth needs amusement. Your children have not only bodies, but minds. Rest for the body and amusement of the mind are demands of nature which too many parents ignore. If you do not provide for your children healthful and sufficient amusement, then thank God for His mercy on you if your children do not take to dangerous or wicked pleasures when they are older.

4. Don't forget that your children are beginning life, while you, perhaps, are ending it. Give them the benefit of your experience, but don't expect that your experience will serve them in place of an experience of their own.

5. Don't be impatient with your children when they doubt your estimate of the world's allurements. Remember it is you who have tested these things, not they. You did not see with your father's eyes, neither should you expect your children to see with your eyes.

6. Don't demand respect of your children, or endeavor to enforce it by your authority. Respect is paid, not to those who demand it, but to those who deserve it.

7. Don't neglect your children's friends. Invite them to your house. Show your children that their friends are your friends, and your children's friends will be such as you will approve.

8. Don't be jealous of your children's friends. If you make your society delightful to your children, they will always prefer you to any other companion. If your child prefers every one else to you, stop and ponder whether you have not compelled him to seek elsewhere the companionship, love and sympathy he ought to have found in you.

9. Don't be afraid to let your children see your love for them. Let a child feel that no matter where he goes or what he does, no matter whether friends forsake or foes slander him, his parents' love and trust will always follow him, and that child is not only safe for all time, but the thought of this love will shine out like a lamp in a dark place, cheering and strengthening him against all odds.

Some Things a Girl Should Know.

Some one has suggested fifteen things that every girl can learn before she is fifteen.

Not every one can learn to play or sing or paint well enough to give pleasure to her friends, but the following "accomplishments" are within everybody's reach:

1. Shut the door, and shut it softly.
 2. Keep your own room in tasteful order.
 3. Have an hour for rising, and rise.
 4. Learn to make bread as well as cake.
 5. Never let a button stay off twenty-four hours.
 6. Always know where your things are.
 7. Never let a day pass without doing something to make somebody comfortable.
 8. Never come to breakfast without a collar.
 9. Never go about with your shoes unbuttoned.
 10. Speak clearly enough for everybody to understand.
 11. Never fidget or hum so as to disturb others.
 12. Never help yourself at the table before you pass the plate.
 13. Be patient with all the little ones, as you wish your mother to be with you.
 14. Never keep anybody waiting.
 15. Never fuss, or fret, or fidget.
- The girl who has thoroughly learnt all this might almost be called a Mistress of Arts.—[The Children's Friend.]

He Got Useful Articles.

A desire to get something for almost nothing has caused many a one to part with his hard-earned cash, and while there is always one more victim to be caught by the glowing offers of some slick confidence man, the friends of a certain young man will not be numbered among them. The young man in question read an advertisement in a newspaper to this effect:

"Send \$1 and receive by return mail one hundred useful table articles."

He clipped out the ad., placed a dollar bill in the envelope and addressed it as directed. He patiently waited several days for his surprise package of one hundred articles.

In due course of time a neatly wrapped package arrived, which he began to unwrap in a careful manner. After taking off about twenty yards of paper he found in the center his "one hundred useful table articles," a box containing one hundred toothpicks. There were several blue streaks observed in the inner corners of the box, and a shaken confidence in the world.

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- (4) **Courses in Nature Study and Domestic Science**—Sept. 14, '03.
- (5) **Three Weeks' Creamery Course**—Dec. 1st, '03.
- (6) **Three Months' Dairy Course**—Jan. 4, '04.

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CARNEFAC STOCK FOOD

A CANADIAN GOOD TONIC FOR CANADIAN STOCK

USERS HAVE written us hundreds of letters, showing the results under different circumstances. It has proven invaluable for weak and sickly stock of all kinds. Large dairymen recommend it for milch cows and sickly stock. It has been found invaluable by stockmen for fattening calves and cattle. The most prominent veterinarians use it in their practice. We get letters like this day after day:

Dentonia Park Farm, East Toronto, Ont.
 65 Front St. East, Toronto, Ont.
 GENTS.—We have been using "Carnefac Stock Food" in connection with our milch cows, horses and young growing stock. We have given it a good trial, and can fully recommend it to all farmers and stockmen who are looking for a first-class tonic for all classes of stock.
 (Sgd.) J. B. KETCHEN, Supt.

CARNEFAC STOCK FOOD CO.,
 65 FRONT STREET EAST, TORONTO.

GOSSIP.

PACKING HOUSE CLOSES.

In June, 1900, the Paisley Pork-packing Company was incorporated, and carried on business in Paisley, Bruce Co., till this summer, when, owing to lax management and keen competition, it has been obliged to close its doors. The company had an authorized capital of \$15,000, of which \$10,000 was paid up. The stock was largely subscribed for by local farmers.

\$50 to California and Return

Via the Chicago and North-Western Ry. First-class round-trip tickets on sale from Chicago, August 1st to 14th, to San Francisco and Los Angeles, also to Portland, Tacoma and Seattle. Correspondingly low rates from other points. Favorable stop-over privileges. Return limit, October 15th, 1903. Three trains daily from Chicago to California, through without change, with first-class Pullmans and tourist sleeping cars. For special folder and all information, write B. H. Bennett, General Agent, 2 East King St., Toronto, Ont.

TRADE TOPIC.

SPECIAL NOTICE.

Attention is called to the special offer of the Robinson Corset Co., whose advertisement appears on this page. Their unique hose-supporter, valued at 40c., will be given to every new customer upon receipt of the first order.

Ordered Corsets by Mail

FOR THE NEXT 30 DAYS



As a Special Inducement to give our Corsets a trial, we will send FREE with your first order our 40c. Hose Supporter, described on page 14 of catalogue. Write for Free Catalogue which shows how to order exactly what you want. Our guarantee covers everything. Durability, Perfect fit, Finish.

Robinson Corset Co., London, Ont.

Ginseng in Ontario

Enquirers after Ginseng for planting may be supplied by corresponding with
 ARTHUR J. MARTIN, Ginseng Cultivator, Kinross, Ont.

FARM FOR SALE.

225 acres in West Zorra, Oxford Co.; 3 large bank barns, excellent two-story frame house, good land; 2 1/2 miles from Woodstock. For price and terms, apply to
 ORMSBY & CLAPP, Woodstock, Ont.

WANTED.

Thoroughly qualified man to take charge of dairy of 20 cows, peddle milk, etc. Comfortable home and permanent position for competent, industrious man. References required as to character and experience. Apply:
 A. J. KENDALL, Manager Walker Farms, WALKERVILLE, ONT.

TRADE TOPIC.

CORN HUSKERS AND SHREDDERS.—Labor is now the least available commodity about the farm. The work of the farm hand in the future must be done by machinery. In arranging the work, the labor of corn husking must be taken into consideration. A machine to do this work rapidly is indispensable. Geo. White & Son's corn huskers and shredders are labor savers. See their ad., and get their prices now, before the corn crop is ready to harvest.

What M. H. Cochrane Says About Zenoleum Dip:

"I have used Zenoleum as a cattle wash, sheep dip and for the prevention of calf cholera according to directions, and have found it very satisfactory."

M. H. COCHRANE, Hillshurst, Quebec.

Send for copies of "Zenoleum Veterinary Advisor" and "Piggle's Troubles" and see what others say about it. Books mailed free. Sample gallon of Zenoleum \$1.50, express prepaid. Five gallons \$6.25, freight prepaid.
ZENNER DISINFECTANT CO., 113 BATES STREET, DETROIT, MICH.

ORDER EARLY

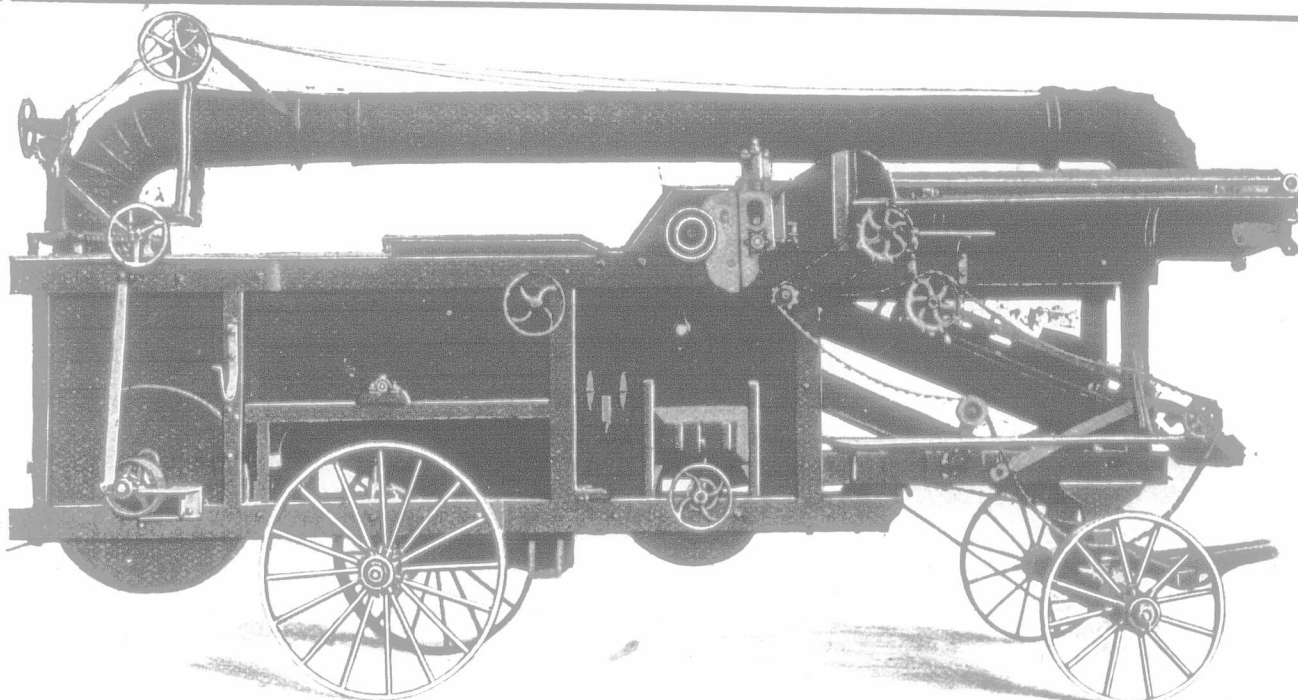
Get Ready to Handle the Corn Crop!

ORDER EARLY

Large Capacity.

Perfect Husking.

Good Separation.



A Combination of the Best.

Husks Corn--- Does Not Shell it.

THE WHITE CORN HUSKER AND SHREDDER WITH "FARMER'S FRIEND" STACKER.

ORDER EARLY

THE GEORGE WHITE & SONS CO., LONDON, ONTARIO, CAN.

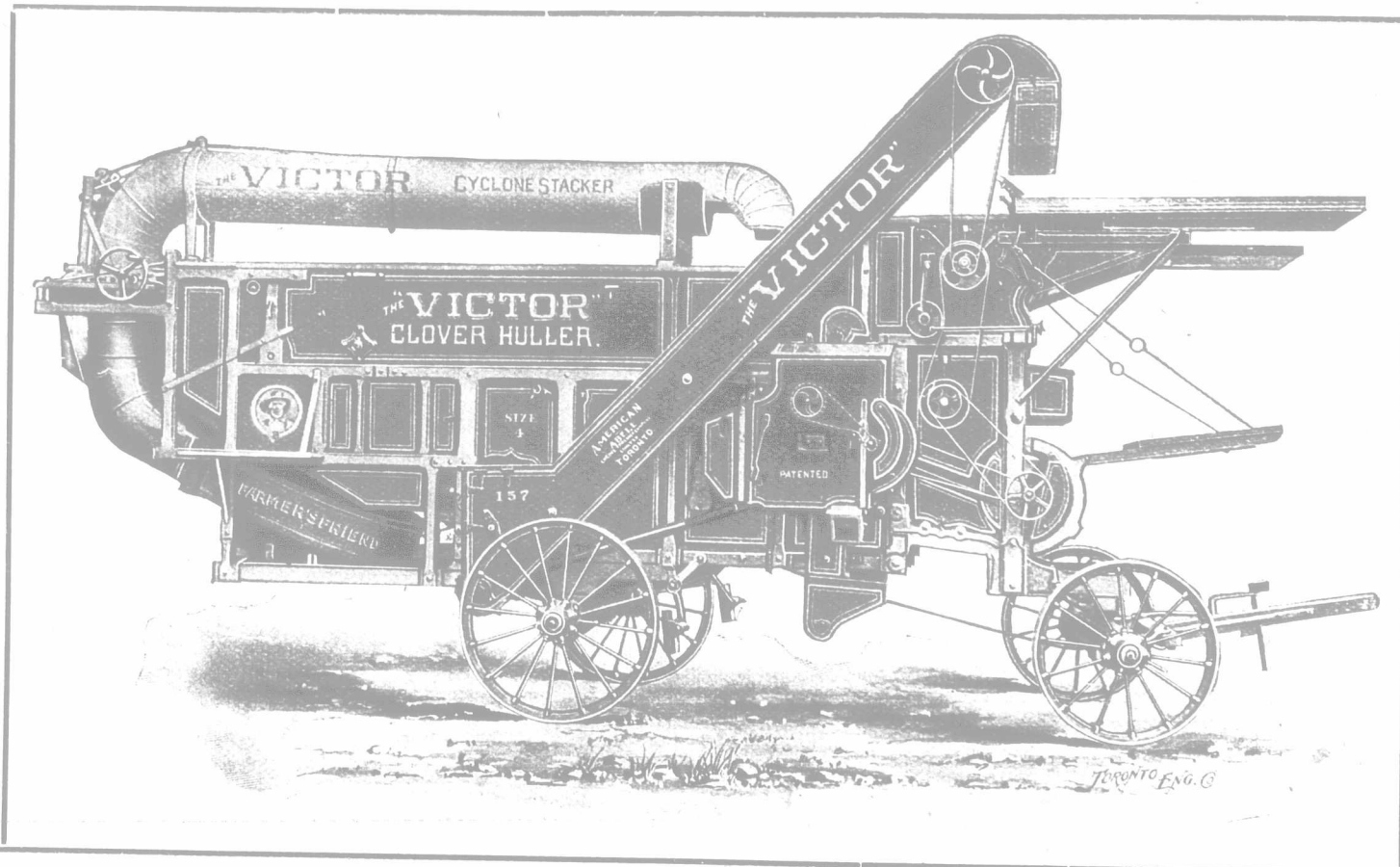
ORDER EARLY



**"COCK O'
THE NORTH"
LINE
OF
THRESHING
MACHINERY**

To Clover Threshers

BUY AND USE AN



ABELL IMPROVED **VICTOR CLOVER HULLER**
AND SEE YOUR BANK ACCOUNT GROW.

MANUFACTURED AND
SOLD ONLY BY US.

AMERICAN-ABELL ENGINE & THRESHER COMPANY, LIMITED, TORONTO.

"Pandora" Range

ENTIRELY NEW.

OUR LEADER.

The **PANDORA** is an entirely new range, made from entirely new designs.

Is the only range on the market fitted with an enamel reservoir. This reservoir is stamped in one piece from the best grades of sheet steel, and is enamelled pure white, which gives it a finish like marble. Has no grooves or seams to collect dirt—is the cleanest reservoir in the world.

Is the only cast-iron range fitted with triple triangular grates, which are heavier, wear longer and work better than any other style.

Has rich nickel dress, oven is ventilated, oven door is fitted with thermometer—no other range has so many good features.

"Sunshine" Furnace

OUR LEADING WARM-AIR HEATER.

Burns coal, coke or wood, and gives perfect satisfaction with either. Wood can be burned in the spring and fall and coal in the severe winter weather. Large double feed doors will admit rough chunks.

Every square inch, from bottom of fire pot to top of dome is a direct radiating surface.

Dome and radiators are made of best grade of sheet steel. Gas damper works automatically; is dust and air tight.

Dampers control fire perfectly, and hot-air pipes distribute the heat uniformly.

WRITE FOR BOOKLETS.

McCLARY'S

LONDON.
TORONTO.

WINNIPEG.
VANCOUVER.

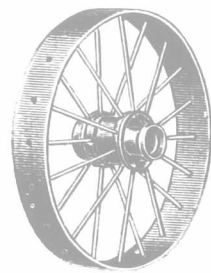
MONTREAL.
ST. JOHN, N. B.

TRADE TOPIC.

HANDY THRESHERS—A. McGill, Chatsworth, Ont., in changing his advertisement, calls special attention to his threshers of small size for private use. These threshers can be run by tread or sweep power. Interested parties are advised to send to the manufacturers for their catalogue.

GOSSIP.

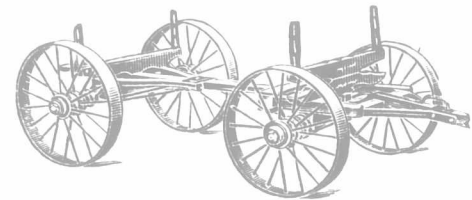
SPECIAL PRIZES A FEATURE.
There were never so many specials given at Toronto Exhibition as there will be this year. Because it will be a Dominion Fair it almost looks as if people have been tumbling over each other for the honor of getting their names in the prize list as donors of special prizes. The Harness, Hunter and Saddle Horse Society of Canada (H. J. P. Good, Toronto, Secretary) will give a gold medal for the best harness horse, mare or gelding; Mr. T. A. Crow, second vice-president of the Harness, Hunter and Saddle Horse Society, will give a silver cup for the best saddle horse; Alderman O. B. Shepard, first vice-president of the Harness, Hunter and Saddle Horse Society, will give a silver cup for the best roadster; Mr. W. E. Wellington, first vice-president of the Industrial Exhibition, and director of the Harness, Hunter and Saddle Horse Society, will give a silver cup for the best heavy draft gelding or mare, of any breed; Dr. Andrew Smith, Hon.-Pres. Industrial Exhibition, and Principal Ontario Veterinary College, will give a prize for the best pair of horses suitable for a Victoria; The Canadian Horse Breeders' Association give \$250 towards the prize list. The Shire Horse Association of England give two fifty-dollar gold medals, one for the best Shire stallion, and the other for the best Shire mare. The Canadian Pony Society (H. M. Robinson, secretary) gives a silver cup



Wide-Tire **Metal Wheels**
FOR WAGONS

Made to fit any axle, of any desired height or width of tire. Are stronger, lighter and cheaper than wooden wheels. Just the thing for the farm. Our

**QUEEN CITY
HANDY WAGON.**



With metal wheels, is low and convenient for farm and general work. Made by skilled workmen, and of the best material. Guaranteed to carry four to five thousand pounds. Write for catalogue with full description of both Wheels and Wagons.

**Dominion Wrought Iron Wheel Co., LTD.,
ORILLIA, ONT.**

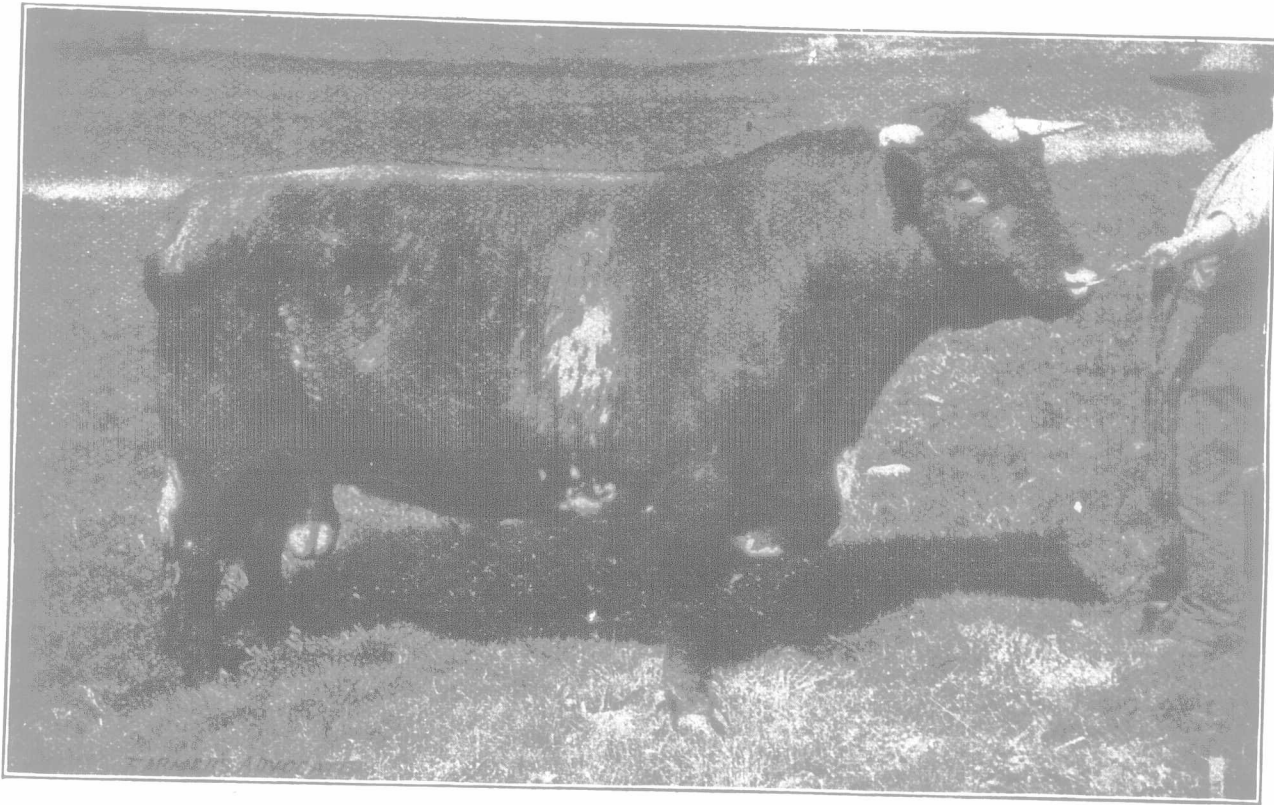
STAMMERERS

THE ARNOTT INSTITUTE, BERLIN, CANADA.
For the treatment of all forms of **SPEECH DEFECTS.** Dr. W. J. Arnett, Superintendent. We treat the cause, not simply the habit, and therefore produce natural speech.
Write for particulars.

for the best pony. The English Hackney Society gives one gold medal and two silver medals for the best Hackney gelding, the best Hackney stallion and the best Hackney mare. The Toronto Hunt Club gives various pieces of plate for Polo ponies and Hunt events. The Dominion Shorthorn Breeders' Association gives \$1,500 toward the Shorthorn prizes. Several sheep associations give specials. The same is the case as regards swine, while poultry and dogs, the latter especially, will receive many specials.

Write for particulars to the **FARMER'S ADVOCATE.**

GRAND DISPERSION SALE
 OF
Hillhurst Shorthorns
 AT
 HAMILTON, ONT., TUESDAY, AUG. 11, 1903



JOY OF MORNING.

Bred by W. S. Marr, Uppermill, Aberdeenshire.

Sire Pride of Morning; dam Jessica, by Scottish Archer.

50 FEMALES

Thirty-three of which are imported Scotch, among them several show heifers. Thirteen cows will have calves at foot.

8 BULLS

Including the celebrated sire, Imp. Joy of Morning; the red two-year-old Missie show bull, Imp. Lord Mountstephen; and three imported Scotch yearlings.

All the best cattle are listed for this dispersion sale of the herd which has taken the highest place as the Home of Herd Headers.

FOR CATALOGUES ADDRESS:

CAPT. T. E. ROBSON,
 THOS. INGRAM,
 GEO. JACKSON, } Auctioneers.

JAS. A. COCHRANE,
 HILLHURST STATION, P. Q.

In answering the advertisement on this page, kindly mention the FARMER'S ADVOCATE

Fall Term Opens September 1st.

CENTRAL Business College
STRATFORD, ONT.
 The school that makes a specialty of each student.
 Our students get positions. Write for handsome Catalogue. W. J. ELLIOTT, Principal.

GO TO
The Best.

IT PAYS BEST IN THE END.
The CANADA BUSINESS COLLEGE,
 CHATHAM, ONT.,

with its 27 years of successful work to its credit, stands without a peer in Canada in the line of BUSINESS or SHORTHAND training. 346 students placed in good positions in the past eleven months shows what we do for our students when graduated.

College Reopens for Fall Term Sept. 1.
 Our Catalogue is the handsomest issued by any business school in the Dominion. Copy sent by addressing, D. McLACHLAN & CO., Chatham, Ont.

THOM'S PATENT
 The only successful
SILO FILLER.

Beware of imitations.

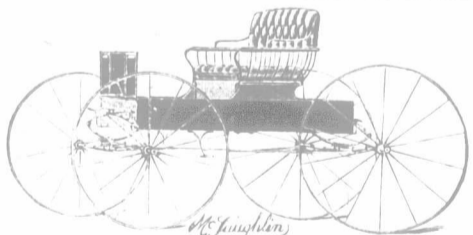
Canada's
 Best.



MADE IN SIX SIZES.

Adapted for all kinds of farm power, from the two-horse tread up to the heavy engine; capacity up to 30 tons per hour. Thousands in use. Send for testimonials. Also **GRAIN GRINDERS** and **TREAD POWERS.**

Thom's Implement Works
 WATFORD, CANADA.



RUNABOUT No. 100.

We are headquarters for rubber-tired work. A large variety of styles to select from.

Rubber Tires Have Come to Stay

A good quality of rubber (such as we use) at a reasonable price, is our goal satisfaction to reasonable purchasers.

Our Model ONE GRADE ONLY, AND THAT THE BEST.

McLAUGHLIN
 Carriage Co., Limited.

OSHAWA, ONT.

SEND
 TRAPPER

Barred R...
 Stock for sale...
 ley Bros' strain, and a...
 of Hawkins' strain, to...
 A. E. SHERRINGTON

GOSSIP.

Mr. William Martin, of Hope Farm, St. Jean, Man., has just received from quarantine the yearling Galloway bull, Grandmaster, bred by Mr. James Biggar, Grange Farm, Dalbeattie, Scotland. Grandmaster is a son of the famous bull, McDougal 4th of Tarbreoch, one of the best individual Galloway bulls ever imported. Grandmaster is a deep, lengthy bull, with plenty of bone, excellent quality, and is a strong addition to the already strong herd at Hope Farm. There being now three imported bulls in this herd, Mr. Martin is open to dispose of one of the older ones, McKenzie of Lockenkit, or Eustace, one of last year's importations.

SOUTH AMERICA BUYS HEAVILY.

At Mr. Henry Dudding's (England) recent Shorthorn sale several buyers were present from Argentine, and one from Uruguay. The southerners were particularly active bidders for the best, and succeeded in carrying off many plums, twenty-two out of sixty-two head going their way. Uruguay getting nine out of the number. Argentine is determined to improve her cattle with stock from Great Britain, and all importations must trace back to before 1850, thus no short-pedigreed cattle are likely to reach that country.

ANGUS BREEDERS DECLINE TO ACT.

At an extraordinary general meeting of the English Aberdeen-Angus Cattle Association, held on the 23rd of June, at the Royal Agricultural Society's Showyard, called to consider matters connected with the spring show and sale held under the auspices of the Association, a letter from the Shorthorn Society was read, containing a copy of the council's resolution, "That in view of the unreliable and misleading results often obtained from the application of the tuberculin test, this council is of the opinion, that the time has come for Shorthorn breeders to see their cattle under the unnecessary, harassing and vexatious restrictions imposed by foreign countries with regard to this so-called test," and expressing a hope that the Association would see its way to take a similar course of proceeding. It was resolved that no action should be taken. —[Live Stock Journal.

CANADIAN CATTLE IN OREGON.

N. C. Maris, who is now on the Pacific coast, sends us the following interesting item: "I am now in charge of the Shorthorn and Hereford herds of banker C. B. Wade, of Pendleton, Ore., who certainly has the best lot of breeding cattle, taken all through, on the coast. Our Shorthorn show herd will be headed by Hillcrest Hero, second-prize two-year-old at Toronto last year, and recently purchased from W. D. Flatt. Our cow is Elgitha 25, bred by Jas. Douglas, of Caledonia, and champion of the coast in the C. E. Ladd herd last year. Our two-year-old is Crimson Pearl, bred by Israel Groff, and our yearling is a Secret heifer, by 'The Lad for Me,' bred by the Robbins.

"We will not show a full herd of Herefords—only a few good young things raised on the farm.
 "Crops are light in eastern Oregon this year. Hay not more than a half crop."

BOOK REVIEW.

Any book reviewed in this department may be ordered through this office.

There have been times, in the very recent past, when a great many people would like to have known more about tile draining. The whole principle of underdraining, its cost, method of carrying out, effect upon the soil, etc., is well set forth in Prof. C. G. Elliott's new book, "Practical Farm Drainage." His methods are well tested, and the wording of the book is sufficiently clear to be understood by all. Rather than experiment with drains, read the Professor's book and be sure that you have the right principle. With cloth binding, select typography and explanatory illustrations, the price covered through this office, 25c. Publishers, John Wiley & Sons, New York, and Chapman & Hall, London, E.C.

DE LAVAL

GUARANTEED CAPACITIES.

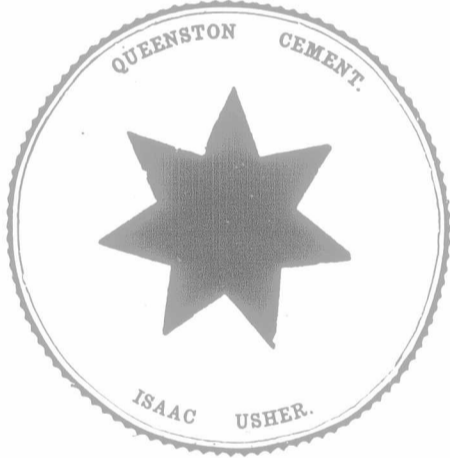
"HUMMING-BIRD"	250 lbs. whole milk per hour,	\$ 65
"DAISY"	350 " " " "	85
"BABY" No. 1,	450 " " " "	100
"BABY" " 2,	600 " " " "	125
"BABY" " 3,	1000 " " " "	200
"DAIRY" TURBINE,	1000 " " " "	225

There is a big difference between the advertised and actual capacity of the miscellaneous lot of separators sold to-day; but please remember that De Laval capacities are Guaranteed and are enough greater than competing machines to more than offset the apparent difference in first cost.

THE DE LAVAL SEPARATOR CO., 77 York St., Toronto.

CREAM SEPARATORS

Going to Build?
 A new house, barn, silo, concrete floor, or any other such work? If so, use
Queenston Cement



THE old brand made by a new process. No better cement made. All who contemplate using cement should first inspect the different structures built of the different kinds of cement, and then they would know which is best and cheapest. We especially request those interested to ask our many patrons about the new-process Queenston Cement used during the latter part of last season. Do not be misled by statements from those who sell the goods most profitable to themselves. Write for prices, estimates and full particulars. We can save money for you when building.

ISAAC USHER,
 QUEENSTON, ONTARIO.

U. S. Cream Separator

EXCELLED EVERYTHING AT THE KANSAS STATE COLLEGE

Read carefully Press Bulletin No. 123, issued May 26, 1913.

The U. S. excelled all of the five other Separators in the competition, but we refer to one only in this space, viz.: our "would-be competitors"—

DeLaval average test of skim milk,	.048
U. S. " " " "	.033
U. S. excels DeLaval,	.015

This shows that the DeLaval Separator left 45 per cent. more butter fat in the skimmed milk than the U. S.

These Tests substantiate former records, and are continued proofs that

The U. S. is the Most Thorough Skimmer on Earth.

For Manitoba and the West we transfer our Separators from Chicago and Minneapolis, and for the Eastern Provinces from Quebec, Sherbrooke, Montreal and Hamilton. Write for catalogues to

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

WOODSTOCK STEEL WINDMILLS

Galvanized or Painted. For Power or Pumping.



DANDY Windmill

with Graphite Bearings, runs easy and controls itself in the storm.

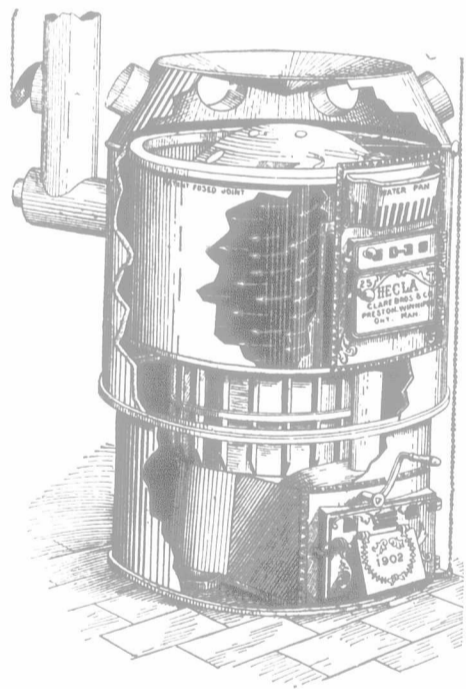
GRINDERS, PUMPS, WATER TANKS, DRINKING BASINS AND SAW BENCHES.

WOODSTOCK WIND-MOTOR CO.,
WOODSTOCK, ONT. (Ltd.)

ABOUT HEATING

Is the title of a booklet which we are sending free to all who ask for it. It describes in detail the construction of our

Hecla Furnace



This furnace gives excellent satisfaction with either

COAL or WOOD.

A special wood grate is supplied without extra charge. Write us for further information.

CLARE BROS. & CO.

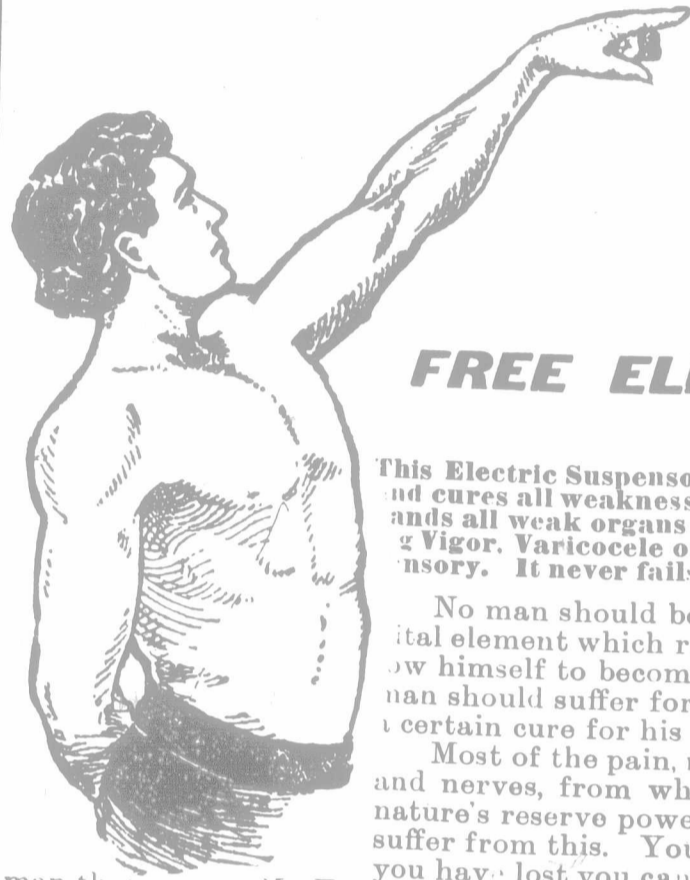
LIMITED.

PRESTON, ONT., AND WINNIPEG, MAN.

GIDER MACHINERY
Best and cheapest. Send for catalogue.
BOOMER & BOSCHERT PRESS CO.
368 West Water St., STAMFORD, N. Y.

DEATH TO HEAVES guaranteed
NEWTON'S Heave, Cough, Diarrhoea and Indigestion Cure. A veterinary specific for wind, throat and stomach troubles. Strongly recommended. \$1.00 per case. Dealers, Mail or Ex. paid. Newton Horse Remedy Co., Toledo, Ohio. Druggists supplied by Lyman Bros. & Co., Toronto and Montreal.

MEN! LOOK HERE



DO YOU SUFFER FROM LOST STRENGTH

Nervous Debility, Varicocele, Early Decay and Waste of Power? They are quickly and forever cured by the Grand Product of Nature, DR. McLAUGHLIN'S Electric Belt, with

FREE ELECTRIC SUSPENSORY FOR WEAK MEN.

This Electric Suspensory carries the current direct to the weak parts and cures all weaknesses of men, varicocele, etc. It develops and expands all weak organs and checks unnatural drains. No case of Failing Vigor, Varicocele or Debility can resist the powerful Electric Suspensory. It never fails to cure. It is free with Belts for weak men.

No man should be weak; no man should suffer the loss of that vital element which renders life worth living. No man should allow himself to become less a man than nature intended him; no man should suffer for the sins of his youth, when there is at hand a certain cure for his weakness, a check to his waste of power.

Most of the pain, most of the weakness of stomach, heart, brain and nerves, from which men suffer, are due to an early loss of nature's reserve power through mistakes of youth. You need not suffer from this. You can be restored. The very element which you have lost you can get back, and you may be as happy as any man that lives. My Electric Belt, with Special Electric Suspensory (free), will restore your power. It will check all unnatural drains and give back the old vigor of youth.

B. Hellinghead, Woodbridge, Ont., says:—I feel well satisfied with the Belt. I have doctored and spent hundreds of dollars without relief, and your Belt has made a new man of me in every way. My step is firmer, and I am stronger in every part of my body. The rains have stopped altogether.

This drain upon your power causes Kidney Trouble, Rheumatism and Stomach Ailments. You know it's a loss of vital power and affects every organ of the body. Most of the ailments from which men suffer can be traced to it.

I have cured thousands of men who have squandered the savings of years in useless doctoring.

My Belt is easy to use; put it on when you go to bed; you feel the glowing heat from it (no sting or burn, as in the old style belts), and you feel the nerves tingle with the new life flowing into them. You get up in the morning feeling like a two-year-old.

This is what Wm. Irvin of Malcro, Sask., writes me:—Before using your belt I was a complete wreck. I can now get up in the morning feeling just like a young fellow of 17. (My age is 58.) I cannot praise your Belt too much, and would like all my fellow-sufferers to give it a trial.

Old men of 70 write me that they feel as strong and young as they did at 35. That shows it renews the vigor of youth.

It cures Rheumatism, Sciatic Pains, Lumbago, Kidney Trouble. It banishes pain in a night, never to return.

You can read what Geo. A. Midgett, 178 Stanley Avenue, Hamilton, Ont., has to say about the Belt:—I must say that the Belt has done me good. It drives the pain out of my back. As I have been bothered since birth, mine is a very hard case. The Suspensory is a grand thing to build up the parts. I have the greatest faith in your Belt, and I must say you are the most honest man I ever dealt with. Most men, when they get your money, lose all interest, as that is all they care for. But you cure and your business ought to prosper. I have praised your Belt to the highest. I know it has done for me what doctors could not do.

What ails you? Write and tell me, and no matter where you are I think I can give you the address of some one in your town whom I have cured. I've cured thousands, and every man of them is a walking advertisement for my Belt.

Every man who ever used it recommends it, because it is honest. It does great work, and those whom I have cured are the more grateful because the cure costs so little.

Dr. McLaughlin's Offer to the Public.

You run no risk, as I guarantee every case I undertake. Failure to cure costs you nothing, as I take all the chances. All I ask is that you give me evidence of your honesty and good faith; that you are willing to pay me. By offering me reasonable security you may then use the Belt and

PAY WHEN CURED.

FREE! Write me to-day for my beautifully illustrated book with cut showing how my Belt is applied, and lots of good reading for men who want to be "The Noblest Work of God"—A MAN. I will send this book, sealed, free.

DR. M. S. McLAUGHLIN, 130 Yonge Street, TORONTO, ONT.

Office Hours—9 a.m. to 8.30 p.m.

NEVER SOLD BY DRUG STORES OR AGENTS.

SHORTHORN BULLS FOR THE ARGENTINE.

Mr. F. Miller, the well-known live-stock exporter to South America, is evidently determined to do all in his power to push Shorthorns in the Argentine, for amongst his many purchases of late we note he has bought the following notable bulls:—The premier place must be given to Baron Abbotsford 76087, placed second at Park Royal, for which Mr. Miller had to pay £1,500. This bull was bred

by Mr. Bell, of Ratclough, and owns as his sire that successful getter, Baron Alwick 69918, from Lady Clara 3rd, by Abbotsford 66588, his grandam being Clara 42nd, by William of Orange 50694. Mr. Miller was also fortunate to be able to secure the Scotch-bred bull, First Choice 78877, a roan, selected by Mr. R. Garden for his Irish herd, and successfully shown by him on several occasions. This bull was sired by Abbotsford 2nd 69838, dam Merry Girl, by roan Prince

64670, and then going back through a long line to the very earliest records of the herdbook. Mr. D. Abbot Green also sold Mr. Miller a very valuable sire in Royalty, by Mr. Deane Willis' Bapton Emigrant 71970, from Royal Nun 2nd, by Bright Stephen 63722, and thence in a direct line to a cow purchased at Hexham as far back as 1834. These three bulls call for special notice, but Mr. Miller's recent purchases, about thirty in all, are all of the highest order of merit.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Now Is a Good Time TO INVESTIGATE

the advantages offered
to all who are able and
willing to WORK, in

NEW ONTARIO.

**Free Lands;
Cheap Lands;
Good Markets.**

Write for information to

HON. E. J. DAVIS,
Commissioner of Crown Lands,
TORONTO, ONT.

BRITISH COLUMBIA.

"Frutland," Kamloops, B. C.
Newly developed irrigated lands in the beautiful fertile valley of the Thompson River, on the main line of the C. P. R., within half a mile of the City of Kamloops, the inland capital of British Columbia, and a well-known health resort. Magnificent soil for fruit of all kinds: Apples, pears, cherries, plums, peaches, grapes, strawberries, and all kinds of vegetables grown in abundance. Perfect climate; air dry and bracing. Good schools, churches, boating, shooting, fishing, etc. For full information apply to: **Manager, Canadian Real Properties, Ltd., Box 185, Kamloops, B. C.**

WE WANT GOOD reputable persons everywhere to sell our new Sanitary Combs. Positively sell on sight, and are absolutely guaranteed unbreakable; will remove dandruff, cure falling hair and headaches. Money refunded if not satisfactory. Sales large, and active agents are actually becoming rich. Work your own town or travel. We tell you how. Write for terms without delay. 50c. sample, 25c. postpaid. Address **PROF. LONG,** 5 Day St., St. Thomas, Ont.

THE Excelsior Life

INSURANCE CO.

Head Office: - - Toronto, Ont.
Absolute Protection. Profitable Investment. Agents wanted. om

CLYDESDALE STALLIONS.

I am now offering the quality stallion, Highland Harry 2545, by MacInnis (imp.), a perfect model; and the stallion, MacInnis 2nd, by same sire. Also Ayrshire bull, General's Prince 13566. Write at once. o **DONALD CUMMING,** Lancaster P. O. and Station.

CLYDESDALES FOR SALE

New importation just arrived:

**25
STALLIONS**

Choice Breeding,
Excellent Quality and
Extra Large Size.

Stock has been personally selected. Inspection is solicited and prices will be found right. o

O. SORBY, GUELPH, ONT.

IT SAVES TROUBLE and annoyance many times to have ABSORBINE

handy in case of a Bruise or Strain. This remedy is rapid to cure, pleasant to use, and Horse soon ready for work. No blister, no hair gone.

ABSORBINE removes any soft bunch from Animal or Mankind. \$2.00 per bottle, delivered or of regular dealers. om

W. F. YOUNG, P. D. F., Springfield, Mass.,
Lyman, Sons & Co., Montreal, Agts. for Canada.

RED RIBBON STUD

Largest Importers and Breeders of

Shire Horses

in the Dominion,
including first-prize winner at Royal Agricultural Show, England, and winning 1st prize at Industrial and other large shows, than all others combined.

Stallions and mares of all sizes, home bred and imported, always for sale, or on order.

MORRIS & WELLINGTON,
Fonthill P. O., Welland County, Ont.

GOSSIP.

LIGHT HARNESS HORSES AT THE DOMINION EXHIBITION.

While the running races have been generally dispensed with in preparing the prize list for the Dominion Exhibition, to be held at Toronto, from Aug. 27th to Sept. 12th, the trotting and pacing classes remain very much the same, except that instead of the whole amount being given for speed, 25 per cent. is given for conformation of horse and neatness of driver. Another change is that there are no heats except on order of the judge who will have to decide the question of stamina and speed. Seventy-five per cent. is given for speed, thus virtually confirming the fastest horses as before in the winning of the prizes. A most excellent programme has been prepared, comprising upwards of some twenty events for ponies (polo and otherwise), gymkhana events, hunting events, jumping hurdles and for height. These various sections take up three and one-half pages of the prize list. The aggregate amount given in prizes is \$2,685, of which the Dominion Government contributes \$945. There are also seven cups and seven pieces of plate offered for competition in the same classes. In addition, there are a series of extra special prizes to be given by the Dominion Government to the farmers and breeders for roadsters, pairs and singles; saddle horses, saddle and harness horses; draft horses, single and pairs, and a collection of ten horses of any breed or breeds. Full particulars of these classes can be had on application to Manager Orr for a prize list. Entries close for the general classes on Aug. 8th, positively. The speed and conformation sections, comprising classes for 2.50 pacing horses, 2.50 trotting horses, 2.30 pacing horses, 2.30 trotting horses, gentlemen's single road horse, road drivers' parade for trotters, and road drivers' parade for pacers and special high-jumping classes, close a week later, on Aug. 15th. Entries, in every instance accompanied by the prescribed fee, must be made to the Secretary, J. O. Orr, 70 King street east, Toronto.

CLYDESDALES FOR CANADA.

On June 20th, an important shipment of carefully-selected Clydesdales sailed from the Clyde by the Donaldson liner, Kastalia. These were selected and purchased by Mr. Wm. Colquhoun, Mitchell, Ont., and this is his third shipment inside of twelve months. He has now become a veteran in the ranks, says the Scottish Farmer, "and many a good horse he has taken to Canada during more than a quarter of a century. His lot this time numbers six head, purchased from Messrs. A. & W. Montgomery, Netherhall and Banks, Kirkcudbright. They are thick, well-built horses with good feet and legs, and some of them are quite fit to take prizes in this country. A fine specimen of the breed is Baron Glasserton (10682). This horse has good feet, and sinks well on his pasterns. He is sure to take well in Canada, and is a good horse in any country. Another big, upstanding horse with good feet is Baron Fife (11600), whose breeding is first-class. Hold Tight (11373) was bred by Mr. T. Lawrie, Esperton, Gorebridge, and is a well-bred horse on both sides. Siberian (11933) bids fair to rival the fame of his namesake, the Glamis champion Aberdeen-Angus sire, which had the credit of breeding so many winners. Flash Prince is a big four-year-old horse got by the noted prize horse, Prince Sturdy, and out of one of Mr. Pilkington's well-known prize mares, Strawberry Leaf. A big, well-grown two-year-old, with grand feet and legs, was bred at Muirhousehead, and claims for his sire the H. & A. S. champion horse and Leckerbie premium horse, King of the Roses, while his dam was by that superb horse, Orlando (8092), which stood first at Glasgow when a three-year-old, and his gr-dam was by the famous Glasgow prize horse, Gallant Lad. This shipment will still further enhance Mr. Colquhoun's reputation as a Clydesdale importer."

TRUMAN'S PIONEER STUD FARM



BUSHNELL, ILL., U. S. A.

Has for 25 YEARS been headquarters for the CHOICEST

SHIRE, PERCHERON, SUFFOLK AND HACKNEY STALLIONS.

SEVENTH importation for 1903 arrived April 10th. Our importation of exclusively SHOW STALLIONS will arrive Aug. 1st.

20 to 30 Good Practical Salesmen Wanted.

Best lot of draft stallions in the United States or Canada. Notwithstanding the superior quality of our horses, it is a fact that our prices are lower than can be obtained elsewhere in America. If there is no first-class stallion in your neighborhood, please write us. For our 24th annual catalogue, etc., address—

J. G. TRUMAN, Mgr., Bushnell, Illinois, U. S. A.

IMPORTED CLYDESDALES

Another consignment of first-class imported Clydesdale stallions just arrived from Scotland. Personally selected. All in good health and splendid condition. These horses are all from noted sires, and range in age from two to six years. Our motto: "Superior quality with sufficient size." Intending purchasers should call on or write to

WM. COLQUHOUN, MITCHELL P. O. AND STATION (G. T. R.), ONT.
INTERNATIONAL IMPORTING BARN, SARNIA, ONTARIO

J. B. HOGATE, PROPRIETOR.

IMPORTER OF

Clydesdale,
Shire and
Hackney Stallions,
and Spanish Jacks.

68 head imported in 1902. All sold but 2 stallions and 4 jacks. My next importation will arrive about Sept. 1st—60 stallions and 20 jacks. Hogate buys bread-winners, and sells them at bread-winning prices. Hogate doesn't advertise all of his stallions to weigh a ton, but some of them do. You can fool some of the people some of the time, but you can't fool all the people all the time. Be sure and see my stock before you buy in the fall. Prices to suit all, consistent with quality. I will be pleased to see all my old customers in the fall, and as many new ones. om

H. H. COLISTER, MANAGER AND SALESMAN.

ALEX. GALBRAITH & SON,

JANESVILLE, WIS. BRANDON, MAN.

Have a few choice **STALLIONS** left that they offer at a special bargain.

New importation of prizewinners of the various breeds will arrive in August. Buying orders executed on commission. om

CLYDESDALE MARES

Registered mares, from three years old and upwards, for sale.

NELSON WAGG.
Claremont station, C. P. R., 2 miles.
Stouffville station, G. T. R., 4 1/2 miles. om

John Gardhouse, Highfield P. O., Ont.

Breeder of **SHIRES, SHORTHORNS** and **LEICESTERS.** Young stock for sale, both sexes. Scotch and Scotch-topped Shorthorns of such noted families as Imp. Rollas, Clarets, Lovelys, Rosebuds, Blossoms, Circes, Roses, and other noted families. The Imp. Lancaster bull, Prince Louis = 32082 = (77486), heads the herd. Farm 3 1/2 miles from Weston station, G. T. R., and C. P. R., and 14 miles north-west of Toronto. om

HORSEMEN! THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

Get genuine without the signature of Dr. Lawrence Williams Co. Sole Importers & Proprietors for the U.S. & CANADA, CLEVELAND, O.

The Safest, Best BLISTER ever used. It is the place of all liniments for mild or severe cases. Removes all Bunches or Blemishes from Horses and Cattle. **SUPERSEDES ALL CAUSTERY OR FRIENDING.** Impossible to produce scar or blisters. Every bottle is warranted to give satisfaction. Price \$1.00 per bottle. Sold by Druggists, or sent direct. Express charges paid, with full directions for use. Send for free descriptive circulars. **THE LAWRENCE-WILLIAMS CO., Toronto, Ont.**

New Book on how to prevent and cure diseases of horses and cattle, to know sound horses, age, constitution, valuable recipes, etc., prepared especially for farmers, from facts gathered in 20 years' practice, by S. S. Dickinson. (Out shortly.) Advice by mail, \$1. Address **S. S. Dickinson, Port Hope, Ont.**

DR. PAGE'S ENGLISH SPAVIN CURE

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements. This preparation (unlike others) acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by **DR. FREDRICK A. PAGE & SON, 7 AND 9 YORKSHIRE ROAD, LONDON, E. C.** Mailed to any address upon receipt of price, \$1.00. Canadian agents:

J. A. JOHNSTON & CO., DRUGGISTS, 171 KING STREET, EAST, TORONTO, ONT.

BAWDEN & McDONNELL
Exeter, Ont.

IMPORTERS OF **Clydesdale, Shire and Hackney Horses** have left for the Old Country to select their annual importation of high-class horses. The consignment will arrive about September 1st. Be ready to inspect them.

THE KINDERGARTEN STUD FARM, GUELPH
JAMES HURLEY, Proprietor.
Breeder of Thoroughbred horses from noted sires and dams. All classes of horses for sale.

CLYDESDALES

AYRSHIRES and POULTRY.
R. Ness & Sons, Howick, Que.
Importers of Clyde, Percheron and Hackney stallions, Ayrshire cattle, and poultry, have for sale 5 Clyde stallions, sired by Baron's Pride, Sir Everitt, and Royal Carrick, 1 Percheron, and 1 Hackney, winners. Ayrshires of both sexes, and poultry.

Thorncliffe Stock Farm

ROBERT DAVIES usually has on hand some fine specimens of Clydesdales, Hackneys, Jersey and Ayrshire Cattle, Yorkshire Pigs. Correspondence solicited. Visitors always welcome at **THORNCLIFFE, TORONTO.**

GOSSIP.

Senator Ransom, of North Carolina, asserts that he is a farmer and not an agriculturist, and yet he is said to have realized \$68,000 from his last year's crop. This item is said to have been originally written by a newspaper man and not a journalist.

Mr. J. J. Hemingway, secretary of the American Jersey Cattle Club, writes us that all the amendments to the by-laws which were recommended by the board of directors, at the annual meeting of the Club, on May 6th last, have been carried by membership ballot, except the one making the fee for transfers 25 cents.

The old reliable horse importers, Bawden & McDonnell, of Exeter, Ont., announce to the trade that they are now making a selection of Clydesdales, Shires and Hackneys for their annual importation. They expect to land the consignment about the first of September, and horse-men may feel assured that this year's importation will maintain the reputation of this reliable firm.

CANADA'S LIVE STOCK AND FORESTRY.

World's Fair grounds, St. Louis, Mo., July 21. Mr. Henry Wade, of Toronto, Ontario, the Registrar of Live Stock for Canada, writes F. D. Coburn, Chief of the Exposition's Department of Live Stock, as follows:

"We are working up a large exhibit for your Exposition next year.

"Canada made an exhibit of rare excellence at the World's Columbian Exposition, in 1903," says Col. C. F. Mills, Secretary of the Live-stock Department, and in not a few of the classes received the larger portion of the prize money. In addition to the prizes given by the Provincial Government to Canadian exhibitors at Chicago, the Columbian management awarded prizes to the breeders of Ontario and Quebec, as follows: On cattle, \$3,980; horses, \$1,305; sheep, \$5,200; swine, \$1,395; total, \$11,880.

"The prize fund provided for the live-stock exhibit at the World's Fair next year will be nearly twice as large as the amount awarded at Chicago in 1893, and the skilful breeders of Canada, of whom there are many, can be depended upon to exhibit stock of such superior quality as to justly entitle them to receive a liberal share of the quarter of a million of dollars set apart by the Louisiana Purchase Exposition for stock shown at St. Louis in 1904.

"Canadian breeders have never been backward in carrying off prizes. At Chicago the premium list was \$160,000, of which \$20,306 went to the Canadian breeders, or twelve and a half per cent. At Buffalo the total value of prizes was \$40,000, and the Canadians secured fifteen per cent. At St. Louis they expect to do still better, and it wouldn't be at all surprising to see them secure one-fifth of the whole award. It is hoped that the Canadian Minister of Agriculture will see fit to grant the \$100,000 appropriation asked by the Canadian breeders.

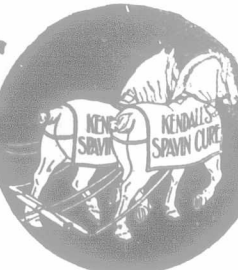
"Canada intends to spring a surprise at the Exposition next year with her exhibit of lumber and timber."
LOUIS LARINE.

TRADE TOPIC.

EVERYDAY EDUCATION is becoming a more powerful factor in a girl's life. Increased knowledge means greater happiness and higher standards of life. It is expected of the girls of to-day that they be educated and refined. For this purpose Harding Hall Girls' School, of London, Ont., has been enlarged and improved, and is now prepared to receive applications for the next term's course of studies. Write the principal, J. J. Baker, M. A., Harding Hall, London, for calendar and full information.

KENDALL'S SPAVIN CURE

Used it ten years. Washington, D.C., Nov. 20, 1902. Please send me your "Treatise on the Horse and his Diseases." Have used Kendall's Spavin Cure for ten years and gladly testify to its merits. Yours truly, Justus C. Nelson.



Five Cases of Spavin Absolutely Cured. Buffalo, N. Dakota, Jan. 26, 1903. I have cured five horses absolutely of Spavin in the last four years with your Kendall's Spavin Cure. Very truly yours, Harry D. Ruettel.

THE OLD RELIABLE

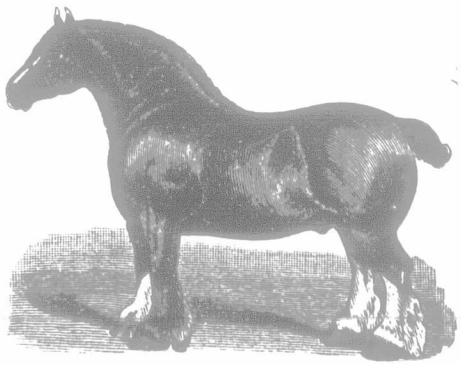
And Most Successful Remedy Ever Discovered for Spavins, Ringbones, Splints and all Lameness.

This is the unqualified experience of thousands of horsemen and others in this and other countries and there is no reason why you should not share in these benefits. Just read what the above people say about "Kendall's." Write to them for your own satisfaction.

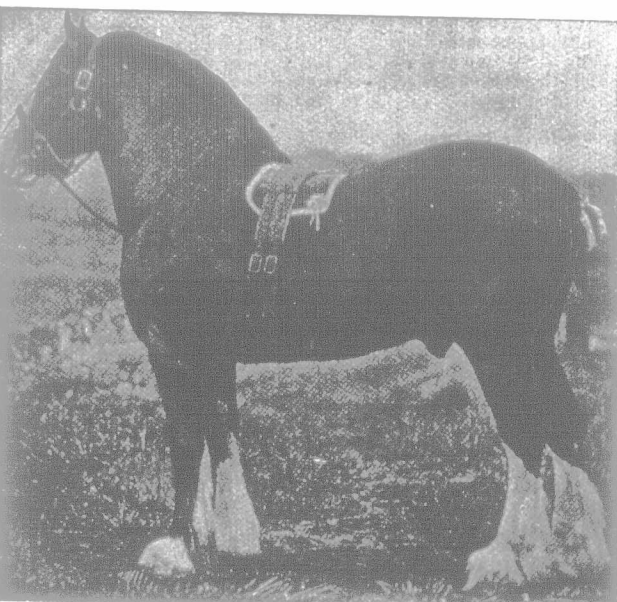
In addition to being the best stable remedy known, it is unequalled as a liniment for household and family use. Sold generally by all druggists. Price \$1; six bottles for \$5. We send valuable book, "A Treatise on the Horse," profusely illustrated, free upon request. **DR. B. J. KENDALL CO., Enosburg Falls, Vt.**

CLYDESDALES and HACKNEYS.

Another large importation will arrive in August. Mr. James Dalgety is now in Scotland for the purpose of selecting a better lot of horses than he ever before imported. Some of the lot have already been purchased, and include some extra big prizewinners. Others will come out that have made the season in Scotland. Intending purchasers should have this shipment in mind.



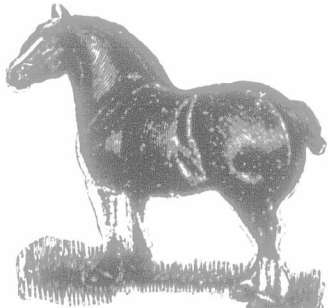
DALGETY BROS., LONDON, ONT., AND DUNDEE, SCOTLAND.



ROBERT BEITH, BOWMANVILLE, ONT.,
IMPORTER AND BREEDER OF **Clydesdale AND Hackney Horses**

Is offering for sale a number of choicely-bred Clydesdales and Hackney stallions; also a number of Hackney mares. The Clydesdales are sired by the noted horses, Prince of Albion, King of the Roses, Lord Stewart and The Prior.

JOHN BRIGHT, MYRTLE, ONTARIO, BREEDER OF Clydesdales and Shorthorns,



Is now offering for sale 8 stallions, sired by such horses as Prince Patrick (imp.), Erskine's Pride (imp.), Sir Erskine (imp.), Royal Laurence (imp.). Also a number of mares and fillies. Shorthorns of all ages, of such families as Miss Ramsden, Clementina, Strawberry, Crimson Flower, Village Girl, Stamford, Rachel, etc.

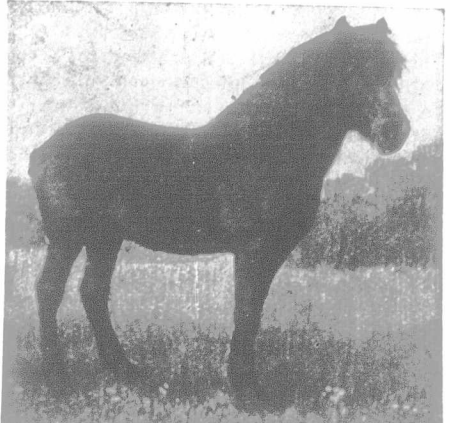
Myrtle Station, G. T. R. and C. P. R. Farm connected by long-distance telephone.

BELGIAN STALLIONS and MARES

IMPORTED LAST SEPTEMBER. THOROUGHLY ACCLIMATED.

The up-to-date drafter, big and medium weight, dark colors, short, straight back, no hair on legs, immense rumps, pony-built body. Not a shaggy lump of fat. **A Klondyke in your stable.** Honest value for honest money. Write, or, better, come to

BARON DE CHAMLOUIS, Importer, DANVILLE, QUEBEC.



**"To Err is Human"—
Not to Err—Elgin.**

The man who is always
right on time is the man
who carries the

ELGIN WATCH

Every Elgin Watch is fully guaranteed. All jewelers have Elgin Watches. "Timemakers and Timekeepers," an illustrated history of the watch, sent free upon request to

ELGIN NATIONAL WATCH CO., ELGIN, ILL.

GOSSIP.

LAST CALL FOR HILLHURST SHORTHORN SALE.

The catalogue of Hon. Mr. Cochrane's grand herd of imported and home-bred Shorthorns to be dispersed by auction, a Hamilton, on Aug. 11th, is out, and is being called for largely from many parts of Canada and the States. It presents a very tempting bill-a-fare in the list of choice young cows and heifers, of approved Scotch breeding, in whose pedigrees is found the blood of a long line of noted bulls, bred by the most advanced breeders, while a considerable number have promising calves at foot, sired by the grand imported bulls in service in the herd, or are in calf to these splendid sires, some having calves to be sold with them and being again in calf, offering the purchaser a three-fold bargain. It is rarely indeed that so many high-class bulls are included in one sale, and the scarcity of first-class bulls has been the weakness of most of the public sales, held in this country in the last few years. This sale will be a pleasing exception in that regard, as the four imported service bulls, three of which were bred by Mr. Duthie, of Collynie, and the fourth by Mr. Reid, of Cromleybank, will satisfy those who see them that they are of the right stamp, individually, as well as being royally well bred. Joy of Morning is a rich, dark roan, of the Cruickshank tribe, with the Highland Society champion, Pride of Morning, for his sire, and his dam by the noted Scottish Archer. These are among the most impressive sires used in the Collynie herd, while Star of Morning, the sire of Pride of Morning, was a Royal and Highland Society winner, and a remarkably prepotent sire, leaving his stamp unmistakably on all his progeny. Joy of Morning is wonderfully covered with the best of flesh all over, and especially on his back, where the most valuable cuts are found, and he is low-down, smooth and well filled in all his parts, and has the appearance of an impressive sire, which he has proved himself to be. Scottish Hero, a son of Scottish Archer, and his dam a Marr Missie, by the great William of Orange, is of the same breeding as the Royal champion, Marengo, and is a bull of grand character, smooth, level and well proportioned throughout, and has proved an exceptionally good breeder. Lord Mounstephen, a red Missie bull, in his two-year-old form, is a show bull from the ground up, full of style and quality and substance, and will take well wherever he goes, as he is practically without a fault. Royal Champion, of the Uppermill Roan Lady tribe, and by a son of Pride of Morning, though in only fair breeding condition, has all the good qualities of an acceptable sire, being richly bred, well proportioned, level in his lines, and having a fine masculine appearance. Royal Challenger, a red yearling Augusta bull, and another capital youngster, good enough

ELM PARK STOCK FARM

Fresh importations of High-class
ABERDEEN-ANGUS CATTLE
AND
SUFFOLK SHEEP.

We have for sale the 1st, 2nd and 3rd prize bull calves at Toronto and London, and 1st prize bull calf at Guelph, all filled by their own dams.

We have a good crop of strong Suffolk lambs. This breed produces the highest proportion of lean to fat of any of the improved mutton breeds.

JAS. BOWMAN, - GUELPH, ONT.

J. Richards, Bideford, P. E. Island,

Importer and breeder of Aberdeen-Angus Cattle, Clydesdale Horses, Shropshire Sheep, and Shetland Ponies. Stock always for sale, on reasonable terms.

We are offering some young Durham bulls, cows and heifers, and 20 Berkshires and 10 Yorkshires, of both sexes. Prices reasonable.

Could supply a carload of 2-year-old stock steers. Correspondence solicited, or come and see our stock. No sale, no harm. Visitors welcome to

CAMDEN VIEW FARM,
A. J. C. SHAW & SONS, Thamesville, Ont.

GEO. B. BRISTOW, breeder of high-class Scotch noted Village Girl and Wimple families.

LAKELAND FARM, Rob Roy P. O., Duntroon Sta., Co. of Grey.

A. J. WATSON, CASTLEBERG, ONTARIO, CAN. Offers for sale young Shorthorn bulls and heifers of the choicest Scotch breeding. Also one five-year-old bull, grandson of imported Indian Chief.

ABERDEEN-ANGUS. For Sale: One two-year-old bull and one yearling bull, sired by Laird of Tweedhill. Will sell right. **W. HALL,** Washington P. O., Drumbo Station.

THE SUNNYSIDE HEREFORDS. Onward 120463, by Imp. March On 76635, at head of herd.

FOR SALE: 2 bulls fit for service. Choice females, all ages. Registered large English Yorkshires, 6 to 8 weeks old. Visitors welcome. **O'NEIL BROS., Southgate, Ont.** Iderton station, L. H. & B.; Lucan station, G.T.R.

CLYDESDALE FILLIES FOR CANADA.

The Scottish Farmer says: Mr. Wm. Taylor, Park Mains, Renfrew, recently shipped, to the order of a Canadian buyer, seven well-bred Clydesdale fillies. These were got by the Lower Renfrewshire premium horse, Ascot; the Lanark premium horse, Coroner; the noted Prince of Wales horse, Handsome Prince; the well-known William the Conqueror, also got by Prince of Wales; Mr. Riddell's big Kintyre premium horse, Canongate, and the well-bred horse, Monarch of Craigie. These fillies are from good dams in Renfrewshire, Kintyre, and Ayrshire, and are likely to prove successful as brood mares. Ascot and Coroner were both prizewinners at the H. & A. S. shows.

to head a first-class herd, as is also Rose Noble, a roan yearling of the Shethin Rosemary family.

With such a splendid list of bulls, and the excellent young cows and heifers referred to in our last issue, the public may confidently reckon on finding in this offering animals that measure will up to the standard of the approved type of present-day Shorthorns, and a healthier and sounder lot of cattle has never been brought to the hammer in this country.

Confidence in the continued growth and prosperity of this grand country of ours, and in the pre-eminent place and part that Shorthorn cattle are bound to fill in the improvement and upbuilding of the character of our beef cattle, may well be adopted as the keynote in our calculations for the future. Our own people feel the need of improving our cattle all along the line, and are waking to the importance of taking early steps to effect such improvement as will give us the best standing in the British market for our cattle, while the great corn-growing States to the south will always look to Canada for seed stock to replenish their herds.

The partial failure of the corn crop in some section for a year or two will be only a temporary check to their ability to buy freely, and one good crop will revive their ambition to secure the best they can buy. They are not out of the market now, by any means; some important purchases having recently been made in Canada by private treaty, and from the applications for the catalogue of the Hillhurst sale, the probability is that buyers will be present in considerable numbers.

Shorthorn breeders throughout this country are personally interested in the success of this sale. Steady-going Canadian breeders will do well to show their confidence in this class of stock, and supply the needed balance to prevent extreme fluctuations in prices. Very few of them are so well stocked that they cannot do well with a few more, but we hope to see farmers and young men who are ambitious to found a good herd taking a fair share of the cattle, as there is room and a bright future for many more good herds than we have, and the whole country will benefit by a wide distribution of such desirable cattle. We confidently anticipate a large gathering of farmers and breeders at Hamilton on Aug. 11th, to witness the dispersion of one of the best herds in the Dominion.

When it comes to stiffness and soreness of muscles, tendons, etc., nothing equals

Tuttle's Elixir

for restoring normal conditions. Apply to the body as a mild sponge bath and put on light blanket. Sponge the legs and put on light bandages.

Used and Endorsed by Adams Express Company.

Tuttle's American Condition Powders

—A specific for impure blood and all diseases arising therefrom. TUTTLE'S FAMILY ELIXIR cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book, "Veterinary Experience," FREE.

Dr. S. A. TUTTLE, 66 Beverly St., Boston, Mass. Beware of so-called Elixirs—none genuine but Tuttle's. Avoid all blisters; they offer only temporary relief, if any.

LYMAN, KNOX & SON, Agents, Montreal and Toronto, Canada.

SALE! INGLESIDE HEREFORDS. Young bulls, cows and heifers of most up-to-date type and breeding. If you want good Herefords at good value prices, send for illustrated catalogue, and state requirements. Also 3 and 4 bred Hereford cows and heifers. **H. D. SMITH, Compton, Que.**

Beechgrove Shorthorns. Present offering: 3 females from 1 to 4 years old, heavy milking strain; also one roan bull calf 8 months old. Prizewinners; a thick, beefy lot. **C. McNULTY, Rathburn P. O., Orillia and Arthly stations.**

SPRUCE HEDGE SHORTHORNS. We are offering females of all ages. Among them are prizewinners and youngsters that are sure to win. **JOHN MCKENZIE, Keward P. O. and Chatsworth Station, C.P.R.**

H. SMITH, EXETER, ONT. SCOTCH SHORTHORNS

Bred for utility. More fat show champions produced than in any other herd. Some choice heifers to spare. Come and see them, or write. Farm joins Exeter, on G. T. R.

Queenston Heights Shorthorns

Two bulls, 16 months, got by Lord Gloster = 2895 =; dams by Crimson Chief = 1891 =, by Indian Chief.

HUDSON USHER, - QUEENSTON, ONT. Farm 3 miles north of Niagara Falls.

LORNE STOCK FARM. SHORTHORNS, OXFORDS and STANDARD - BRED.

We now offer possibly the best 2-year Wildbrino colt in breeding and quality in Ontario. Young stock for sale. Address: **A. McKillop & Sons, West Lorne, Ont.**

Maple Grange Shorthorns

CLARETS, LAVINIAS AND RED ROSES. Sired by such Scotch bulls as Albert Victor (imp.) 6315; Baron's Heir (imp.) 28854; Scottish Bard 2312, and Commodore 28854. Golden Abel (imp.) heads the herd. Stock always for sale, male and female. **R. J. DOYLE, Owen Sound, Ont.**

R. & S. NICHOLSON Sylvan P. O. Parkhill Station, Ont. Importers and breeders of **SHORTHORNS**

Have for sale: **13 IMPORTED HEIFERS, 20 HEIFERS (choice).** Safe in calf to Imp. Spley Count. Home-bred herd composed of Nonpareils, Minas, Clementinas, Cruickshank Lovelys, Shethin Rosemarys, A. M. Gordon's Estelles, Miss Symes, etc.

For Sale: 4 bulls, sired by Imp. British Statesman (63729) = 26833 =, 2 reds, 1 roan and 1 white, from 12 to 17 months old. Also a number of calves, bulls and heifers, sired by Imp. Diamond Jubilee = 28861 =. Some of their dams are cows sired by Imp. British Statesman. Diamond Jubilee sired at head of our herd. **FITZGERALD BROS., Mount St. Louis P. O.; Elmvale Sta., G. T. R.; Hillsdale Telegraph Office.**

Shorthorns, Clydesdales, YORKSHIRES. Offer for sale a young red bull calf by Republican sired out of Nonpareil 34th (imp.)—a go done. Also young Yorkshires and Clydesdales, all ages. Also Amaranth at a bargain, if taken soon.

A. E. HOSKIN, SPRINGVALE FARM, COBURG STA. & P. O.

SUPERIOR

MATERIAL, DESIGN, WORKMANSHIP
IN ALL

WAGONS

MADE BY

THE MILNER PETROLIA WAGON CO. LIMITED
PETROLIA

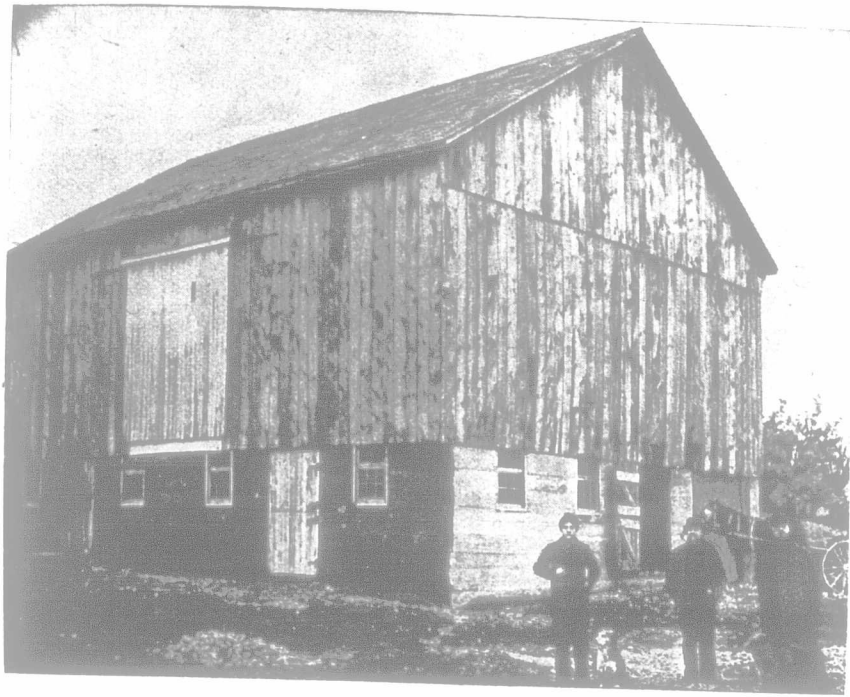
In answer to any communication on this page, kindly mention the FARMER'S ADVOCATE.

BETTER THAN STONE OR BRICK!

GOOD QUALITIES OF

THOROLD CEMENT

RECEIVE ANOTHER TESTIMONIAL.



BARN OF F. H. EICHENBERGER, DELAWARE, ONT. Size, 36x46 feet. Basement built with Thorold Cement.

Read what Mr. Eichenberger says:

Delaware, Ont., December 22, 1899. Gentlemen.—It gives me great pleasure to testify to the good qualities of your Thorold Cement. I built a barn, 36x46 feet, in the wall of which I used 35 barrels of your Thorold Cement, and consider I have a first-class job—better and cheaper than either stone or brick. Yours truly, F. H. EICHENBERGER.

EST. JOHN BATTLE, (Manufacturers of Thorold Cement, and Dealers in Portland Cements,) THOROLD, ONT.

SPECIAL To Stock Raisers

500 Packages Given Free.



We will give a 35-cent package of cream for calves free to any person purchasing 50 lbs. of Day's Aromatic Stock Food; price, \$3. Send cash by P.O. note or express. Ask your dealer, or write to THE Day's Stock Food Co., MIMICO, ONT.



For high-class imp. and Canadian-bred bulls cows and heifers, write H. J. DAVIS, Woodstock Ont.

HIGH-CLASS Shorthorns AND CLYDESDALE HORSES

Imp. Spicy Count 36117, 3 years old. Four bulls, 12 to 20 months. Cows and heifers. JAS. McARTHUR, Goble's, Ontario

Greengrove Shorthorns Number 35 head of choice Scotch families. For sale: Several young bulls, by Wanderer's Last, Imp. Fitz Stephen and Freebooter. Female of all ages. W. G. MILLSON, Goring P. O., Markdale Station.

Scotch Topped Shorthorns—(Imp.) Captain Mayfly (No. 28838), winner of sweepstakes at Toronto (1900), 1st at Toronto (1902), at head of herd. Anio als of all ages of both sexes for sale. JOHN C. BRICKER, Goring P. O. and Station, on G. T. R.

T. DOUGLAS & SONS, STRATHROY STATION & P. O., BREEDERS OF Shorthorns and Clydesdales

88 Shorthorns to select from. Herd bulls (Imp.) Diamond Jubilee =28861= and Double Gold =37854=. Young bulls, cows and heifers for sale at all times. Also one (imp.) stallion and two brood mares.

SHORTHORNS FOR SALE: 10 choice Shorthorn heifers and 10 young bulls, of choicest quality and breeding, at reasonable prices. G. A. BRODIE, Stouffville Sta. o Bethesda, Ont.

ROSEVALE SHORTHORNS. Herd comprises Augustas, Polyanthus, Crimson Flowers, Minas, Strawberrys and Lavinias. For sale, both sexes, the get of Imp. Marengo Heydon Duke, Imp. Baron's Heir, Imp. Golden Able and Imp. Golden Conqueror. W. J. SHEAN & CO., Owen Sound P. O. & Sta.

Shorthorns and Yorkshires—Stock bull, Scotch Lad =35908= and 1 bull, 12 months, for sale. Up-to-date Yorkshires, bred straight from imp. stock. Pigs of spring litter for sale. G. W. KEAYS, Hyde Park, Ont.

SHORTHORNS AND BERKSHIRES. Six bulls fit for service; also a few cows and heifers—best breeding and quality. A few Berkshires, 6 months old, both sexes. Prices reasonable. F. MARTINDALE & SON, Caledonia Station, York, Ont.

Choice Shorthorns and Shropshire Sheep.

I am now offering bulls from 8 to 16 months old. Heifers of all ages, some in calf. Present stock bull, Roan McKay =37867=. CHAS. CALDER, Brooklin.

Shorthorns and Leicesters.

HERD ESTABLISHED 1855 Scotch Booth and Bates families to select from, grand milking qualities being a special feature. (Imp.) Rosicrucian of Dalmeny =43220= heads the herd. Young stock of both sexes to offer; also Leicester sheep. JAMES DOUGLAS, Caledonia, Ont.

HIGH-CLASS SHORTHORNS Now offering 5 bulls, from 4 to 17 mos. old, sired by Royal Duke, he by Royal Sailor (imp.). Also females, all ages, some in calf. Prices moderate. J. R. McCALLUM & SON, Iona Sta. & P. O. Ont.

GOSSIP.

At a sale of horses in training at Sheepshead Bay, N. Y., last month, prices were poor, except for three animals—Prince of Melbourne, \$7,500; Destiny, \$1,800; bay gelding, \$1,000. At a sale of yearlings in Chicago, the same week, the bidding was spirited—the best prices being \$2,000, \$1,800, \$1,500, \$1,000, \$750, \$700, \$650, \$600, \$550, \$500.

We have received the following news item from Messrs C. & J. Carruthers, of Cobourg, Ont.: "We have had quite a few inquiries for Yorkshires lately, and we are now offering the boar, Cotgrave King 11649, whose sire is Summer Hill R. G., imported in dam, bred by P. L. Mills, Nottingham, Eng., dam Cotgrave Lassie 7th (imp.) (9058) (10252), bred in England. We are also offering young stock as good as ever we bred (Holywell strain), at reasonable prices. We have bought another stock boar at D. C. Flatt's sale, Summer Hill Dalmeny Royal (12444) (imp.), bred by the Earl of Rosebery, Edinburgh, a hog of great size, length, depth and evenness throughout, with great bone. Have also a few sows, in pig, for sale. Parties wishing to buy should look up advertisement."

The Province of Quebec will soon possess a herd of Yorkshires second to none in Canada, thanks to the enterprise of Mr. Gus. A. Langelier, of Quebec City. This gentleman, during the last two years, has been getting together a lot of sows, all imported from England and Scotland, which are hard to duplicate for size, length, smoothness and constitution. Walton Sarah V. has already been spoken about in these columns, when she won at Sherbrooke last fall. She farrowed on the 15th of May last, having eleven fine pigs, which are already all sold to different agricultural societies in the Province of Quebec. It must be remembered that Walton Sarah V. is from Walton What's Wanted, the second-prize aged boar at the Royal last year. She now weighs around 700 pounds, is as smooth as silk, as light on her feet as a gilt, and will no doubt be heard from at the leading shows this fall. Mr. Langelier paid to Mr. D. C. Flatt \$225. for Walton Sarah V., who holds the distinction of being the highest-priced Yorkshire, of any sex, ever imported in the Province of Quebec. Then we see Borrowfield Sunbeam XV., one of the sows which Mr. Langelier imported this spring from John Barron, Derby, England. She is a sister to Sunbeam XV., who won second prize at the Royal for aged sows this year. Borrowfield Sunbeam XV. had twelve pigs on March 30th last, and though a show sow, she is of the kind and has the constitution to "rough it out" even with the old-time razor back. Mr. Langelier is also the proud owner of Colston Fan III., whose dam, Colston Fan, is the litter sister of Colston Lass which won h.c. at the Royal and reserve at Peterborough, England, this year. The sire of Colston Fan III. is Sir Wilfrid Laurier, who is out of Sowerby Beauty, the unbeaten Queen of Yorkshires. Sowerby Beauty won first this year at the Royal and at Peterborough, and is acknowledged to be the best Yorkshire yet produced. We also notice that Mr. Langelier owns four gilts out of Borrowfield Hercules, the son of the sweepstakes boar, Borrowfield Eclipse, which was sold to the Earl of Ellesmere for \$525. Borrowfield Eclipse was first at Elkston, in 1900; second and reserve champion at Stafford, in 1900; first and champion at Nottingham, 1901; first and champion at Stafford, 1901; first and champion at Derby, 1901. It would be too long to enumerate the prize animals in Mr. Langelier's herd, which is, without any doubt whatever, the premier herd of Yorkshires in the Province of Quebec. In fact, it would be hard to find better sows than the above named even in Ontario. After the fall shows, we will have a few words more regarding Mr. Langelier's Yorkshires, and we venture to say that anybody who wishes to get the foundation of a first-class herd, or to improve the home stock, cannot be far amiss in writing to Gus. A. Langelier, Quebec City.

Good News to Stock Owners Just the information that you must have to successfully treat Fistula, Poll Evil, Sweeney, Knee-Sprung, Curb, Splint, Spavin, Ringbone and all blemishes hard or soft, also Lump Jaw in cattle. Bone Spavin Ringbone Lump Jaw Certain and inexpensive method fully described in our two big booklets, which we send free if you have a case to treat. Over 100,000 farmers rely upon these same methods. Write for the books. FLEMING BROS., Chemists, 45 Front St., West, Toronto, Ont.

CHAS. RANKIN, WYEBRIDGE, ONT. IMPORTER AND BREEDER OF SHORTHORN CATTLE and OXFORD DOWN SHEEP.

Herd headed by Pride of Scotland (imp.) FOR SALE—Females and bulls of all ages, from noted Scotch families.

Shorthorns and Lincolns A few choice bulls from 12 to 15 mths. One bull 23 mths. Also females any age for sale J. K. HUX, RODNEY, ONTARIO, L. E. & D. R. R. and M. C. R.

Shorthorns, Leicesters and Berkshires. FOR SALE—1-yearling bull and heifer calves; Berkshire bears and sows, ready for service, and suckers ready to wean. Write for wants, or come and see E. Jeffs & Son, Board Head P. O., Bradford and Beeton Stns., G.T.P.

W. R. Bowman, Mt. Forest, IS OFFERING

YEARLING DURHAM BULL

of an excellent dairy strain (weight 1,200 lbs.) for \$75.00. Two Aberdeen-Angus bull calves 13 and 9 mos., at \$75 and \$90. Yorkshire boars and sows, Suffolk Down sheep, shearing ewes and ewes in lamb.

MERCER'S SHORTHORNS

Comprise Missies, Stamfords, Floras, Clarets, Princesses, Red Roses, Young Sterlings, Fashions and Matchlesses. They number 60 head for sale. There are several choice heifers, 17 heifer calves, 3 bulls fit for service and 4 bull calves. A few older females.

Thos. Mercer, Markdale P. O. and Station, Shorthorns, Cotswolds, Berkshires

FOR SALE.—Seven bull calves from 1 to 8 months old; a few young cows with heifer calves at foot; a choice lot of yearling ewes, ram lambs and ewe lambs; young pigs of the long bacon type, from 6 weeks to 2 months old. F. B. MCNICASTLE & SON, Campbellford P. O., Ontario.

TROUT CREEK SHORTHORNS



JAS. SMITH, Manager, Millgrove, Ont. W. D. FLATT, 378 Hess St. South, Hamilton, Ont.

OAK LANE STOCK FARM.

Shorthorns, Cotswolds, Yorkshires and Barred Rock Fowls.

FOR SALE: Three bulls (2 imp.) cows and heifers, both imported and Canadian-bred. Still open to take orders for N.-W. trade. Write for prices. Satisfaction guaranteed.

GOODFELLOW BROS., MACVILLE, ONT.

Shorthorns, Berkshires and Leicesters. FOR SALE: Choice two-year-old heifers, well gone in calf; also yearling heifers, bull calves. Boars and sows fit for breeding, and young pigs. ISRAEL GROFF, ALMA, ONTARIO.

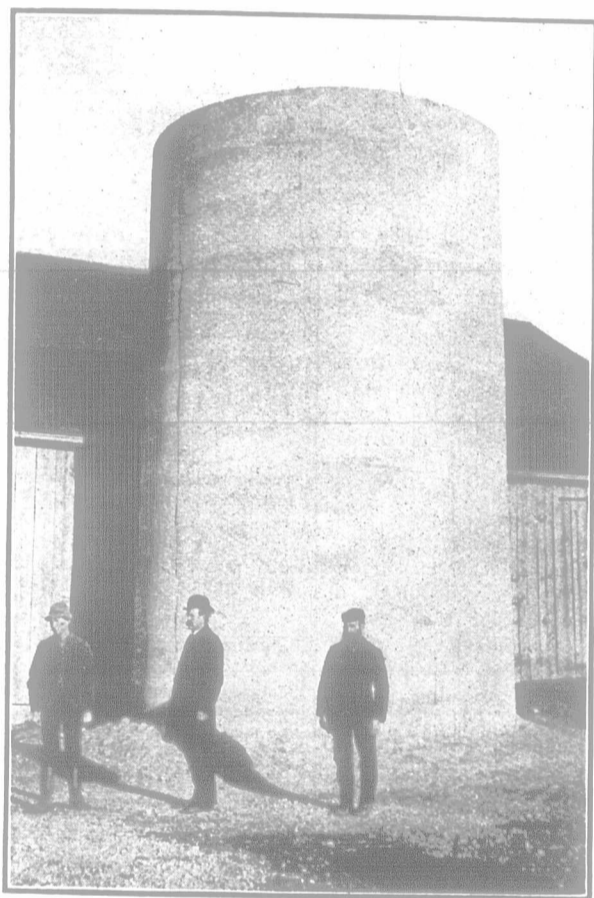
"DIRECT FROM THE GROWERS"

The purest and cleanest GREEN TEA on earth. Delicious and economical in use.

"SALADA"

Ceylon Natural Green Tea as superior to Japan as cream is to skimmed milk. Sealed Packets only. 40c. per lb. By all Grocers.

PORTLAND CEMENT Concrete Silo



BUILT FOR P. CRERAR, MOLESWORTH, HURON CO., ONT. 14 feet in diameter and 30 feet high, with

"RATHBUN'S STAR" BRAND

MANUFACTURED BY The Canadian Portland Cement Co., LIMITED

SOLE SALES AGENTS:

THE RATHBUN COMPANY

310 and 312 FRONT STREET WEST, TORONTO, ONTARIO

PINE GROVE SHORTHORNS AND SHROPSHIRE.

Our herd comprises over 150 females, including our last importation of 30 head, all of the most esteemed strains. Of Shropshires, we offer a few choice rams, also high-class ewes bred to first-class rams. Address

W. C. EDWARDS & CO.,

Rockland, Ontario.

SHORTHORNS

WE ARE OFFERING FOR SALE a grand lot of young imported Scotch cows and heifers with calves at foot or safely in calf to the best imported bull obtainable.

Herd Numbers 150 Head.

Send for New Catalogue.

VISITORS WELCOME, AND CORRESPONDENCE PROMPTLY ATTENDED TO. TELEGRAPH OR TELEPHONE.

H. CARGILL & SON,

Also have a choice lot of Oxford Down Sheep, either sex, at reasonable prices. Cargill, Ontario, Canada.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE

GOSSIP.

SUFFOLK FLOCKBOOK.—Vol. 17 of the Suffolk Sheep Society Flockbook is now out. A short history of the breed, by the secretary, precedes the regular registration pages. The Suffolk as a distinct breed dates back to the early part of last century, and originated by crossing the horned ewes of Norfolk with improved Southdown rams. Our thanks are due the Secretary, Mr. Ernest Prentice, for his courtesy in placing Vol. 17 on our shelves.

All interested in improving the beef cattle of the country should note the important auction sale, advertised on another page, of the Hillhurst herd of imported and home-bred Shorthorns, to take place at Hamilton, Ont., on Aug. 11. Seldom, if ever, has so excellent a herd been brought to the hammer in Canada. The cattle are uniformly of the low-set, thick-fleshed, early-maturing type that meets the demands of the times and of the markets. Take a day off, and combine business with pleasure in attending the Hamilton sale.

SHEEP AT THE ROYAL.

Twenty-one breeds of sheep were represented at the Royal Show at London, England, last month, and the all-round quality is highly spoken of by the agricultural press. The champion Southdown ram was shown by the Duke of Richmond and Gordon (a two-shear), with Mr. Adeane's entry as reserve (the first-prize shearing). Earl Cadogan had the champion pen of ewes in this class, the Pagham Harbor Co. being reserve. The special prize for the best pen of Hampshire Down lambs went to Mr. J. Flower.

For the best Lincoln ram, T. Caswell was champion, with H. Dudding reserve. For the best pair of Dorset Horns, the entry of W. R. Flower was first, Earl of Carnarvon reserve. These were the only classes in which specials were offered.

In Shropshires, the winners were as follows: Two-shear ram—Tanner, Muntz, Cooper. Shearling ram—M. Williams, Cooper, Muntz, Tanner, Evans, Fenn, Mills, Nock, Berry, Buttar, Harding, Minton. Five shearing rams—Cooper, Muntz, Evans. Three ram lambs—Cooper, Nock, Wall. Three shearing ewes—Cooper, Muntz, Mills. Three ewe lambs—Minton, Harding, Cooper.

Oxfords.—Shearling ram—J. T. Hobbs, Brassey, Horlick, R. W. Hobbs, Stilgoe. Three ram lambs—J. T. Hobbs, Reading, Arkell, Brassey, R. W. Hobbs. Three shearing ewes—J. T. Hobbs, Brassey, R. W. Hobbs. Three ewe lambs—J. T. Hobbs, Reading, Brassey, Stilgoe, Arkell. Lincolns.—Ram, two shears—T. Casswell, Wright, Dudding, Dean. Shearling ram—1, Dudding; 2 and 3, Dean; 4, J. E. Casswell; 5, T. Casswell. Five shearing rams—T. Casswell, Dudding, Wright, Dean, J. E. Casswell. Three ram lambs—1 and 3, Dudding; 2, Dean. Three shearing ewes—Wright, Dudding, Dean, Swallow. Three ewe lambs—1 and 3, Dudding; 2, Dean.

Cotswolds.—Shearling ram—Garne, Houlton, Swanwick. Three ram lambs—1 and 3, Garne; 2, Swanwick. Three shearing ewes—1 and 2, Garne; 3, Houlton; 4, Swanwick. Three ewe lambs—Garne, Swanwick.

Border Leicesters.—Shearling ram—1, Hume; 2 and 3, Taylor; 4, Twentyman. Three ram lambs—Twentyman. Shearling ewes—Hume, Taylor, Twentyman. Ewe lambs—Twentyman.

Dorsets.—Shearling rams—1 and 2, W. R. Flower; 3, Hambro; 4, Culverwell. Three ram lambs—Attrill, Flower, Hambro, Culverwell. Three shearing ewes—Flower, Hambro. Three ewe lambs—Flower, Attrill, Hambro.

TRADE TOPIC.

IMITATING "SALADA."—The "Salada" Ceylon Tea Co., through their solicitors, Denton, Dunn & Boutbee, have issued a writ in the Ontario High Court of Justice against John Segsworth, carrying on business as the East India Tea and Coffee Co., claiming an injunction restraining the defendant from imitating the "Salada" tea trade-mark.

GRANDVIEW SHORTHORNS

For Sale.—1 bull, by Royal Beau; also a few females. Herd headed by the Marr Missie bull Marengo—31855—om

J. H. BLACK & SON, ALLANFORD P. O. and STATION.

BEAVER VALLEY SHORTHORNS. Some choice heifers and young cows with calf at foot; also two bulls for sale. Inspection invited. om E. & C. PARKINSON, Thorburn P. O. and Station, G. T. R.

BELLEVUE SHORTHORNS.

Both sexes. Imported and home-bred. All ages. Prizewinners at home and abroad. EDWIN BATTYE, Gore Bay P. O. and Port. o MARITOULIN ISLAND.

CHOICE SHORTHORNS.

We are now offering 12 heifers from 6 months to 2 years of age, and 7 bulls from 6 to 10 months old, some of them extra choice and prizewinners—a low down, thick lot. Also, Yorkshires.

WM. McDERMOTT, Living Springs P. O., o Fergus Station.

Imp. Shorthorns and Lincolns

A. D. MOGUGAN, RODNEY, ONT., P. O. AND STA., o

Imported Aberdeen Hero at the head of the herd, which is composed of the best Scotch families. Ten grand shearing and two-year-old ewes for sale, in lamb to a Royal winner. Also ewe lambs from imported Dudding ewes at reasonable prices. o

R. Mitchell & Sons, Nelson, Ont.

Present offering three extra good bulls from 12 to 14 months, two imp. in dams, and one from imp. sire and dam.

Also a number of Scotch heifers in calf. o Burlington Jet, Station and Tel. Office.

Shorthorns and Shropshires. Scotch and Scotch-topped families of Shorthorns. Young bulls and heifers for sale. Shropshires, bred direct from imported stock: Mansell and Cooper strains. BRUCE BROS., Souffville Station, G. T. R. o Gormley, Ont.

I GUARANTEE A \$5.00 PACKAGE OF

BARREN KOW CURE

postpaid, to make any cow under 10 years old breed, or refund money. No trouble, no risk. Given in feed twice a day. om

L. F. Selleck, Druggist, Morrisburg, Ont.

FOR SALE.

Having given up buttermaking, owing to scarcity of suitable help, I am offering two fine, deep-milking Jersey cows, three and four years old, for sale. Butter-fat test, 4.80 and 4.70; due Aug. 24th and 29th. Also Jersey bull, Brampton Hero, two years old, sired by Brampton's Monarch (imp.), out of deep-milking dam. F. C. PETTIT, Burgessville P. O. and Station.

Ten Yearling and Two-year-old Heifers sired by Nero of Glen Rouge, and bred to Dentonia's Achievement. o

E. B. HINMAN & SONS, Grafton, Ont.

JERSEYS

The Greatest Herd in Canada.

Just received a shipment of Jerseys direct from England and the Island of Jersey, which brings our herd up to over 100 head. For Sale—10 bulls, imported and home-bred cows and heifers all ages. For prices, etc., write

m B. H. BULL & SON, Brampton, Ont.

A SNAP IN JERSEYS.

Three fine young cows, bred, and a good young bull, not akin to cows or progeny. Price, \$225 for the four. Write for particulars. W. W. EVERITT, Dun-Edin Park Farm, Box 552. om Chatham, Ont.

Lyndale Holsteins

We are now offering a number of young bulls, fit for service, sired by Lady Waldorf's De Kol. Spring calves of both sexes.

BROWN BROS., Lyn P. O. and Station.

HOLSTEINS, TAMWORTHS, COTSWOLDS.

Present offering: Young boars and sows fit to breed, and younger ones. Choice animals. Ram and ewe lambs and two 2-shear rams. Perfect covering. o R. O. MORROW, Wilton Ont. Brighton Stn.

Riverside Holsteins

Choice young bulls for sale, from 3 to 7 months old, whose sire and dam are in the Canadian Advanced Record of Merit.

MATT. RICHARDSON, & SON, Haldimand Co. o Caledonia, Ont.

Brookbank Holsteins

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

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



Get an Empire.

Examine all the Cream Separators on the market; look carefully to their construction; then select the one which you think will do the best work and give you the least bother. We believe that's the

EMPIRE

Easy Running Cream Separator.

Guaranteed to run more easily, to be easier to clean and last longer than any other. It's for you to decide. Try it first. Get our free book.

Empire Cream Separator Co.
28 Wellington St. W., TORONTO, CANADA.

NETHERLEA AYRSHIRES.

Present offering: 3 bulls fit for service, prize-winners; also a few young females, sired by Napoleon of Auchinbrain (imp.), whose dam's record was 72 lbs. a day, and all of them out of record cows. T. D. McCALLUM, Danville P. O. and Station, Quebec.

AYRSHIRE CATTLE

SHROPSHIRE SHEEP, B. P. ROOK FOWL and 20 YOUNG LARGE ENGLISH BERKSHIRES FOR SALE. J. YUILL & SONS, om Carleton Place, Ont.

AYRSHIRE BULLS.

If you want a snap in from 10 to 16 months old, sired by one of the best stock bulls in Canada, Rosland of St. Annes (8901), and from dams producing 50 to 60 lbs. of milk per day, write quick to D. LEITCH, Cornwall, Ont.

HIGH-CLASS AYRSHIRES.

My present offering is one yearling bull, one 4 years old, and also cows and a choice lot of spring calves, of both sexes. F. W. TAYLOR, Wellman's Corners P. O., Hoard's Sta.

NO HUMBUG. Three in One.

Shave V. Stock Marker and Calf Dehorner. Stops twice from rooting. Makes 48 different ear marks. Extracts Horns. Price \$1.50. Send \$1 for trial. If I fail, send back. Paid May 6, 1902. Hog and Calf Holder only 75c. FARMER BRIGHTON, FAIRFIELD, IOWA.

EUROPEAN ADVERTISEMENTS.

THE RIBY HERD and FLOCK

OF SHORTHORN CATTLE AND LINCOLN LONG-WOOL SHEEP

HENRY DUDDING, Riby Grove, Great Grimsby, Lincolnshire.

To get Champions by the produce of Champions. These can always be secured from the Riby Herd and Flock, the largest in England, comprising the choicest lines of blood extant. Theirs is a world-wide reputation, and suffice to say that at no period of its history, dating back 150 years, were they stronger in merit or quality. 86 awards were won in 1901, and equally good results secured in 1902, culminating in those great victories at Smithfield Show, where its pen of wethers won the 100-guineas Challenge Cup for the best pen of sheep of any age or breed; and at Chicago Live Stock Show, in December last, where a ram from this flock won the \$400 prize offered for the heaviest sheep in the world. CABLE—Dudding, Keelby, England.

English Shorthorns.

Booth and Bates Shorthorns, topped with Cruik shank bulls. Young cows, bulls and heifers always on hand for sale. Eligible for the American herdbook. Royal and Highland prizewinners included for the last two years. Close on £400 won in prizes last year and this.

WM. BELL, Ratochugh Farm, Alnwick, Northumberland, Eng.

W. W. CHAPMAN,

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

pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered.

Address: MOWBRAY HOUSE, NORFOLK ST., LONDON, W. C., ENGLAND.

Cables—Sheepote, London.

GOSSIP.

GOVERNMENT PRIZES FOR BREEDING.

The Dominion Government, through the Dominion Exhibition executive at Toronto, have given special prizes amounting to close upon \$750, for the encouragement of horse-breeding, as follows:

Class 189, Single Roadster, gelding or mare, in harness, not less than 15.1 hands—1st, \$30; 2nd, \$20; 3rd, \$10; 4th, \$5.

Class 190, Pair Roadsters, geldings or mare, in harness, not less than 15.1 hands—1st, \$40; 2nd, \$20; 3rd, \$10; 4th, \$5.

Class 191, Single Carriage Horse, gelding or mare, in harness, not less than 15.1 hands—1st, \$30; 2nd, \$20; 3rd, \$10; 4th, \$5.

Class 192, Pair Matched Horses (open to Carriage, Coach, High-steppers, Hackneys or cobs) in harness, not less than 15.1 hands—1st, \$40; 2nd, \$20; 3rd, \$10; 4th, \$5.

Class 193, Best Saddle Horse, gelding or mare, ridden by owner—1st, \$30; 2nd, \$20; 3rd, \$10; 4th, \$5.

Class 194, Best Saddle and Harness Horse, mare or gelding, 15 hands and over, to be first shown in an appropriate vehicle, and judged as a horse best suited for harness purposes; the horse to be unharnessed in ring, and to be shown and judged under saddle. The horse best suited for both these purposes to be awarded first prize—1st, \$30; 2nd, \$20; 3rd, \$10; 4th, \$5.

Class 195, Single Heavy Draft Horse, gelding or mare, in harness, any breed—1st, \$25; 2nd, \$15; 3rd, \$10; 4th, \$5.

Class 196, Span of Heavy Draft Horses, geldings or mares, in harness, any breed—1st, \$40; 2nd, \$20; 3rd, \$10; 4th, \$5.

Class 197, Best Collection of 10 Horses, any breed or breeds, not necessarily bred by, but must be owned by, exhibitor. Entrance fee \$10—1st, \$100; 2nd, \$60; 3rd, \$40.

SHORTHORNS AT ST. LOUIS.

The executive committee of the American Shorthorn Breeders' Association has decided to enter Shorthorns in the dairy contest at St. Louis. The herd will be in charge of Mr. H. H. Hinds, of Stanton, Mich., who had the management of Shorthorns during the World's Fair dairy test. All Shorthorn breeders who have cows of rare merit as dairy animals are requested to report as soon as possible to Mr. Hinds. The expense of the test will be paid by the Association, including transportation to and from St. Louis. In addition to handsome prizes given by the Louisiana Purchase Exposition, the Association will also give liberal premiums. The following classes are made for the test:

Class A will consist of cows entered for demonstrating the economic production of butter-fat and butter.

Class B will consist of cows entered for demonstrating the economic production of milk for all purposes relating to dairying.

Class C will consist of cows entered for demonstrating all the products of the cow, viz., beef and milk, with their calves judged for their beef merits.

Class D will consist of cows entered for demonstrating the greatest net profit in the production of market milk on the basis of quantity and quality of milk of a given standard.

The committee to whom was referred the conditions to govern the demonstration, recommended that the awards be based on the following dairy and beef elements:

1. The dairy performance of the cow in the yield of products as determined in the dairy demonstration of the exposition.
2. The beef conformation of the cow, and her gain in live weight during the demonstration.
3. The beef merit as shown in the quality and growth of the calf, and as a prospective profitable butcher's beast. The points and their values considered by the judges in making the awards will be as follows:

1—Dairy performance of cow	40
2—Beef points of cow	35
3—Beef points of calf	25
Total	100



This is the kind of test that only one fence can stand

This actually happened to a Page Wire Fence on the farm of Joseph M. Reist, Alsfeldt, in Normandy township, Grey County, and this is what Mr. Reist writes about it:

"Last spring I purchased 120 rods more and had the fence erected in the woods. Lately there fell three trees over it, crushing it to the ground without breaking any wires. After the trees were removed the fence went back to its place and is as tight as before. I can say from my experience, the Page is the cheapest, best and only fence worth a man's time and money to put up."

"Page Fences wear best"

PAGE WIRE FENCE CO., Limited
Walkerville, Ont. Montreal, P.Q. St. John, N.B.

Farnham Oxfords and Shorthorns

My present offering—125 one and two year old rams, sired by Bryan's 125, Hampton Hero 4th, Royal Windsor 4th, and Kempford Hero 8th (all imported), 35 of which are flock headers, the balance strong, vigorous ranch rams. Also 50 choice yearling ewes, and the rare, nice ten-month-old bull, Royal Arcanum 45133, by Imp. Sixty Conqueror, and four heifers, from 10 to 20 months old, by 20th Crown Jewel. Guelph four miles. HENRY ARKELL, Arkell P. O. and Station.

HAMPSHIRE DOWN SHEEP.

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This highly valuable ENGLISH BREED OF SHEEP is unrivalled in its wonderfully early maturity and hardness of constitution, adapted to all climates, whilst in the quality of mutton and large proportion of lean meat it is unsurpassed; and for crossing purposes with any other breed, unequalled. Full information of

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A great lot of good young lambs. Home-bred and imported shearling rams. A beautiful lot of home-bred ewes. Whoever wants such, let him write. All 1902 customers fully satisfied, and I am determined to please each and every 1903 customer by furnishing good stock and dealing fair. JOHN CAMPBELL, "Fairview Farm," Woodville, Ontario.

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STRENGTH EQUAL TO ANY.

Instantly kills ticks and parasites on sheep and lambs. Improves and waterproofs the wool. A sure remedy for vermin, mange, etc., on horses, cattle, sheep, and dogs. Ask your druggist for Kemp's Dip. I will express it, prepaid to any part of the Dominion, for \$3.1.

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Importer and breeder of Shropshire sheep. My flock was represented at Toronto, and won first on shearing ram, first and second on aged ewes, and second on the pen. First time exhibiting. If in need of a first-class yearling ram, imported or home-bred, write! Your wants can be supplied, and at prices consistent with quality. Have a choice lot to choose from, and can guarantee satisfaction. Come and see them, or a card will bring them.

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SHROPSHIRE—A flock of 110 head, fine, healthy sheep. Can supply 2-year, 1-year and ram lambs; also 2-year, 1-year and ewe lambs. Prices reasonable. **ABRAM RUDELL,** Hespeler, Ont.

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GLENBURN STOCK FARM Berkshire Pigs, of good length and quality. From March and April litters. Can supply pairs. Sex and young boars, ready for sale. Choice Short-horn calves of both sexes.

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GLENBURN YORKSHIRES won Gold Medal at Ottawa, 1902. Herd averages 100, headed by the choice boars, Oak Lodge Prior and Pine Grove Squire. Twenty head sows, 12 six-months sows, due to farrow March and April, 40 sows and boars, four weeks to three months old; pairs not akin.

DAVID BARR, JR., Kennebec, Ont.

BERKSHIRES AND YORKSHIRES For Sale—Boars fit for service; sows in litters and ready to breed, and younger stock, all of the best bacon type. Pairs not akin. **JOHN BOYES,** Rosebank Farm, Churchill, Ont.

GOSSIP.

High prices were realized for Thoroughbred yearling colts sold at Sheephead Bay last month from the stud of J. B. Higgin, at the Ranch del Paso Farm, a baker's dozen of the best selling at prices ranging from \$2,500 to \$15,000.

It is reported that the records of the American Hereford Association were caught in the flood at Kansas City, being stored in a basement. They are said to be in bad condition, though the figures are still legible. It is probable that all will have to be copied.

The American Aberdeen-Angus Breeders' Association has offered a very large sum of money to be won in prizes at the breed show at Kansas City and the International at Chicago this year, and at very many other meetings. At the International \$5,000 will be hung up and \$2,500 at Kansas City, while, as already outlined, sums otherwise donated range from \$100 to \$300. The Preliminary classification, rules and regulations have been issued, and may, with other needed information, be obtained from Secretary Thomas McFarlane, Pedigree Record Building, Union Stock-yards, Chicago.

A well-known starting judge recently asserted that he would much rather start a whole afternoon's programme of professional races than one race for amateurs. "If you wish to lose your friends in short order," said he, "just go to the track or speedway with a lot of them and attempt to get them away in good shape in a matinee race." And there is a lot of truth in what he says. A starter has no way of controlling a field of amateur drivers, and if he insists in giving every one an equal chance, or if he gets disgusted and lets them go away to a ragged start, some of them will get mad. It makes little difference which course he takes, he will have less friends when it comes night than he had in the morning.

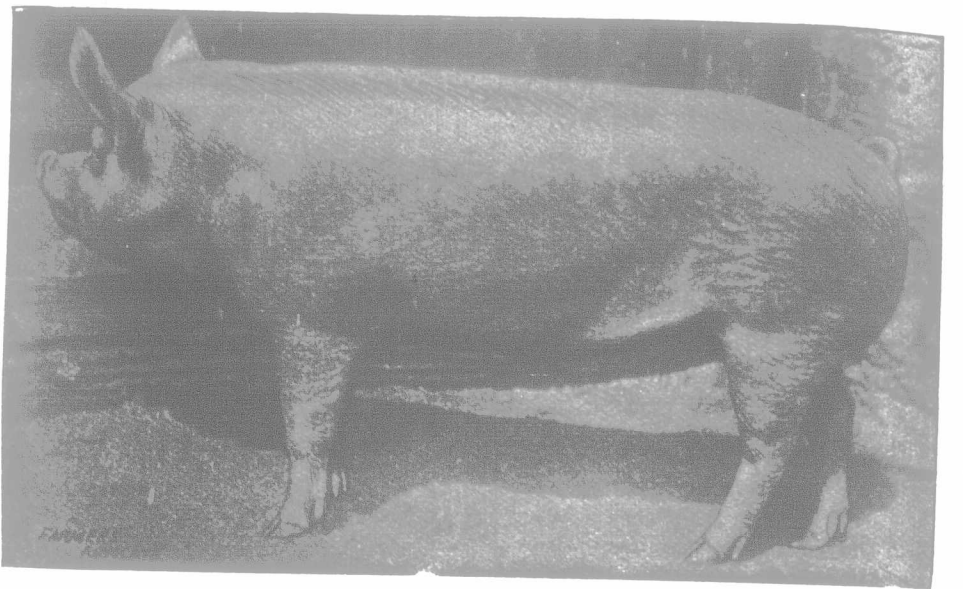
In view of the fact that a great deal of discussion has been indulged in as to how a four-in-hand team should be handled, the individual styles of such well-known whips as Morris Howlett, Aurel Batonyi and the Brothers Fownes, having been incidentally brought into the discussion, the challenge recently issued by Mr. John Thompson, one of the best known of English sportsmen, is likely to create considerable interest among coaching devotees on both sides of the Atlantic. Mr. Thompson believes that the Fownes Brothers, E. K., Arthur, Ernest and Charles, are the four best coaching drivers in the world, and his challenge is an offer to wager \$2,500 that in a competition they can demonstrate themselves superior in that respect to any other four coaching drivers in the world, either French, English, American or any other nationality. Should the wager be accepted on the part of some quartette of expert drivers, an interesting exhibition of reinsmanship should result.

A DRAWING RACE CARD.

The racing card in connection with the great annual exhibition at Ottawa has been prepared. It is better than any yet announced in Eastern Canada, and there should be a big gathering of the lovers of the sport to see it. There is a trotting race and running events every day, and the purses are liberal. There is a purse of \$250 for 2:35 pacers and 2:23 trotters; \$300 purse for 2:18 pacers and 2:10 trotters; \$250 for 2:25 pacers and 2:20 trotters; \$250 purse for 2:40 trotters; \$100 purse for a free-for-all. Of the purses for the running events there is one of \$125 for half-mile heats; \$150 purse for 1/4 mile hurdle; \$150 for 1/4 mile dash; \$125 for 1/2 mile heats; \$100 for 1/4 mile; \$200 for hurdle race; 1/4 mile handicap; \$150 for 1/2 mile dash; \$150 for 1 mile (selling).

SUMMERHILL HERD OF Large English Yorkshires

HEADQUARTERS FOR THE IDEAL BACON HOG.



Our winnings at the large shows, for 1901, are as follows: At Toronto every possible first prize and five seconds, two silver medals, and first for pen of pure-bred bacon hogs, also sweepstakes on bacon hogs over all breeds; at London every possible first but two; while at the Pan-American, where our herd was divided, half going to Toronto, we won six out of ten possible firsts, also sweepstakes on boar any age. At the Pan-American (Buffalo), Toronto and London there were thirty-six first premiums and medals given; all the medals and every first prize but six won by the Summerhill Yorkshires. When in need of the best write **D. O. FLATT & SON, MILLGROVE, ONT.** on Telephone: Millgrove, Ont.

HILLCREST HERD OF Large English Berkshires

My brood sows are imported or show animals, and the sires are big, long fellows of the bacon type. For sale: An excellent lot of young pigs, and a few young sows recently bred. Can supply pairs not akin. Enquiries promptly answered. Vine station, G. T. R.—near Barrie. **Jno. Lahmer, Vine, Ont.**

TAM WORTHS. Young pigs for sale, from medal-winning sow, O. A. C. 110, and other good ones, sired by Imp. Starlight, Pan-American First, and Bold Boy, Toronto winner. **JOHN HORD & SON,** Parkhill P. O. and Station.

TAM WORTHS. FOR SALE: Two young sows, bred to Dandy =2954=, a good typical sire; also several young boars and sows of very best breeding.

HAZEL DELL STOCK FARM. D. J. GIBSON, Bowmanville, Ont.

Newcastle Herd of Tamworth Swine Have for a number of years taken a share of the best prizes offered at Toronto Exhibition, but this year has excelled all past records, having taken the sweepstakes for the best herd; also both silver medals for best Tamworth boar and best Tamworth sow, besides many other prizes in the various classes. Our present offerings are: A few choice young sows, 4 to 5 months old; 2 yearling sows, in pig; and we are now booking orders for spring pigs, both sexes. Enquiries promptly answered.

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WILLOW LODGE BERKSHIRES Herd headed by Long-fellow 10th of H. F., assisted by the noted prize-winner, Highclere Crown 3rd. Sows, the best money will buy, and are winners. Young stock of both sexes and all ages for sale, not akin.

W. WILSON, SNELGROVE, ONT.

Maple Grove Herd of Large ENGLISH YORKSHIRES From imported and home-bred sires. Choice lot of young sows bred to imported boar, Summer Hill Dalmeny Cavalier =10955=, and a number of young stock from prizewinners. Pairs not akin supplied.

T. J. COLE, BOX 188, BOWMANVILLE, ONT.

"BROAD LEA OXFORDS" An offering choice ewe and ram lambs, shearing ewes and a few shearing rams for flock headers. Also young Yorkshire pigs of the best bacon types. Teeswater, C. P. R. **W. H. ARKELL, Mildmay, G. T. R., Teeswater, Ont.**

LARGE ENGLISH YORKSHIRES Imported and Canadian-bred Yorkshires, from stock of the best British herds. A choice lot of boars, ready for service, and a number of sows being bred to imported Dalmeny Long Sam, for sale. Also young pigs, all ages.

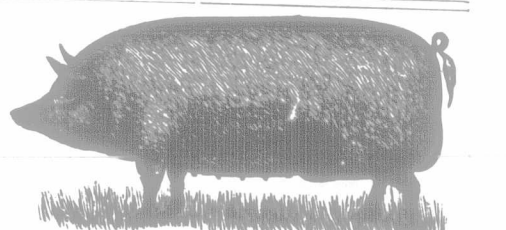
H. J. DAVIS, BOX 518, WOODSTOCK, ONT.

SPRING BROOK STOCK FARM. Two boars ready for service; also a few March boars. Write at once for prices. Always a choice lot of 11-steiners, of all ages, for sale.

A. C. HALLMAN, Breslau, Ont.

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Sows safe in pig, boars fit for service, sows ready to breed, boars and sows 2 and 4 months old. Satisfaction guaranteed in orders received by mail.

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PINE GROVE FARM HERD OF LARGE ENGLISH YORKSHIRES.

The oldest-established registered herd in America. We have 12 imported boars and sows and 20 home-bred animals breeding, and have a limited number of young boars and sows for sale, suitable for this fall's breeding. Satisfaction guaranteed in all mail orders.

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Yorkshires, Collies and Poultry

This month we are offering something extra in Yorkshire boars and sows, 6 weeks to 4 months. Will sell 10 yearling W. Wyandotte hens and two cocks, all fine stock. Choice pedigreed collies.

J. A. & A. H. Armstrong, Warkworth, Ont.

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My importation of Yorkshires has arrived, and is rather better than I expected. Imported boars and sows now for sale at prices consistent with quality. Correspondence cheerfully answered.

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FOR SALE: Yorkshires and Holsteins

Best type and quality. Young stock constantly on hand. Prices right. **R. HONEY,** on Brickley P. O., instead of Warkworth.

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Choice young stock for sale, from imported and home-bred stock of highest breeding and quality. Prices low. Satisfaction guaranteed. My motto: "Not how cheap, but how good." Telephone, Telegraph and Stations: C. P. R. and G. T. R., Weston, Ont. (electric cars from Toronto). Address: on

L. ROGERS, EMERY, ONT.

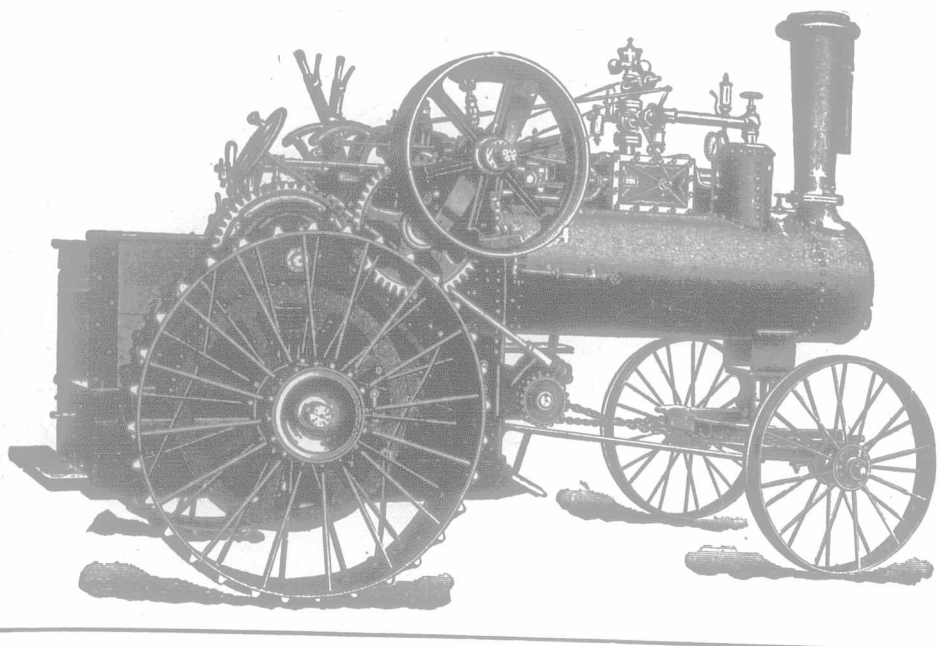
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For Sale: 1 boar, Cotgrave King 11649, farrowed Oct. 25th, 1902, sire Summer Hill R. G. (imp. in dam); dam Cotgrave Lassie 7th (imp.); also young boars and sows. Write

C & J. CARRUTHERS, Cobourg, Ont.

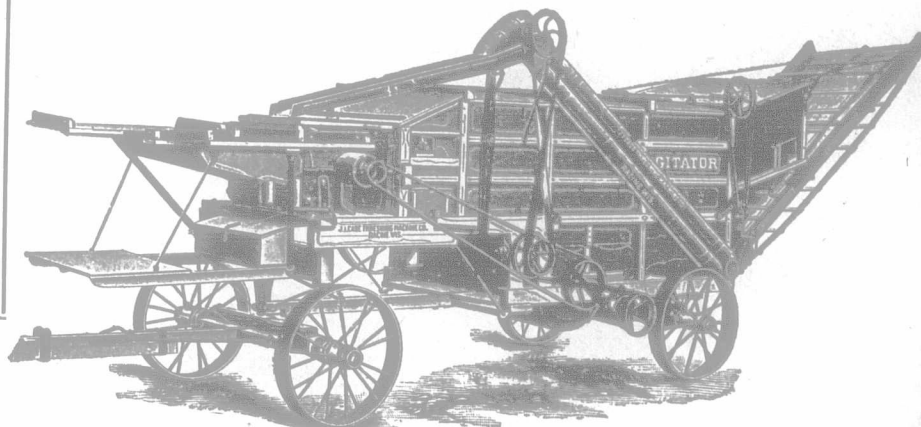
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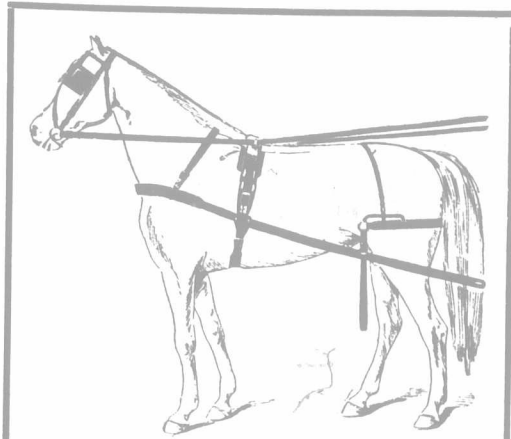
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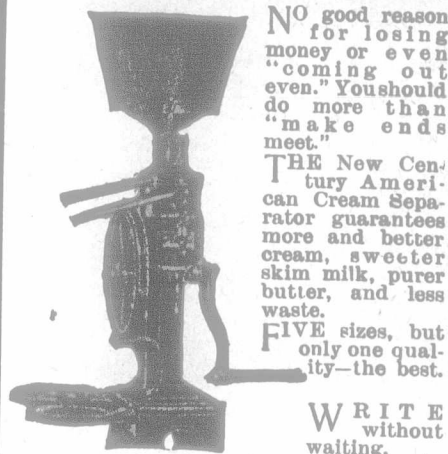
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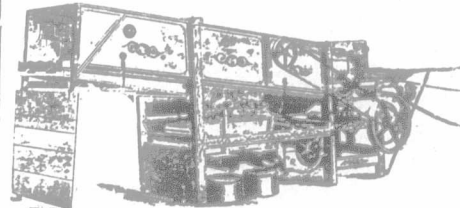
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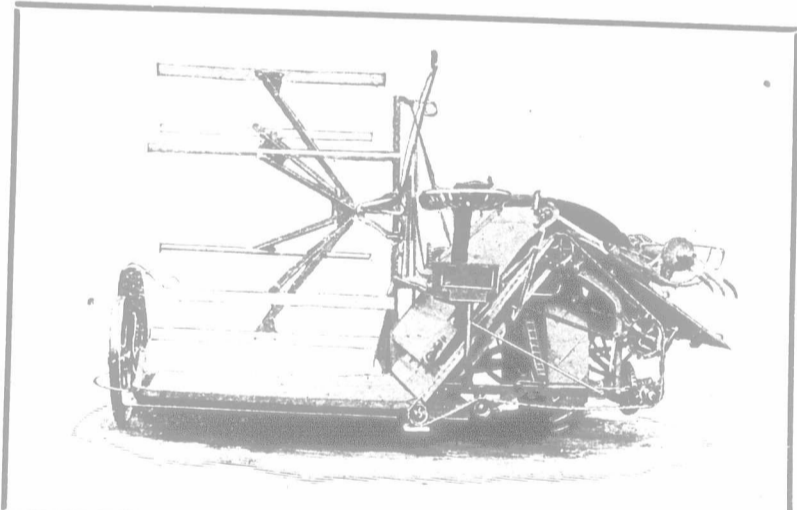
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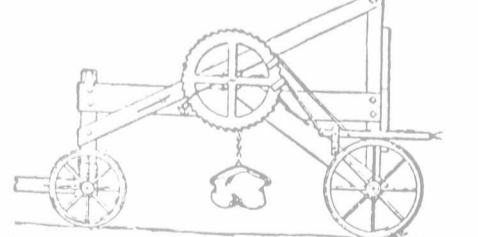
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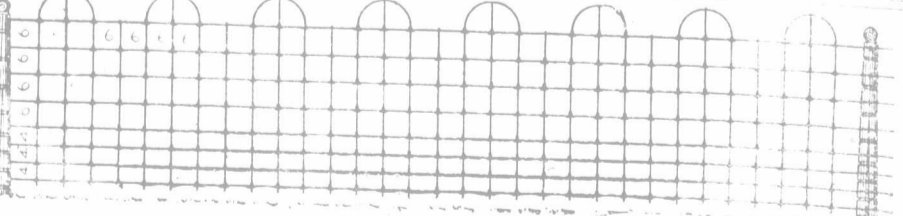
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