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# The Farmer's Advocate

## and Home Magazine

"Persevere and Succeed."

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### EDITORIAL.

#### HOW SHALL THE RURAL SCHOOL BE REFORMED?

In an article entitled "The Undoing of the Farmer," "The Farmer's Advocate" for November 7th discussed a luminous address, at Syracuse, N. Y., by United States Secretary of Agriculture Wilson, on the "Unproductive Farm," in which he charged the educational system with tempting the youth away from the soil and equipping them only for other pursuits. He commended the agricultural secondary schools, which would be feeders of the agricultural colleges, and open to students who go no further opportunities for beginning the study of what pertains to their life-work. "But why," we asked, "should the 'beginning' date in the Secondary or High School, when it is in the public school that the foundation is laid, and, for the great majority of our growing population, the educational superstructure, in so far as schools can rear it, is completed?"

An attentive and critical reader of "The Farmer's Advocate," whose opinions we highly value, writes, though not for publication, interpreting the article as not altogether approving the beginning of agricultural instruction in the High Schools, as is now being tried in Ontario. Now, we have welcomed the inauguration of these classes as a hopeful sign in the movement for a reform of the public school, but expressed a caution against speedy and great expectations, an attitude, we believe, shared by those who planned and administer them, with the hope that the work will not remain in these High Schools, but gradually work down through the public schools by means of the agricultural instruction given those whose purpose becoming public-school teachers. These six High-school class teachers are carrying on a campaign in the counties where they are situated, attending meetings, arranging for short courses, and showing to farmers that they can give instruction of value to their sons and daughters, in order to create a widespread demand for it.

Our correspondent states that he does not see how agricultural instruction can be expected in the public schools without a pretty thorough reorganization of the school system.

That is precisely what we are contending for. Thoughtful people have begun to realize at what a cost to themselves their children have been lured from the country, and inspired with no love nor ability for success in its pursuits if they remained there. Confessedly, there are difficulties, but the problem will not be solved until solved aright. All but a comparatively small fraction of the total school population, cities and towns included, receive their education in the common schools, and 58 per cent. of it, we are officially told, depend upon the rural school alone. Its character is, therefore, vital to the education of the people. Agriculture being the most important industry of this country, the school system should have some relation to it. A reform at the base will benefit the whole edifice, right up to the university.

In the Ontario school system there has been an optional provision for teaching agriculture as a specific subject, but with very indifferent results. To teach agriculture, per se, as an art, or the actual operation of farming, in the common schools is not yet practicable, and the young women, who chiefly preside over them, could not be expected to undertake the task; nor would the mere memorizing of a mass of technical terminology be of real educational value.

We are asked what more can be done?

First.—Improve the grounds, buildings and equipment. Good schoolhouses and churches are an index of a neighborhood, and enhance the value of its farms. Make the grounds roomy and pleasant, so that the young folk will delight to go there and be proud of their schools. Provide a school garden for growing flowers and other plants. Teach the students to use their hands. A more mistaken notion never got abroad than that education is just accumulating facts in the memory. To be educated, is to be so trained as to use aright all the powers of the man—physical, mental, and moral or spiritual. (Watch "The Farmer's Advocate" of Dec. 19th for a splendid resume of the experience of teachers in school-gardening and its benefits.) Inculcate the dignity of labor and the wholesomeness and superiority of country life. Let the pictures on the walls and the apparatus idealize and relate to the farm and the farm home. Have plenty of bright books on nature and the farm in the school library, with some that parents can, if need be, refer to. Don't fill it up with a lot of weak stories, but make it cultivate a taste for good literature.

Second.—Revise and improve the text-books. Put more of the beauty and purpose and atmosphere of the farm and farming into the readers. Color arithmetic with problems that relate to the work of the farm and the farm household, provoking home enquiry. Give the mathematical phases of the mechanics, chemistry and commerce of the farm at least equal prominence with brokerage and commission. The geographies might make more of the intimate relation between that subject and farming.

Third.—Elect school trustees who will carry out an enlightened and liberal policy, giving the preference, at a better salary, to a man or woman teacher brought up on the farm and in sympathy with farm life, rather than one from a city or town whose experience, interests and ambitions prevent him or her from estimating life from the farmer's point of view.

Fourth.—Greater care by county councils to select men for the position of rural-school inspectors who are in sympathy with agriculture and agricultural education, and who have had successful experience in rural public-school work. The Departmental regulations governing the qualifications of inspectors should lay as much emphasis there as on his university attainments.

Fifth.—Wherever possible, maintain the advanced or continuation class; do not allow the school to be run as a mere feeder of High Schools. Restore the prestige and efficiency of the rural and village school, saving to parents a great deal of extra High-school education outlay, maturing the scholars under the more wholesome home and local school conditions, cultivating their self-reliance, and sustaining the progress of the teacher by keeping up advanced studies. These classes should be encouraged by inspectors in every way possible, instead of crowding them into the High Schools.

Sixth.—Modify the public and High-school courses. Since it is in the latter that teachers secure much of their academic training, it follows that the programme of studies, which has been biased in favor of "professional" pursuits, such as law, pharmacy, medicine, etc., and mercantile occupations, should be overhauled, so as to restore the balance to those studies that relate more directly or indirectly to agricultural life, and which can be used to quite as good educational purpose as foreign languages and Ancient History.

Seventh.—Readjust the teacher-training in Model and Normal Schools. Here, in our humble judgment, is the key to the whole situa-

tion. In these institutions the teachers are made and public-school teaching receives its complexion and bent. We should like to inquire, through the Provincial Minister of Education, exactly what is being done at the Normal Schools that will minister to the needs of the masses engaged in farming. What is to be the character of the new Normal Schools being established? Are the staffs being chosen to man them in touch or sympathy with agriculture and rural life? Why not locate one of them in conjunction with the Ontario Agricultural College, where an infusion of its spirit might be received? We are told in the newspapers that, along with their training in the science and art of teaching, the Normal students are to receive much more academic instruction. Is it to be of the old High-School-University pattern, or upon the broader lines of The New Education? A new and younger president is now the head of the Provincial University, and the Minister of Education is turning a new educational page. What shall it be?

#### ECONOMICAL FEEDING OF CATTLE.

The summary of results, given on another page of this issue, of an extended series of experiments conducted by the Missouri College of Agriculture, in wintering young cattle on different forage crops, alone, and combined with different grain rations, should prove of special interest to feeders at the present juncture, when in certain districts fodder is unusually scarce and grain and millfeeds high in price. It is important that farmers should have an intelligent knowledge of the most economical methods of carrying over young stock and dry cows, in order that the former may continue to make some increase in weight, and that the latter may be kept in condition to make the best use of their feed when coming into milk again. And the experiment stations, having the necessary facilities for determining the results of different methods of treatment and feeding with greater accuracy than private individuals, their investigations should be accepted as throwing valuable light on these problems.

Among the important lessons conveyed by the bulletin in question is the relative feeding value of clover and of timothy hay and cornstalks, showing clearly the superior nutritive effect of clover, especially for feeding in combination with the carbonaceous fodders, such as corn and timothy, and strongly emphasizing the importance to the farmer of sowing and growing in liberal quantities this commonest of the legumes, and the one requiring the least expense or skill to grow, harvest, store or feed. Clover is one of the most valuable stock foods produced, and, instead of impoverishing the land, adds immensely to its fertility and its power to produce more bountiful crops of grain or roots or corn, gathering from the air nitrogen, one of the most valuable and efficient of fertilizing elements, and storing it in its rootlets for the benefit of future crops, supplying humus for the conservation of moisture in the soil and food for the plants that follow. As a sequence, the gospel of clover-growing, which is the salvation of farming in this country, should be more earnestly than ever preached, and taught in season and out of season, through the press, the Farmers' Institute system, the dairymen's associations, and every other available channel, so that enthusiasm for the culture of this great forage crop, in conjunction with its legitimate running mate, corn, may become more general and widespread.

In view of the unusual scarcity and the probable high price of clover seed for next spring's sowing, the questions of the most profitable quan-

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tity per acre to sow, the best method of covering the seed to insure a catch, the best grain crops with which to seed down, the best means of protecting the young plants from destruction by the heat of the sun after the harvesting of the grain crop, and of avoiding the undue freezing in winter and heaving out by spring frost, may well engage the attention of farmers and form a topic for discussion and interchange of experience during the winter months. It is an acknowledged fact that heavy losses are sustained in some years from clover seed sown with a so-called nurse crop failing to prove a satisfactory catch, or from being burned out after harvest, or heaved out by frost. And the loss is not only the cost or value of the seed, but the consequent loss of a crop of one of the most valuable of stock foods and soil fertilizers, interfering with the most approved system of crop rotation, and causing impoverishment of the land by a succession of grain crops. The title "nurse crop" in this connection is really a misnomer, as there is ground for believing that a grain crop robs the clover plants of moisture, and shades them so that the tendency is to a slender growth and peculiar sensibility to the heat of summer, seen in case of dry weather after the grain harvest, but we presume it is yet too early in history to advocate sowing the seed alone, giving it the same advantages accorded to other crops, and farmers will continue the system of sowing it with a stronger-growing crop, taking chances for success or failure as long as the experience proves that the prizes are in greater proportion than the blanks; but it is surely worthy of consideration, whether by sowing less grain per acre than has been customary, an equally good yield of the cereals and a stronger stand of clover plants may be secured, and the latter better prepared to resist a drought after the grain harvest.

Another good point, which we have already quoted from the instructive and suggestive bulletin, is the reference to alfalfa or lucerne, a le-

gume which should be more widely grown over the greater portion of Eastern Canada. Prof. Waters, in his summary, is able to declare that alfalfa in its best condition is, without a doubt, more efficient than either clover or cow-pea hay, and when in ordinary condition is fully equal to either of these hays at their best.

## NATIONAL ASPECTS OF LIVE-STOCK HUSBANDRY.

In a country like Canada, so peculiarly well adapted to live-stock husbandry in general, and the rearing of pure-bred stock in particular, the various Provincial Departments of Agriculture have, in the past, naturally and wisely directed their efforts largely in that direction, by means of exhibitions, the dissemination of information, and the securing of better transportation facilities. The Provinces have received aid from the Live-stock Branch of the Dominion Department of Agriculture, under the administration of Hon. Sydney Fisher as Minister, who is to be congratulated upon the service thus rendered. With the more thorough organization of the agricultural service in the older Provinces, and its inauguration in the new Western Provinces, the Dominion should be relieved of such educational work as Farmers' Institute lecturing and live-stock judging schools.

The most signal and important achievement in recent years, at Ottawa, relative to the pure-bred live-stock interests, was the adoption of a system of record-keeping upon a national basis, with headquarters at the Capital, but still under control of the breeders.

Obviously, then, the Dominion Live-stock Branch will hereafter devote its energies to those wider questions affecting the security, development and improvement of our live-stock trade in all its national aspects. For this very reason, the Live-stock Commissioner, Dr. J. G. Rutherford, is wisely associating with the service men well versed in various aspects of the industry, and seeks to strengthen his hands by means of the National Association, called again to meet in Ottawa during February next, as already outlined in "The Farmer's Advocate."

The recent inauguration of the dressed-meat and canned-goods inspection service will undoubtedly tend to encourage an export trade in these products. It is a most evident fact that the public abroad and at home will insist on wholesome foods, and though there may be friction here and there in its inauguration, the inspection service has not come an hour too soon. Improved and cheapened facilities, with greater speed in getting dressed meat to its destination, will soon be demanded, as well as for finished beeves on the hoof, and a thorough inquiry into the production of the latter, with a view to greater certainty of profitable returns, is assuredly in order, and should involve questions of breeding, feeding and early maturity, as well as transport. In view of its relation to beef-raising, as well as dairying, why not inaugurate a really comprehensive programme of research in relation to the question of the combination cow, upon which farmers would welcome well-defined deliverances?

And then, what of the Canadian sheep and wool industry? Why are our markets not better supplied with toothsome mutton and lamb? Are there not many areas of the country peculiarly well adapted to an extended sheep industry? Has the sheep any place on a dairy farm? What direction should wool production take? What's to be done with the predatory dog? What of the wool market and the effect upon it of the shoddy trade? These and many other problems bearing upon the extension and profits of sheep-rearing may well receive greater attention on the part of a national live-stock organization than they have in the past.

The collection of accurate statistical data, showing the condition and progress of the live-stock industry of Canada, indicating, also, those areas or conditions in which certain breeds of stock do best, and the possibilities of their profitable development, opens up another large and useful field for national effort.

According to recent Western advices, one hundred and fifty young men from the farms of Manitoba, Saskatchewan and Alberta, are registered and in regular attendance at the Manitoba Agricultural College in Winnipeg. Considering that it is but the second year of operation, this is a most encouraging record, indeed.

## "THE UNDOING OF THE FARMER."

Editor "The Farmer's Advocate":

The farmers of this Province are under a very great obligation to "The Farmer's Advocate" for the article in a recent issue under the above title.

Farmers are proverbial grumblers. The weather doesn't always suit them, and prices are not always adjusted to their way of thinking. The feeling has been growing of late years that the farmer has not been getting a fair share of the prevailing prosperity. For the farmer's failure to secure his due of the material rewards of life, various reasons have been offered, and the issue is now fairly before us. Perhaps the solution of the difficulty lies in the farmer himself, and I wish to ask if the farmer respects his work and himself as he should? For instance, he finds that a lawyer from a distant city is to be his guest on a certain day. How will this legal friend be entertained? Is it not a fact that the best in cellar and pantry will be put at his guest's disposal? Suppose that his guest should be a farmer from an adjoining township. In this case, would there be the same eagerness to make a fine display? If not, why not? In the answer to this question is involved more than we think.

Another instance is worth considering. A farmer is, say, to meet a couple of men of national reputation at a fair, the one a successful grain-grower, the other a politician. To which one will the farmer be the more likely to defer?

Again, a farmer's marriageable daughter meets two successful young men at a party, the one a professional man, the other a farmer. Matters of wealth and character being equal between the two young men, in the event of both of them becoming suitors for the daughter's hand, which of the two will the farmer and his wife be the more likely to encourage?

Now, I do not for a moment accuse the farmer of snobbishness or flunkeyism, but farmers will do well to think more worthily of themselves and of their vocation. No work in the world makes more exacting demands upon the higher intellectual faculties than is made by farming. No occupation in the world has brighter prospects before it than are held out before the Canadian farmer just now. No doubt agriculture has its drawbacks, but so has every other occupation. We admire the business acumen of the man who successfully manages a departmental store, but we sometimes forget that the farm, with its crops, its roots, its orchard, its garden, its horses, its swine, and its dairy herd, is really a departmental concern, with all the problems of a city departmental store, together with scores of problems connected with living organisms that the city man never dreams about. In importance, as regards the welfare of the race, the farmer's work far transcends that of any manufacturer or professional man the wide world over.

One of the problems of the future is to have the farmer come into his own. The noise and glitter of the past years may have had not a little to do with making some young men and women believe that farm life is slow and humdrum, but the present financial panic proves that a deal of what seemed so attractive was, after all, only empty show. When many a business man is being crowded to the wall, and scores of men reputed rich are being proven to have possessed fortunes of only fictitious value, the average Canadian farmer has the pleasant feeling of having a little more than held his own. Not a few dwellings in our cities that seemed to be palaces in external appearances, conveniences and furnishings, in comparison with the average farmhouse, are turning out to have been built and furnished on borrowed capital, and their occupants are being compelled to seek undesirable quarters, and to subsist on diet that the farmer, fortunately, knows nothing about. Let the farmer think about these things, and help his children, in the light of them, to read the signs of the times. Along with this, let him learn, once and forever, that money-getting and public recognition are merely incidents in the great business of living. The greatest thing in the world is manhood or womanhood; the loveliest spot under the sun is home; and both of these may and do come to their best in farm life when the farmer is awake to his privileges.

Wentworth Co., Ont.

O. C.

INSPECTION OF RURAL-SCHOOL CONTINUATION CLASSES.

Editor "The Farmer's Advocate":

Your agitation for better rural schools, and more attention to the public schools, is meeting with effective results. The Department of Education has already modified the system of Normal-school training so as to require observation and practical teaching in rural schools as part of the Normal-school course. They also oblige each Normal-school Master to spend one week per year with a rural public-school inspector. This is another acknowledgment that the Normal Schools are ineffective. The fact is generally admitted that the Normal Schools were in most cases taking little interest in the rural schools. Such a condition of affairs is now to cease, and we hope that the Normal-school Masters of the future will recognize that the chief schools that come under their direction are the rural schools, and also recognize that the chief schools in Ontario are, after all, the rural schools. Here the mass of our people receive the only education they get, and the schools ought to be given the best attention possible. As the Continuation Classes are public schools, being administered under the Public Schools Act, it is expected that their efficiency will contribute much to the welfare of the rural classes. If Continuation Classes be properly staffed and inspected, they will soon multiply, and will be found in all the rural districts, and will mean much to the people.

The inspection of Continuation Classes in Ontario ought to be an imperative duty on the regular County Inspector, rather than be under a central Provincial Inspector. There are many reasons for this. I may mention, among these, the fact that they originated under the rural inspectors, and they are their choicest schools. These inspectors naturally take a pride in the efficiency of these schools, and in the excellence of their equipment and well-kept school-gardens. To take these schools from the inspectors is to discourage them and to divide their work. The rural classes know the inspectors well, and if they be any use, they enjoy their fullest confidence and can operate these schools better than any Provincial officer can possibly do.

I believe no better head can be found for these schools than the present inspector, Mr. Cowley; still, I think, now, after one year's consideration, that the Department would act wisely in abolishing the official position of Continuation Inspector and creating a Travelling Assistant Superintendent of Education, whose official duty would be to aid County Inspectors and to inspect the Normal Schools, where all the public-school teachers are trained. There will be some thirty Normal-school Masters, and they should be thoroughly familiar with rural conditions. How are we to know that the Normal-school Masters are, unless they are inspected by a man thoroughly in touch and constantly in contact with the best and the worst in our rural schools? This question

answers itself. Let the Department make Mr. Cowley Assistant Superintendent, and let his specific duties, outside of the Department, be Rural Schools and Normal Schools, and give the County Inspectors back the Continuation Classes. Ottawa, Ont. R. STOTHERS.

HORSES.

QUALITY IN HORSES.

There is no subject upon which there seems to be more diversity of opinion amongst horsemen than as to what constitutes "quality" in a horse. It is a term in very common use, but if you ask a number of horsemen what they mean by it, you are sure to get a variety of answers. One will say it means breeding, another conformation, another finish, another "class," another symmetry, another individuality, another accentuation of all fine points, another magnetism, another refinement of lines, or perhaps a combination of some or all of these attributes. Some say that quality is recognizable, but undefinable and unexplainable.

The term "quality" is an abstract one, indicating a special attribute in an individual, just as being well bred, well conformed, and possessing finish, are attributes of some individuals. When one says that a horse has "quality," one means that he has a special attribute, which may or may not be combined with any or all of the others mentioned. Of course, there are varying degrees of quality, so that the term can only be used in a comparative sense. In the light classes of horses it is very often used synonymously with breeding. Certainly, the more warm-blooded a horse is, the higher the degree of quality he is apt to possess; but one may take two equally well-bred Thoroughbreds and find one showing evidence of the possession of a higher degree of quality than the other, so that breeding and quality do not mean the same. Neither does quality signify the possession of symmetry, good conformation, finish or "class." A horse may be defective in any or all of these respects, and still possess a high degree of "quality." He may be fiddle-headed, lop-eared, ewe-necked, sway-backed, flat-sided, slack-loined, cow-hocked or calf-kneed, and yet show much "quality."

Much confusion is caused by using the term "quality" synonymously with "class." Horses are spoken of as high-class, medium-class, and so on, indicating the degree of excellence which they possess for the purpose for which they are best suited. Two individuals can be taken as an example, showing equal "quality," but one of them, on account of better conformation, more style and action, may be worth twice as much as the other, consequently he is a higher-class individual, although the two are equal in "quality"; so that "quality" and "class" do not mean the same.

If, then, "quality" does not mean breeding, or conformation, or symmetry, or finish, or class, or a combination of any or all of these, what does it mean? It is an easier matter to explain what constitutes "quality" than it is to give a concise and at the same time comprehensive definition of what it is. It may not inaptly be defined as fineness, in contradistinction to coarseness of texture. How frequently one hears a prosperous purchaser say to a dealer: "He is a very nice horse, but very light in bone." The dealer replies, "Yes, but his bone is of good 'quality.'" It is a fact that the bone of some horses is much more dense or compact, and is, as the dealer expresses it, of better "quality" than that of some others.

What causes this greater density in the bones of some individuals than in those of others? The fibres that form part of the tissues of an individual of high "quality" are more slender than those of one of less "quality." One can appreciate this even with the naked eye in examining the walls of horses' hoofs. In a horse possessing a fairly high degree of "quality," the fibres which run from the coronet down, in forming the basis of the wall, are most palpably finer than in those of the wall of the coarser individual. So with the bone; the elements that combine to form it into a horse of high "quality" are fine and more highly organized than in those of a coarser individual.

What you find in regard to quality in the bones of an individual, you find pervading all the tissues of his organism. You do not find a horse with coarse bone and fine skin, or coarse skin and fine bone. If the bone is fine, or has "quality," in an individual, the muscles, tendons, ligaments, skin, hoofs, hair and all other tissues which enter into his composition are equally fine, or are of equal "quality." The "quality" of a horse's bone may be perfect, but undue or disproportionate length, or other defective form, or faulty relationship of one bone to another, may make his conformation very imperfect, indeed, so that it is difficult to understand why some horsemen think there is any relationship between "quality" and conformation.

A high degree of "quality" is apt to be associated with defects, or one might also state that a horse can have too much quality. Size, or, more correctly, substance, is strength, other things being equal. A horse with a high degree of quality may be so lacking in substance as to impair his power for the performance of work or severe tests of endurance or speed. He may be so light-limbed that he cannot stand the wear and tear of hard work and remain practically sound. We often find horses that are superfine with disproportionately small feet, and every experienced horseman knows that it is seldom that such horses do much work and remain sound. A horse, however, cannot have too much "quality," providing it is combined with sufficient substance for the purpose for which he is required. A high degree of "quality" and sufficient substance are



A Western Ranching Scene.

most important attributes in contributing to perfection in horseflesh.

There are many everyday evidences of the ill consequences of deficient quality in horseflesh. You hear a horseman say that a horse has soft legs, and he points out an individual inclined to fill about the skin of the fetlocks, to show windgalls which extend up to the sheaths of his back tendons, and whose hocks are inclined to be puffy throughout. If he gets a bruise or injury of any kind to the skin of his legs, the consequent swelling is apt to extend, and is inclined to remain. Abrasions, cuts, cracks and scratches heal rather tardily. Concussion and direct injury to bone are very much inclined to result in bony enlargement, such as splints, that spread out and have not well-defined limits. Standing in the stable too much rapidly produces stocking of the legs. There is a predisposition to greasy legs. Feet are inclined to be flat, large, and easily bruised.

These tendencies show coarseness of tissue and low organization, a meagre blood supply and inactive nutrition. Horses with "quality" also develop windgalls and splints, if subjected to sufficient cause, but their character differs from those of the coarse horses in being clean-cut and well defined, and not having the tendency to spread out. A horse with quality may have a bog spavin, but it will show as a well-defined prominence, and not as a round puffiness of the hock throughout.

Draft horsemen talk "quality" just as much or more than those who have to do with the light breeds. The difference in the "quality" of individuals of the draft breeds is just as well marked as in the light breeds. Take, for instance, a Clydesdale or Shire, either of which will have a considerable quantity of long hair on the back of his legs, which is often referred to as "feather." If this hair is found to be fine and silky, not coarse and wiry, you will find that it is possessed by an individual that shows "quality" throughout. His skin will not be coarse and beefy, his legs will be fluted, his bone will have a tendency to flatness, showing density of structure. The hair of his mane and tail will be fine, like that at the back of his legs. The eminence and depressions formed by the bones of his head will be comparatively finely chiseled. He, in fact, shows "quality," when compared to other members of the same breed that are equally well bred; as far as possessing the characteristics of the breed, and as far as the studbook is an indication of breeding. This is a further example of the fallacy of the view that "quality" and breeding are the same thing.

C. F. GRENSIDE, V. S.

#### CANADA'S GLANDERS POLICY ENDORSED.

It is a tribute to the common-sense merits of the Canadian method of dealing with glanders, instituted by Dr. J. G. Rutherford, Veterinary Director-General, to find that, after noting the results of the work done in Canada during the past three years, Great Britain has adopted much the same procedure, viz., by the use of mallein as a diagnostic or discovering agent, then slaughter of the reactors, for which compensation will be paid. Half-hearted measures have been found of little or no use in dealing with such a disease. In 1906 nearly 2,000 horses were destroyed, at a cost for compensation close on \$150,000. The Western Provinces were the ones chiefly infected.

#### A WARM RECEPTION.

Enclosed find remittance to end of 1908. No paper that comes to us has a warmer reception. Haldimand Co., Ont. J. SENN.



A Typical Cheshire Farm Home (English). Champion Shorthorn, Ridley Alliance, in Foreground.

#### HANDLING COLTS.

The winter season now being with us, and the men and boys of the farm, not having much to do, can spend a short time each day profitably in handling the colts. That the old-fashioned method of "breaking colts" by hitching one either with an old horse, or two together, and without any previous preparation expecting them to go to work, is wrong, few will deny. With many colts this gives reasonable satisfaction, but with many, especially highly-bred, nervous animals, the results are not good, and with none are they as good as when some time and care has been spent in gradually preparing the colt for service. The ultimate value of a colt depends greatly upon his habits and manners, and these, of necessity, depend largely upon his early handling. Colts should not be "broken," they should be "educated." We do not mean, by "education," that they should be taught tricks, etc., but that they should be gradually taught and prepared to perform the functions for which they are designed. While we do not approve of working immature animals at either slow or road or saddle work, we think that they should be handled while quite young. The colt should be taught to lead, stand tied, have his legs or feet handled, etc., before he is six months old. Where practicable, he should be taught to lead behind a rig or drive beside a horse in single harness for exercise during the winter months, when he spends the most of his time in the stable, and unless turned out in yard or paddock daily, gets little exercise. All acknowledge that exercise is beneficial to growing animals, and, if given it in this way, it teaches the colt manners and obedience, in addition to affording the advisable exercise. If this be continued the second and third winters, with the addition of added education given gradually, he will be practically educated for service by the time he is three years old, when he may, with safety, be asked to do light work on the farm or light road work. We wish to speak now of our idea of the manner in which a colt that is practically green and unhandled at three or four years of age should be treated. We take it for granted that he has been halter-broken (we use the word "broken" because it is a term so often used and well understood). If he has not been halter-broken, this should be his first lesson. It must be understood that, whatever we are teaching him, we should have halters, harness, rigs, etc., that are so strong that he cannot break them, in order that the teacher, trainer, breaker, handler, or whatever we wish to call him, may, on all occasions, be in a position to gain the mastery. While it is unwise to have the will of the colt and the trainer to come in contact, if such should occur, the trainer should always be in a position to gain his point. The colt being halter-broken, the next thing to do is to give him a mouth, or, in other words, get him accustomed to the bit. This cannot be done quickly. If he be bitten, and an attempt made to drive him at once, he will fight the bit, plunge, etc., and make his mouth sore; and if the practice be continued, there is a danger of spoiling his mouth for life. A light open bridle, with an ordinary snaffle bit, should be selected. This should be put on and left on, with the colt in a roomy box stall or paddock, for a few hours in the forenoon, taken off for dinner, and again put on for a few hours in the afternoon, etc., for a few days. At first he will fight the bit, but soon becomes accustomed to it, and will be quite contented, and even eat and drink with it in his mouth. Then some pressure should be put on the bit, to teach the colt to yield or submit to its restraint. This can be done by the use of a dumb jockey, or by putting any ordinary surcingle on and attaching a strap to it on each side, passing along each side to the

withers forward, and buckling to the bit ring. If a portion of each strap be elastic, all the better. Gentle pressure should at first be exerted on the bit, and left so for a few hours once or twice daily, and the tension gradually increased until the patient becomes accustomed to reasonable pressure. It is good practice now to take him out on a long leading rein and exercise him, either in a circle or straight away. All this teaches him to yield to restraint and obey his trainer. Now, a set or part of a set of harness should be put on him for a few hours daily, and he allowed to run loose in stall or paddock. The straps should be allowed to hang so that they will come in contact with his legs, abdomen, hips, etc., but not low enough for him to step on them. When he has become accustomed to this, he should be driven on the road or in a field without being hitched to anything. He should be taught to go ahead when told to; to stand at the word "whoa," step backwards when told to back, etc. He should be made accustomed to the sights that usually frighten horses, as wheelbarrows, rigs, animals, trains, automobiles, traction engines, and, in fact, everything possible. Care should be taken to teach him that certain words of command demand definite actions; for instance, "whoa" means to stop and stand still, "back" means to step backwards, "steady" means to slacken the pace, etc. If we notice the average teamster or driver, we will be surprised to observe how careless he is of these points. He uses the word "whoa" when he wants his horse or team to stop. If the team is trotting, and he wants them to go slower, he again says "whoa," or often "whoa, back," and if the team does as told—that is, stop and step backwards—he will whip them for doing as they were told. In fact, he uses the same word or words to express many different desires, according to circumstances. This would prove confusing to a person, and, of necessity, much more so to a horse. If all horses were taught from the first that certain words of command demanded certain actions under all conditions, they would soon learn to obey readily; but when we use the same word of command to exact different actions, under different conditions, we can readily see why we are not always promptly obeyed. If, whenever we say "whoa," the horse knows that he is supposed to stop and stand still, he will soon learn to obey that command promptly, and stop under mostly all conditions, and we would thereby avoid many accidents. Hence, we may say that the failure of horses to obey commands is largely due to careless or ignorant training. After a few lessons in harness, he should be hitched. Many prefer hitching a colt with a well-broken, prompt-acting horse. We prefer hitching him singly to a two-wheeled cart, or to a cutter. Whatever he is hitched to should be strong, as should also be the harness, as a breaking of either, and a consequent runaway, teaches the colt very bad habits. The rig should be strong, and, if we are driving him in single harness, it is wise to put a strap over his hips and attach it to the shaft on each side, to make it impossible for him to kick. He should be hitched often, and driven short distances at first. This accustoms him to being hitched and unhitched. He should also be taught to stand tied while in harness. For this purpose a long, strong rope should be used. The rope should be passed around the neck and then through the ring of the bit, and tied to some solid object. It is wise to tie to a fence or the side of a building, so that he cannot walk around or partly around it, as he can if tied to a post. He should be so securely tied that he cannot break the rope or the object to which he is tied, even though he try, as, if he succeeds in getting loose, he will try all the harder next time, and easily acquire the habit of pulling. When once we commence to drive a colt, we should drive him regularly until he has become quite handy, as standing idle for a few days makes him too fresh, and harder to handle. When once he becomes handy, we may increase the distance, and probably do some driving that has to be done, and practically make him pay for the trouble he is giving us; but we must remember that he is not yet thoroughly educated, and that we must still consider him a colt and be very careful with him. Some may say that all this is too much trouble, and takes too much time, but, after all, little time has been spent until we begin to drive him, and the after results and the pleasure we will get out of a well-broken or well-educated horse will repay us for our extra trouble, without taking into consideration his extra value if offered for sale. Well-mannered and reliable horses are always valuable for family or ladies' use. "WHIP."

The stern hand of the law has descended upon some of the Manitoba stallion-owners who neglected to enroll their horses according to the provisions of the Provincial Horse-breeders' Act. The first prosecution took place at Dauphin, and resulted in a verdict of guilty. Other cases have been taken up, and it is expected that, by the time the judicial slate is cleared, there will be few stallion-owners in Manitoba disposed to ignore the provisions of the Act.

LIVE STOCK.

ENGLISH SHORTHORNS IN 1907.

Editor "The Farmer's Advocate":  
 In reviewing the past season's doings in Shorthorn circles, there is one point that strikes home very clearly, and that is that the breed is permanently established in a more flourishing and prosperous condition than its most ardent partisans ever anticipated. The "Red, White and Roan" has basked in the sunshine of success for several years now, thanks to the Argentine trade; but many considered this state of affairs would not be permanent. When the reports of some of the early sales in Buenos Ayres came to hand, coupled with the fact that some of the leading exporters in England were not making as many purchases as usual, some began to think that clouds were looming on the horizon. Then came the news of the test scandal in Buenos Ayres; as the outcome of this, a severe check to the export trade was expected. However, when one comes to look very carefully into the situation, there are many points that give the Shorthorn breeder hope and encouragement. The drop in some of the Argentine sale averages is explained away by the fact that a number of the animals submitted were of inferior quality, and in no case have high-class specimens failed to fetch a remunerative figure. The exposure of fraudulent practice as regards pedigrees and the test, has also not been without its benefits. It has denounced those who have resorted to dishonest methods, and caused renewed confidence to be placed in the exporters who have always dealt with their clients in a fair and honorable manner. The only regrettable feature is that the delinquents were not more severely dealt with.

THE SALES-RING.

The sales in Great Britain throughout the whole season have had a most healthy tone. At Perth, in the spring, the trade was very good, high prices being frequent, Mr. Duthie paying the top figure, namely, 1,000 gs., for the red Hetherwick bull, Achilles. At Birmingham, there was a large entry, and, though the average showed a decline, and many good bulls changed hands at lower prices than usual, the prizewinners and outstanding animals met with a ready demand, 1,000 gs. being again paid for a bull, in this instance Mr. MacLennan being the purchaser, for South America, the animal being the red Shenley Victor, bred by a new breeder, Mr. Rapheal, in Hertfordshire. The sale at the Royal is now becoming an important one, and here the trade continued good. Mr. Royer took out Mr. Rothwell's Lord Brilliant II., second in the junior yearling class, at 1,000 gs., and many other animals sold well.

Mr. Harris, a Cumberland tenant farmer, held a sale in the autumn, at which the bidding was brisk. The animals were mainly pure Bates, and four females realized 200 gs. or over, the average for the whole herd being £90 18s. 1d. A very important series of sales are conducted annually in Scotland in October, the Collynie-Uppermill joint offering of bull calves being the leading event. At this gathering, some sensational Shorthorn history has generally been made; Mr. Duthie's having gone on breaking his own records year after year, but his latest success crowns them all. Higher individual prices have been paid; but the astounding average of £407 for 17 calves, gives Shorthorn breeders something to ponder over.

THE SHOW-RING.

We now come to the events in the show-ring, and a look through the exhibitions of the past year tells us that we have still some splendid specimens of the Shorthorn left in our land, though the export drain has been enormous. The old bulls naturally claim precedence, and here one animal stands out alone. We refer to Linksfield Champion. This bull had a great record last year, but he was unfortunate in encountering such a phenomenal youngster as Bapton Viceroy. This year, however, Mr. Miller's great bull more than held his own. He commenced by winning first and champion at Dublin, and followed this up by taking the male championship at the Lincoln Royal, first and the gold medal for best of the breed at the Highland, and first and champion at the Welsh National at Abergstrogh, as well as 50-gs. cup at the Royal Lancashire, and first at several other important shows. Linksfield Champion is possibly the best show bull we have had for several years. He was a great bull last year, and this time he comes out well-nigh perfection. His beautiful head, full of character, surmounts a magnificent front, while his enormous wealth of flesh and great scale, without a suspicion of roughness, at once takes the eye. He is, perhaps, not quite so deep in the thighs as some would like, but, nevertheless, he is a bull of the type that a beef Shorthorn should be. We understand that Linksfield Champion has been sold to go to Chili for £1,500. Sir Richard Cooper's Meteor is an old favorite of show-goers, and, though he has had a long winning career, he came out this year at the top of his form, having grown more massive, and lost the weakness of his thighs that was previously noticeable. He won first and champion at the Oxfordshire, first and champion at the Nottinghamshire, and several other prizes, but it is regrettable that on his last appearance in public he should be the victim of one of those unexplainable show-ring decisions where an inferior bull that he had always well beaten was put above him. This was at Peterboro. Meteor has been extensively used in the Shenstone herd, and the calves by him show great promise, and have

already taken high places at good shows. The two-year-old bulls found an undisputed leader in H. M. the King's Royal Windsor, a beautiful roan son of Luxury, and Remembrance, by Count Lavender. He won first and champion at the Royal Counties, first and reserve champion at the Royal, first and reserve champion at the Highland, and first and reserve champion at the Royal Lancashire. Royal Windsor is a wonderfully stylish bull, carrying a great covering of flesh on an expansive and level top. He is very neat and true in his lines, and shows every indication of a coming champion another season. Other good two-year-olds were Mr. Chatterton's Avondale, Mr. J. D. Willis'

this, carrying a great wealth of natural flesh on a massive frame, and yet showing all the essential points of a good dairy cow. Priceless Princess, from Mr. C. Adeane's famous herd in Cambridgeshire, was the champion pedigree dairy Shorthorn at the Royal and here again we have a very perfect specimen, for she is a rich-colored, stylish cow, showing beautiful quality, with a large udder and correctly-placed teats, while she has an indication of finishing at a remunerative price for the butcher when useless as a pail-filler.

THE DAIRY SHORTHORN.

There is a strong movement now progressing in England towards the encouragement of the cultivation of long-pedigree dairy Shorthorns, and rapid strides are being made. Many grand animals of this type are now to be found, and new herds are springing up frequently, while proper recognition is being given at the shows, supported by a society of breeders interested in this class of cattle. But perhaps better results would be obtained if breeders would use bulls (bred from milking strains, of course) with more robust frames, rather than the weedy animals whose sole recommendation is a "milky" pedigree. The class of cattle found in the Cumberland dales are the type—deep, hardy animals, with plenty of size and stamina, as well as excellent dairy qualifications.



Beauty.

A fine type of non-pedigree dairy Shorthorn in full milk. First at Royal Lancashire and first at Cheshire Shows.

Stoncrop, and Mr. G. Harrison's Elvetham Sweetmeat.

There were some excellent yearling bulls shown, and in this section the Royal herd from Windsor held a particularly strong hand, with Golden Treasure and Evander. The former, a white half-brother to Bapton Viceroy, was second to his herd mate at the Royal Counties, and first at the Bath & West. He is a gay, level bull, with a lot of quality. The dark-roan Evander is by Royal Chieftain, from Eliza XXI. He won first at the Royal Counties and the Shorthorn Society's prize, won first at the Royal Lancashire, and first at the Highland, and, if he keeps his present form, will be a great two-year-old, being well grown, very level, particularly good along the back and behind the shoulder, and having a beautiful head and front. Mr. Rothwell's Lord Brilliant II., the highest-priced bull at the Royal, also won a number of prizes at important shows.

The cow classes brought out some good females of a real dual-purpose type, the best of these being exhibited by Lord Calthorpe. This was Sweetheart, by the great bull, Royal Duke, and bred by the late Queen Victoria, a magnificent roan cow in every respect, an ideal Shorthorn matron. She has size, thick-fleshing, and a wonderful udder; but, more important than this, she can breed winners herself, as well as win, as her son, Evetham Sweetheart, and several other of her progeny testify. Sweetheart was very successful in 1906; but, this year, she has improved her record very considerably, being first at the Royal Counties, first and female champion at the Royal, first at Great Yorkshire, first and 50-gs. cup at the Royal Lancashire, and first at the Highland. Ursula Raglan, a voluminous winner of Mr. Geo. Harrison's, was also to the fore at a number of shows, including first and champion at the Oxfordshire; a wonderful type of cow

animals, with plenty of size and stamina, as well as excellent dairy qualifications. The plum of the two-year-old heifers was undoubtedly "Baillie" Taylor's Piltive Rosebud II., a very sweet heifer of real Scotch type, wide, deep and blocky, on short legs, and a beautiful rich roan in color. This daughter of Golden Dawn and Rubina was a good winner in 1906, and this season she won first at Dublin, first and champion at the Royal Counties, beating Sweetheart; first and reserve champion to Sweetheart at the Royal, and first and champion female and reserve breed champion at the Highland, and was afterwards sold at a high figure for export. Another two-year-old deserving of mention was Mr. Phillips' Roan Pansy, a very level heifer of great substance, but rather on the small side, considering her age. She won at a number of shows, including the Bath & West, and was second to the Piltive heifer at the Royal. She was also exported.

The yearling heifers were a creditable display, although there was no Lady Amy 7th or Golden Garland amongst them. The Royal herd was again to the fore with Marjorie, a pretty roan heifer, showing a lot of character, and carrying a thick covering of hair, but inclined to be a trifle weak in the back when standing. This heifer secured the premier award at the Royal Counties, Royal, Highland and Royal Lancashire shows.

GILBERT H. PARSONS.

The Dairy Shorthorn Association of Great Britain and Ireland have decided, during the coming year, to offer £100 in prizes for pedigree Shorthorn cows and heifers. Some of this amount has been allotted for competition at the spring show of the Royal Dublin Society.



The Result of an Impressive Sire.

Five bulls, by the Irish Shorthorn, Bright Meteor. All purchased for export to the Argentine, 1907.

## TREAT THE SHEEP FOR TICKS.

In order to avoid trouble in the flock from ticks, lice or scab, the sheep should, without fail, be treated twice a year with one of the proprietary dips on the market. In a few days after shearing the ewes in the spring, the lambs should be dipped, and some of the preparation rubbed over the ewes. Again, before winter sets in, the whole flock should be either dipped or have the "dip" poured upon the animals from a coffee pot or other vessel, the wool being "shed" or opened at intervals of four or five inches for that purpose. With short-wooled sheep, dipping at this season is quite practicable and safe, but with the long-wooled breeds, the waste of material is such that pouring is much more economical, as no tank is required, and much less of the dip is used. To facilitate the work of pouring, three persons are required, one to hold the sheep, one to shed the wool, and another to pour the liquid, which should be applied warm. The man holding the sheep first sets it upon its rump, the back leaning against him, and with his hands sheds the wool on its neck and breast, while another man is shedding on the belly, thighs and lower sides, and the pourer attends to both. The sheep is then allowed to stand up, an opening in the wool is made the full length of the spine, from rump to crown, and a liberal portion poured in, which runs down the sides, completing the operation, about a quart of the solution being sufficient for each sheep. Two men and a boy, or three strong and active boys, will thus treat from fifty to seventy sheep in a day, and the expense for labor and material is so little, compared with the profit in the growth of wool, to say nothing of the comfort and thrift of the sheep insured, as to make it a prime necessity in the management of the flock. The fact that no ticks may be noticeable at this season is no reason why the treatment should not be used, as the pest may develop during the winter, or scurf and scab may appear, causing the sheep to rub their wool off and fail in condition, when the treatment cannot well be administered, owing to the ewes being forward with lamb and the weather too cold. If, after the flock has been treated, sheep from untreated flocks are purchased, they should be subjected to the process before being permitted to join the flock, as they may infect the cleansed animals with ticks or the germs of the dread disease known as scab, causing much worry and loss. The flockmaster whose flock is suffering from any of these preventable causes, will also suffer in his pocket and in his mind from his neglect, while, on the other hand, having done his duty by his sheep, he will enjoy seeing them healthy and prosperous, and will be well repaid in the increase of wool and mutton or strong lambs for his labor and the small expense involved.

## EXPERT JUDGES.

Editor "The Farmer's Advocate":

Would ask for a space in your valuable paper for a few remarks regarding the expert judges sent out by the Ontario Department of Agriculture, for the purpose of educating the farmers and breeders of the Province in the right line of stock-breeding. For the County of Lambton, we had for judges, or educators, as you may call them—as I understand that is the purpose in which they are sent out—one an undertaker and the other a butcher by trade, the former taking the dairy cattle and swine classes, while the latter takes the beef cattle and sheep classes. I feel sorry to think that the Department could not select men out of so many good farmers and experienced breeders as we have in this fair Province, men capable of doing the judging of breeding stock without calling on undertakers and butchers to do the work.

I may just mention some of the work done by the sheep judge to show how expert he was. At the first show at which I met him, he was then judging the Cotswold class. In yearling ewes there were five shown. Of course, there were first, second and third prizes awarded, all very well. Three of these sheep were winners, the other two not winning. At the next show, two days later, one of the latter two he places first, and states she is the kind of a ewe he likes to see come before him. At the next show, two days later, this first-prize ewe at the latter show was strictly outside of the prizes. Next show, the next day after, this ewe was again placed first, competing against same sheep at all the shows. I may just mention a few of his placings in the Lincoln class. In yearling rams, at the first show, he judges one yearling ram, and he is all right, and a prizewinner. At the next show, two days later, he rules the same sheep out, and calls him a two-year-old. Of course, at all the rest of the shows he was ruled out by the same judge. But, when he came before another judge, he was a yearling and all right in his place. And in yearling ewes at the first two shows, one yearling ewe was a yearling all right. At the third show, he puts her a two-year-old, claiming she had four permanent teeth; but the exhibitor to prove she was still a yearling, and that two of those teeth were her baby teeth, drops them out on the ground with his thumb and finger. There was much more such work done by this "expert," which I will not ask space in your valuable paper to explain. Thanking you kindly for the space,

and hoping that our Department will find men among the farmers and breeders capable of doing the judging of breeding stock, where type, character, quality and underpinning is taken into consideration, saying nothing about the baby teeth. H. McLEAN.  
Lambton Co., Ont.

## WINTERING YEARLING CATTLE.

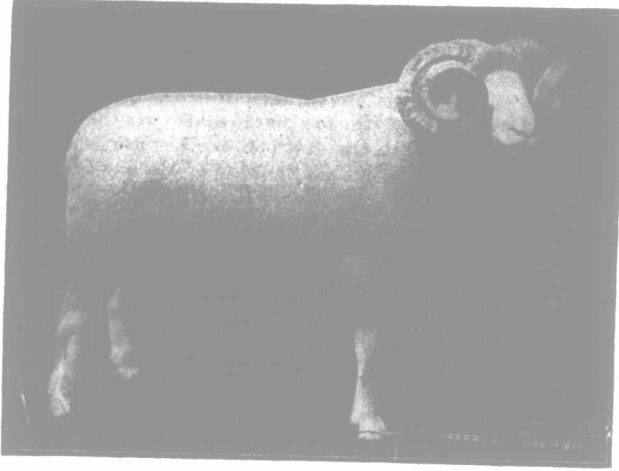
In view of the scarcity of fodder in some districts, closer attention will be paid this season to the foods and methods pursued in the "wintering over" process. Our readers will, therefore, be interested in bulletin No. 75, issued in the "nick of time" from the Missouri Agricultural College, by H. J. Waters, B. S. A., director, giving the results of seven years' careful work in wintering high-grade yearling cattle on different forage crops and grain rations. The effect of these rations upon the gains in winter, and in some cases upon the capacity of the animals to make gains in summer, has been carefully studied.

In the experiments without grain, the following rough fodders were used: Timothy hay, whole-corn stover, shredded-corn stover, siloed-corn stover, clover hay, cow-pea hay, and a combination of whole-corn stover and clover hay.

In the four years' experiments in which a limited amount of grain was used, the value of the following rations for wintering cattle was compared:

- Shelled corn and timothy hay.
- Shelled corn and clover hay.
- Shelled corn and cow-pea hay.
- Shelled corn and alfalfa hay.
- Shelled corn and millet.
- Shelled corn and sorghum.
- Shelled corn, half corn stover and half clover hay.
- Shelled corn and whole stover.
- Shelled corn, cottonseed meal and wheat straw.
- Shelled corn, cottonseed meal and corn stover.

The principal results obtained in these experiments may be summarized as follows:



Dorset Shearling Ram.

First at Bath & West Show, 1907. Owned by E. Hambro.

## COMPARISON OF VARIOUS COARSE FODDERS FED WITHOUT GRAIN.

1. Timothy Hay Alone.—Timothy hay of average quality was found to be nutritious enough to a little more than maintain the weight of yearling steers that were in thin condition to begin with. That is, steers of this class were wintered on timothy hay of fair quality without loss in weight, and, on the average, made a slight gain. The gain, however, was very small, varying from a slight loss in one experiment, when the weather was particularly unfavorable, to a fair gain when the quality of the hay was good and the weather was dry, bright and crisp.

Our experiments show that 18.25 pounds of hay were required to be offered daily to a steer weighing 750 pounds for these results. On this basis, it would require 3,285 pounds, or slightly more than a ton and a half of hay to winter a steer of this size from November 1 to April 30—six months—and, according to our experiments, the steer would make a gain of about 50 pounds.

2. Whole-corn Stover Without Grain.—Taking the average of our four years' work, it appears that whole, field-cured corn stover, handled as in ordinary farm practice, would not quite maintain yearling steers moderately thin to begin with. That is, the average of all our trials shows a loss of 33 pounds per steer, on the basis of a six-months' wintering period, or from November 1 to April 30.

In these experiments, we offered an average of 33½ pounds of stover daily per steer, computed on the basis of 750 pounds live weight. This would require three tons of stover per steer for a six-months' wintering period.

3. Shredded-corn Stover Without Grain. The results with shredded stover were slightly less favorable than with whole stover, although the difference was so small as to be easily within the

limit of error. Clearly, so far as our experiments show, there was no enhancement of the feeding value of the stover by the shredding process.

Almost as much shredded stover was refused, or left uncaten, as of the whole stover. Shredding, therefore, would seem to be justified upon the ground of greater convenience in handling and the protection of the fields against injury by hauling stover out in muddy weather, etc., rather than upon that of the enhancement of its value as a feed.

4. Siloed Stover Without Grain.—Siloed stover without grain produced very much better results than did field-cured stover, either fed whole or shredded, but the results are too meager to warrant a definite conclusion.

5. Combination of Clover and Stover Without Grain.—In every trial, equal parts of clover hay and corn stover proved to be more efficient than did timothy. By combining stover with clover, therefore, it is possible to bring its feeding value up to that of timothy hay, or, on the assumption that stover has little feeding value, the conclusion is justified that clover has practically double the feeding value of timothy.

## COMPARISON OF DIFFERENT KINDS OF ROUGHNESSES COMBINED WITH A LIMITED AMOUNT OF GRAIN.

1. Shelled Corn and Timothy Hay.—This is the standard ration with which all others are compared, and is chosen for the standard because it more nearly approximates farm practice than any other single combination.

This combination proved very unprofitable in every trial, and was not to be compared in economy with the use of some legume hay with corn.

2. Corn and Corn Stover.—This proved to be a much poorer combination than did even corn and timothy hay, as might be expected.

3. Corn and Millet.—This was not as satisfactory a combination as was corn and timothy hay in either of the two years through which the trials extended.

4. Corn and Sorghum.—This did not prove to be as efficient a ration as one would be led to expect from the reputation this hay has throughout the State as a feed. The gains made on a limited amount of corn and all the sorghum hay the animals would eat were larger than from millet or stover, but less than from timothy and a like amount of corn.

5. Corn and Clover Hay.—By substituting clover for timothy in these trials, the efficiency of the ration was practically doubled. That is, a bushel of corn, when fed in combination with clover hay, produced essentially double the number of pounds of gain that were produced on similar steers with the same amount of corn and good timothy hay.

6. Corn and Cow-pea Hay.—What was found to be true of clover applies almost identically to cow-pea hay. That is, so far as our results go, cow-pea hay of good quality, with practically no peas on the vines, has about the same feeding value as good clover hay, and, like clover hay, when combined with corn, is capable of producing about double the amount of gain that can be obtained from timothy hay.

7. Corn and Alfalfa Hay.—Our results do not indicate a material difference between the feeding value of alfalfa and good clover or good cow-pea hay. It is safe to assume, however, that alfalfa of ordinary quality is fully equal to either of these hays in their best condition. Alfalfa in its best condition is, without doubt, more efficient than either clover or cow-pea hay.

8. Corn, Clover Hay and Corn Stover.—As was the case with this combination of roughnesses without grain, in every trial the combination produced larger gains than did good timothy hay. This means that, with a large amount of coarse material like stover to be utilized, one of the most useful materials to feed in connection with it is a limited quantity of clover, cow-pea or alfalfa hay. To combine with this stover, food-stuffs which do not remedy its chief defect, viz., low protein content, such as millet, sorghum, timothy, or even corn, will not compare in economic results with the use of a legume hay.

9. Corn, Cottonseed Meal and Stover or Straw.—In these experiments it was sought to supply the protein in cottonseed meal instead of in clover, cow peas or alfalfa. In other words, to attempt to utilize the low-priced roughage like stover or straw by combining cottonseed meal and a limited amount of corn with it.

The amount of gain secured was far less than when legume hay was used, such as clover or cow peas, and, in view of the high price of cottonseed meal, it would not be profitable to attempt to substitute this material for one of the legume hays for the wintering of cattle.

10. Gains Made from Light Feeding are Relatively Costly.—In our feeding trials without grain the cattle were but little more than maintained at best, and, therefore, practically all of the food consumed was wasted, when reckoned from the standpoint of gains made. As has already been pointed out, timothy hay very little more than maintained the cattle.

When we fed poorer material than timothy hay, such, for example, as corn stover, not only was all of the feed wasted, when considered on the basis of the gains made, but to this expense must be added the cost of a slight loss in weight of the animal.

As the ration was increased in amount, so that the rate of gain increased, the cost of gains diminished uniformly. This seems to be true up to the full limit of the appetite of the animal, or approximately on full feed. That is, other things being equal, and considering only the cost per pound of gain, the cheapest gains are uniformly made when the animal is on full feed, or approximately so.

11. Cattle, to Graze Well, Must be Thin.—By grazing a portion of the cattle used in these experiments the following summer, it was found that there is a fairly definite relation between the gains made in winter and those possible to be made the following summer at grass. In other words, the gains made on grass are inversely proportionate to the amount of fat the animal carries, and are almost inversely proportionate to the gains made the previous winter.

If, therefore, cattle are to be grazed the following summer, it is important that they be wintered lightly, or in such a way as not to carry to grass any considerable amount of fat.

12. Circumstances Under Which Small Winter Gains May be Justified.—It will be impossible, therefore, to take advantage of the cheapest way of making gains in winter, if the cattle are to be grazed the following summer. For to reduce this gain to the lowest cost per pound, as has already been pointed out, would necessitate full feeding, or approximately full-feeding the animal. This, in turn, would have the effect of storing up fat on the body, rendering the animal unfit to be grazed the following summer. In short, this would bring the animal to a marketable condition, or to a condition where it would be unprofitable to keep it longer for any purpose.

While it will probably be profitable, under ordinary circumstances, to feed in the winter up to the full capacity of the animal to grow, without laying on fat, it will be justifiable in many seasons when the farmer has large quantities of cheap, coarse material, without an opportunity to market it, to bring the cattle through the winter in even thin condition, so that they may make the largest possible gains the following summer.

12. The Value of Cattle Enhanced by Wintering.—The wintering process enhances the value of cattle, just as does the fattening process, although for another reason, and to a much less degree. But this enhancement of value due to the wintering process is necessary, in order to make up the deficit that is practically inevitable when cattle are wintered lightly. This enhancement is due to the fact that the steer in the spring has the grazing season, which is the season of cheap gains and large profits, immediately before him, and is, therefore, worth more than in the preceding or the succeeding fall, when he has before him the wintering period, which is the period of expense. In the case of the fattening steer, the value is enhanced by reason of the animal being put in marketable condition. In the case of the animal that is being merely wintered, the enhancement is due mainly to a change of position, rather than to a change in condition.

14. Seasonal Influence.—A very large variation in the results of wintering cattle, due to differences in season, is inevitable. This may be a difference in the previous summer season, as manifested in the quality of the roughage, as is strikingly illustrated by the high efficiency shown in the foddors and hays grown in the dry season of 1901. Or it may manifest itself in the deterioration of the quality of the material during or after harvest, by storms, excessive rains, etc. Or the weather of the winter may effect the result, by influencing the animals directly. Cold, crisp, dry, bright, steady weather, furnishes ideal conditions for maximum returns. Then the appetite is sharp; the food is in good condition, and is eaten with a minimum of waste; the sheds and lots are dry, so that the animals follow a regular routine of eating, drinking and lying down. Alternative warm and cold, rain and snow, intermingled with foggy, muggy weather, with muddy lots, wet coats, and wet feed, when the animals eat irregularly, and stand up most of the time for want of a comfortable place to lie, furnish the most adverse conditions for making gains or even maintaining weights.

Among other points given in the details of the experiments, we note the following:

It may be said that one ton of timothy hay is worth as much as three tons of whole-corn stover, when each is fed as an exclusive ration.

The surprise of the experiment was that the shredded stover was less efficient than the unshredded material, or that, apparently, instead of enhancing its feeding value, shredding appeared to depreciate it. The leafy, edible portions were not improved by shredding, and the animals were forced to eat a lot of useless pith (cellulose). The shredding process must be justified on the ground of greater convenience. Almost as much material

was found wasted when shredded as when fed whole.

With cornstalks as the chief food supply, and the farmer has the chance of adding a small quantity of corn or a half allowance of clover, in point of both efficiency and economy, the stover-clover combination will be preferable. Such combinations as corn and stover, corn and straw, or millet, etc., should, in the interest of economy, be avoided.

The poor showing made by millet and by sorghum was a surprise. Owing to their low content of protein, it was expected that they would fall below clover and cow-pea hay, but that they should fall so far below timothy, we were not prepared to believe. This remark applies especially to sorghum.

It frequently occurs that yearling cattle, wintered well, and, carrying to grass considerable fat, will weigh little if any more the following fall than they did in the spring. They will be considerably larger, but much thinner. Fat has in this process been displaced by growth.

The cost of cutting and curing cornstalks, including husking, is placed, in the bulletin, at \$2.00 per ton.

Young cattle require liberal feeding on nutritious feeds, while older cattle will utilize to better advantage poorer and coarser grades.

It is more important to keep cattle from six to eighteen months old steadily gaining than later. After twenty-four months, the rate of growth naturally declines, and the tendency to lay on fat begins to assert itself.

If baby beef is the object, the quicker cattle are made fat, the greater the profit.

#### CALF - REARING.

To rear a profitable and creditable animal, the work must begin at birth, and generous, but discreet, treatment must be continued until maturity. Few animals find their way into a show-yard that have not been treated well from their earliest days. Fewer still carry off honors.

Practically a year is lost when the calf flesh is allowed to fall off; and a young beast that has not lost its early flesh will come out worth as much at two and a half years old as the neglected one will at three years and a half. Nothing so well ensures this generous rearing as letting the offspring run with the cow, and this is a common practice with breeders of pure-bred stock, and has, doubtless, much to do with the excellent bullocks we see at our winter fairs and Christmas markets, though many of these have not had this advantage. It is too expensive for the ordinary breeder of well-bred beasts to allow the calf to take all the cow's whole milk, and, therefore, more economical means must be used. However, there are times when a couple of calves may be reared on a cow which kicks, or is hard to milk, or some animal not too valuable; and one cow will rear two calves better than they can be reared with the bucket if the cream is taken off the milk.

It is extremely difficult to make the conditions sufficiently favorable to secure the same thrift in the skim-milk calf as is ordinarily found in the well-nourished, sucking calf. The latter not only has the milk in its original composition, uncontaminated by bacteria and perfectly warmed, but is also compelled, by force of circumstances, to take milk into the stomach slowly, making it most easily acted upon by the digestive fluids, and less apt to scour. But, even though the whole-milk calf is somewhat better raised, butter-fat is so valuable as a commercial article that feeding whole milk, or permitting calves to suck their dams, is an extravagant practice on good farming lands. Skim-milk, therefore, is to be chiefly relied upon for growing all calves on the farm, except pure-breeds of the beef breeds.

Therefore, how to obtain best results from feeding skim milk to calves will be the subject I shall endeavor to discuss. Commencing with the treatment of the calf at birth, assuming that the mother has a comfortable bed, the calf can be left with her for a few hours after birth, and, upon next visiting the stable, it must be ascertained if it has taken any milk. One can form a good opinion about this by examining the udder of the cow. If the youngster has helped itself, well; but if not, it must be assisted to do so. When it has once sucked, there need be no further fear on this head. The first milk or colostrum belongs to the young calf, as it has a cathartic action upon the bowels, removing all inert material.

Many follow the practice of allowing the calf to enjoy its mother's milk and company for about a week after birth, because the calf sucking its dam has a tendency to reduce her udder very considerably, and thus prevent any serious results from inflammation. Again, when the calf is removed at birth, or at least after its first suck, it has not the advantage of the beastings or colostrum which is produced for several days, and as a consequence, becomes, in not a few cases, constive, and this constiveness generally, later on, leads to the opposite evil—diarrhoea.

Others practice the method of removing the calf from the dam immediately after it has sucked once. They contend that it can be then taught to drink with far less trouble to the feeder and with no apparent ill effect upon the calf, and, also, that far better results can be obtained from the mother as a milker.

From practice, the writer has found that the latter

method is the better, and that with judicious feeding, the young calf can be started to drink soon after birth.

Assuming that the latter method is the better to follow, the calf should be placed out of hearing of its mother, in a dry, warm, well-ventilated shed, and a good bed of straw is most essential. It should be given a good start by having fresh, whole milk at least three times per day the first week, each meal consisting of about three pints of milk. At the end of the first week, a slight change can be made. During the second week, the feeding may be done twice a day, and a little skim milk, perhaps a half pint, substituted for the whole milk, the amount to be increased very gradually, until, at the end of three weeks, the whole milk is entirely withdrawn, when the calf should be receiving from five to seven quarts per day. At this age, calves are too often supposed only to require milk of the thinnest character, such as has been skimmed "sky blue," and has not the needful nutritious qualities in it. As a supplementary food at this age it might be well to use whole flaxseed made into a jelly by boiling on the back of the stove for ten or twelve hours. A small amount of this at first in the milk, until, say half a pound per day has been reached, has been found a very beneficial substitute for the fat content which has been skimmed off.

From three weeks until the close of the second month, a gradual increase up to eight or nine quarts per day may ordinarily be fed to a good-sized calf without inducing scours, which sometimes results from overfeeding on milk. At four months of age, ten quarts may be given, and at five months eleven quarts. During this length of time, we endeavour to increase the quantity of milk, but lower the quality. At this age, the quality of its food should be such that the calf could be weaned entirely from milk without any injurious effect.

The temperature at which the milk is fed to the calf should be carefully watched. Milk fed at a temperature nearest that of the animal body will give best results and least troubles. Cold milk chills the calf, and often brings on digestive disorders. On the other hand, if milk is heated to the scalding point, the albumen coagulates and rises to the top in the form of scum, which coagulation renders it less digestible. If everyone who is raising calves would provide themselves with a thermometer, which could be hung so that the bulb would be submerged in the milk, warming could be discontinued at the proper time.

In rearing calves with the bucket, it is very essential that the vessels be kept scrupulously clean. Milk is liable to collect on the seams, where it becomes charged with bacteria, these micro-organisms affecting the milk in such a way as to set up fermentation and consequent indigestion in the calf. The buckets should be made of galvanized-iron, having just as few seams as possible.

A bunch of nice green, well-cured hay should be easily accessible to the calf from the time he is three weeks old until he is weaned. For economy's sake, a small, coarse, net should be placed, filled with the fodder, near the head. It is most essential that the hay and all other food given at this time should be of the best quality, for the digestive powers of the young animal at this age are by no means strong, and are all unaccustomed to the work required of them. The hay that is saved without exposure to rain in June, is the best for calves, providing it has not been allowed to heat in the mow. Hay made later on is too woody in the stems and indigestible for calves, and is often the cause of several common ills to which they are subject. Roots are a very good food for the calf. They tend to correct many evils, and keep the bowels in healthy, regular condition. The hay and roots can be gradually increased; but, until about twelve months old, cotton cake must be entirely withheld. The latter is too indigestible for calves, portions passing through them whole, thus causing irritation of the stomach and bowels and purging. A little linseed meal, oats and wheat meal are each wholesome when given prudently and moderately.

In rearing calves with the bucket, it is very essential that the animals should be all tied separately before they are fed, and, if left tied for about a quarter of an hour afterwards, they will not acquire the much-detested habit of sucking each other. Moreover, when tied, each animal gets its share of milk, without being subjected to the blows frequently administered by the unfeeling attendant in order to keep one calf from interfering with its companion's food. A simple contrivance is the stanchion made of narrow boards, fixed vertically, and sufficiently far apart to permit the calf to enter his head at feeding time. On the floor or ground is fixed a feed-box, just wide enough to hold a pail firmly, and long enough to allow all the calves to be fastened at once. It is good practice, while the calves are still held in the stanchions after feeding, to drop in a few whole oats. In their eagerness to suck something, they will, when quite young, begin eating them.

The lumber required for ten stanchions, as given by the Kansas Experiment Station, is as follows: One piece, 1 inch by 12 inches by 12 feet, for bottom of feed-box; two pieces, 1 inch by 12 inches by 16 feet, for bottom of feed-box (8 feet), upright partitions (24); two pieces, 1 inch by 6 inches by 10 feet, for front of feed-box; five pieces, 1 inch by 16 inches by 16 feet (pine), for top and bottom rails; five pieces, 1 inch by 4 inches by 12 feet, full thickness, for fixed uprights; two pieces, 1 inch by 4 inches by 16 feet, ¾ inch thick, for swinging uprights; ten pieces, 3 inches by 6 inches by 1 foot, for tongues or locks; three posts, 6 feet in



length; three blocks, 6 inches by 12 inches, under feed-box.

It has been stated that by means of the stanchion, calves can be taught to eat whole oats at a very early age. Young calves, invariably, have a craving for something bulky, and this desire is well satisfied when whole oats are supplied. Oats are easily digested, and they furnish bulk as well. It has been found by competent feeders that oats have a counteracting tendency on scours.

As the calf becomes a little older, it is good practice to supplement the oats with a little shelled corn, and gradually increase the corn ration until equal parts of corn and oats has been reached. It is not good practice, however, to feed ground grains to calves. Their stomachs are very susceptible to many diseases, and meats sometimes, from exposure, become contaminated, which acts very unfavorably with the youngsters.

Bran makes a very good food, as its composition is largely mineral matter and protein. It has been found, however, that it is a little too laxative when fed along with skim milk; the milk, too, furnishes all the protein needed. As a general thing, if the farm grains are fed wisely, there is no need for commercial foods for calves.

Pasture for skim-milk calves should not be too watery, because of its laxativeness. Turning calves out early is, therefore, not to be recommended. Even during the summer, when the pasture is at its best, many prefer to stable the calves, because flies seem unusually irritating to these young animals. It is good practice to confine the calves in a roomy, dark shed during the day, feeding them succulent food, and, during the night, allow them freedom in a good-sized paddock, where there is an abundance of grass.

Calves can be easily dehorned when about three or four days old. At this age you simply clip the hair from where the rudimentary horns or buttons later appear, and with a moistened stick of caustic potash rub over the button until the skin becomes inflamed and more or less tender to the touch. A scab will appear a few days later, and further growth of the horn will cease. As caustic potash has a very corrosive action, it is advisable to wrap the end with cloth to protect the fingers, and care should be exercised not to allow any to run down the face of the calf, as it is exceedingly painful.

Weaning the calf from milk is a matter which should not be hastened. When the calf is about five months old, one might commence to dilute the milk, and, before the middle of the sixth month is reached, it may be of such poor quality that you are practically feeding colored water. At this time, the calf should be receiving a light and wholesome diet, and the milk will be little missed. Especially should the calf be receiving a liberal ration of grain at weaning time.

Winter quarters for well-fed, thrifty calves need not be very warm. A good-sized, well-ventilated shed, free from drafts, makes ideal conditions. They soon adapt themselves to conditions by growing a thick, long coat of hair, and, with a liberal supply of straw bedding, they are made very comfortable. Calves seem to require sunshine, hence on sunny days during the winter they should be allowed to stroll about in the sun.

Calves should have plenty of fresh water before them at all times, from calfood until they reach maturity. Soft water is preferable. Salt should also be before the calf at all times. A small box placed conveniently within shelter, where the calf may lick it at will. Loose salt is preferable to rock salt.

The rearing of calves is one of the most interesting phases of stock-breeding. With the exercise of skill and attention to details, calves may be reared on skim milk very successfully. Probably no animals are more responsive to skillful treatment. The skillful feeder will keep just within the appetite of these young animals. He will not permit the calf to leave any food in its manger, but rather place just sufficient before it to have it all eaten. He will also watch that he makes all changes gradually.

Raising calves on skim milk is certainly a less expensive method of producing the first few hundred pounds of beef than to permit the calf to draw the whole milk from the dam; and, while they may have less bloom and rotundity of form, they will have sufficient digestive capacity to insure good future gains.

Lambton Co., Ont. FEEDER.

## THE FARM.

### THE SPLIT-LOG DRAG IN NOVA SCOTIA.

The editor of the Middleton Outlook, following the example of "The Farmer's Advocate," offered a prize of twenty-five dollars to the person making the most improvement during the season on a mile of road by means of the split-log drag in Annapolis County, the competition to be limited to residents of that county. Thirteen competitors entered for the prize, and that number of pieces of road were placed under the operation of the drag.

The different pieces of road chosen varied in composition from the deep sand to the strongest clay. They were, therefore, well calculated to test the value of the drag. The competition was not opened until May 15th and closed October 15th. As the early spring and late fall, especially the former, are the best times for using the drag, the competition did not afford a full test of its value. The judges in the com-

petition were: Capt. J. J. Buckler, of West Dalhousie, Deputy-Warden of the County, and Mr. Isaac Young, Superintendent of Streets for Middleton; two practical men eminently qualified for the position.

Previous to the opening of the contest, the judges visited each section of the road early in May and noted carefully the conditions of the road, the kind of soil, the drainage, etc. Upon the close of the competition, on October 15th, they again visited each piece of road, and observed closely all improvements made. Mr. R. B. Fiske, of Clarence, the successful competitor, had in his favor the fact that he had chosen what was probably the worst piece of road in the county. The judges decided that his road showed the most improvement during the season. The drag was used from six to twelve times.

The judges in their report said: "We found the competitors, without exception, thoroughly convinced of the value of the drag. We do not look upon the competition as a full test of its merits, as it should be used throughout the season, particularly in the early spring; yet, after carefully comparing the roads upon which the drag was used, with similar pieces of road on which the road machine or no machine was used, we are convinced that the drag is a most important acquisition to our road-making machinery. While it makes a decided improvement in sandy roads, and can be used with advantage on stony roads, yet it is on the clay and mixed clay roads that it will give the best results.

"Some of the strong features of the drag are that it is extremely cheap; that it not only makes the road good, but keeps it so; that it may be used to supplement the work of the road machine, the disc harrow or the pick and shovel; that it keeps the road continuously in good condition, from the beginning to the end of the season, and that it gives a straight, smooth, hard, well-rounded road that no other means appears to provide.

"We further believe that if in every road district in Annapolis County a split-log drag were used throughout the season under the direction of the surveyor, and paid for out of the regular statute-labor fund, it would prove of the greatest benefit to the county."

The greatest interest will naturally be taken in the work of the winner of the prize. Mr. Fiske chose one of the worst pieces of road in the county. The soil was clay and loam, the land very flat, and the road is lined with forest trees which shade the road. He first opened up the ditches to get rid of the water, then dragged seven times, using only one pair of horses. The drag was eight feet long, of hemlock, the pieces thirty inches apart, the rear piece was shorter than the front piece on the side next to the ditch. The front piece was also shod with iron. An hour was required to drag half a mile satisfactorily.

A greater change in a road can scarcely be imagined than that found by the judges. When they visited the road in May, they went through ruts hub deep, the horses sometimes being scarcely able to pull the carriage. On their October inspection, they trotted over the entire half mile, which was as smooth, straight and round a bit of highway as one cares to see.

### BOOKKEEPING FOR FARMERS.

Some weeks ago we received a copy of a book entitled, "A Simple Method of Bookkeeping for Farmers, Market Gardeners and Dairymen," by K. W. Kersey, Lecturer in Bookkeeping at the South-eastern Agricultural College, Wye, Kent, and at the Horticultural College, Swanley, Kent, England. In the preface the author states, what we know to be true in Canada as well as in England, that, "Very few men engaged in farming, market-gardening, and the like, have the knowledge necessary for keeping account of their transactions in the same way as those in business in towns and cities." The object of the book is to provide a simple method of bookkeeping which will give farmers and others a thorough knowledge of their business.

By devoting a short time each day to accounts, a business man can show, at the end of each financial year, the following results:

(a) The exact amount invested in the business.

(b) His profit or loss from the year's transactions.

(c) His cash balance.

(d) The amounts owing to him or by him.

In addition, he is able to find out how loss has arisen, if there has been loss, or where and why profits have been smaller than they should have been. It will show him where economies in business ought to be practiced, and also whether he is spending too much for his means on himself and family.

The first part of the book explains the keeping of accounts by single entry. For the encouragement of farmers who are deterred from starting to keep accounts by the thought of the number of books required, we would draw attention to the statement of the author, that, where a cash business is done, only one book is actually necessary, namely, a cash-book. Most Canadian farmers, we trust, do business on the cash system, but if any considerable number of transactions are done on credit, then a ledger is also needed. The book in which a country blacksmith keeps the accounts of his dilatory or forgetful customers is a ledger, and very definite information as to how

it should be kept can be obtained from him. Farmers are recommended to keep also a note-book, in which transactions, whether of sale or purchase, may be entered, and all particulars, as to the date, quantity, price and date of delivery stated. In addition, notes may be made of any event of importance that takes place, and to which a reference may be useful, such as times of sowing, harvesting and threshing; quantity of seed used, with resulting yields; weather conditions, etc. The keeping of such a book, while not absolutely necessary, will give much satisfaction. Separate books, such as wages-book, stock-book, and granary-book, may also with advantage be kept; but the one that must be kept, if there is to be any record of accounts at all, is the cash-book. On the left or debit side all moneys received are entered; on the right or credit side are entered all moneys paid out. Simplicity itself. Pages can be headed "Receipts" and "Expenses," and it is well to have only one month's transactions on each double page.

At the end of the financial year all accounts are balanced, and valuations made of stock and implements on hand, and grain and other products unsold. Thus, the financial standing and the gain or loss of the year's business are known. Detailed instructions for making up profit-and-loss account, for valuations, and for striking a balance sheet, are given.

Part second of the book is taken up with an explanation of a system of keeping accounts which, it is claimed, possesses all the advantages of double entry, but with a considerable saving in time and trouble. The chief book used in this system is called the "Analyzed Cash-book." Instead of the ordinary cash-book, with one or two money columns, a larger cash-book is necessary, ruled with several additional money columns on both receipt and payment sides. The additional columns are used for analyzing the receipts and payments. For example, in the case of "Farm Accounts," the headings of the columns on the receipt side would include Live Stock, Grain, Hay and Straw, Poultry, etc., and those on the payment side would contain, in addition, columns for Wages, Foodstuffs, Implements, Household Expenses, etc. As each item is entered in Cash column, it is entered also under the particular heading to which it applies. Thus, \$100 received for sheep, would be entered as cash received, and also in Live-stock column. Five dollars paid for groceries would be entered as cash paid out and in column for Household Expenses as well. By totalling up these columns at the year's end, the sums that have been received and expended in each department of the business can be found out. We are of the opinion that, for many Canadian farmers who have but few business transactions, this analysis of cash-book entries might be made at the end of the year, and would be found both interesting and profitable.

Professor Kersey very properly insists that all supplies from the farm consumed at home, such as milk, butter, eggs, poultry, fruit, etc., should be credited to the farm and charged against household expenses. If this were done honestly, many farmers would be quite surprised at the amount of their income and the sum they spend on themselves.

If any farmer should invest one shilling and sixpence in the purchase of this book, and carefully study it, he will be much more than repaid, though, as the title-page indicates, it is more especially adapted to those under tutors taking short courses at agricultural colleges.

## THE DAIRY.

### A NEW PROCESS OF BUTTERMAKING.

Something entirely new in the way of making butter which will keep, is promised by M. B. L. Ehrmann, a French chemist. Every person with experience has been disappointed in the quality of butter taken from cold storage. The housewife frequently purchases a few pounds of good butter, possibly when the market price is low, but finds that this butter is scarcely fit for table use in two weeks. Various forms of preservatives, harmless and harmful, have been recommended for keeping butter, but none of them have the property of retaining in butter that delicate aroma which everyone enjoys. The demand is more and more for fresh butter, and it is difficult to sell cold-storage goods at all, except in times of scarcity. If Mr. Ehrmann has really discovered a practicable method of preserving butter, by a simple, harmless and inexpensive method, he will have conferred a great benefit on mankind. Briefly, the process consists of blowing carbonic-acid gas through the cream, or washing the cream or butter with carbonated water.

The following practical points in the process will be of general interest to readers, as given in the pamphlet received:

"The quality of butter depends, first of all, on the quality of the cream, and the cream, during the time it is stored waiting to be manufactured into butter, is subject to many alterations detrimental to the value of the butter produced.

and to its keeping qualities. The effect of carbonic acid is to prevent such alterations.

"When pure carbonic acid is used, the butter prepared by my process will retain its sweetness, freshness, and original flavor.

"The cream can be treated in two ways, either by the wet process or by the dry process. For the small farmer, a small cylinder of carbonic acid, with a reducing valve, will be a sufficiently convenient plant."

For the benefit of those not familiar with the nature of liquid carbonic acid, we may say that it is purchased from manufacturers, who send it out in heavy steel drums. The drums hold from 25 to 50 pounds of the liquid gas, which costs about ten cents a pound. Such gas is used in the making of "pop," "ginger ale," and all similar soft drinks. The gas is also used in machines for producing refrigeration, and for the manufacture of artificial ice, etc.

According to the directions for using, the cream may be carbonated in the cans or in the vats by blowing the gas through the cream, or the water used in the making of the butter may be carbonated, and this applied to the cream, butter and utensils.

"The quantity of carbonated water to be blown into the cream is about one-fifth the quantity of the cream. More carbonated water is required in summer, also when the cream has to be sent to a distant place or factory, or has to be kept for a long time before being churned, or when the cream is overripe. If the butter has to be sent to a distant market, or to be kept for weeks, more carbonic acid is to be used in the cream.

"The cream can be churned directly after it has been carbonated, or some time afterwards, and the butter is manufactured as usual.

"Carbonated cream keeps sweet longer than non-carbonated cream. It is never desirable to carbonate the milk, as a quantity of carbonic acid would have to be used much larger than is required by the cream, and would be subsequently lost in the buttermilk."

The foregoing are some of the main points in the new process of buttermaking. It is certainly very ingenious, and deserves, at least, some investigation. Instead of sending out preservatives of various kinds to patrons of creameries, we may see in the near future small jars of carbonic acid on the cream wagons, to be delivered to patrons for carbonating their cream. These jars would also furnish material for making soft drinks during the summer. These soft drinks would tend to keep people at home, instead of patronizing lemonade stands, pop shops, and shops where stronger beverages are dispensed. The result of all this would be to make persons more sober, and cause them to give more attention to the quality of the cream. The carbonic acid in the cream (and in the patrons) would mean better raw material for the buttermakers, which would bring more wealth, comfort and happiness to dairy farmers and buttermakers. In fact, it seems to be another case of the clover-seed crop depending upon the number of "old maids" in the locality. On being asked to explain, the originator said: "Old maids are fond of cats; cats kill the mice, which destroy the bumblebees; and the bumblebees, if destroyed, cannot aid in fertilizing the clover blossoms; therefore, the clover-seed crop depends upon the number of old maids in the neighborhood."

But, seriously, there would seem to be some merit in the process, if not too expensive. At the price which liquid carbonic is sold in this country, we should judge that it would be too expensive to use in large creameries for carbonating cream to be manufactured into butter. It might, however, be used by cream shippers and cream dealers who receive fancy prices for their cream. There is also the question of the effect of the carbonating upon the flavor of the cream. The originator claims the effect to be beneficial. I use carbonic acid to wash out from the cream any volatile impurity detrimental to its quality, says the inventor.

So far as we know, the process has not been investigated in America or at any of the European experiment stations. We shall await developments with considerable interest.

H. H. D.

Butter is the greatest tell-tale on the farmer of any product he turns off. It tells to the consumer at once what sort of a man or woman made it; whether they were neat and clean in their ideas and methods; whether the cow houses were foul and badly ventilated; whether the feed was musty and unfit for use; whether the separator and milk vessels were kept clean and sweet; whether the packages that contain it were in right condition. Everything that comes of ignorance of good sound dairy and sanitary sense, the butter tells with a loud voice.—[Hoard.

AN AWAKENING REPORT FROM NEW ZEALAND.

The report of Dairy Commissioner Cuddie, of New Zealand, is published as Bulletin No. 10, Department of Agriculture. Mr. J. A. Kinsella, a former Canadian, having resigned the position of Dairy Commissioner, the present occupant, a New Zealander, we understand, was appointed in Nov., 1906, to this important position. Mr. Cuddie's report is a valuable contribution to dairy literature, and we extend to him congratulations. He seems to have grasped the essential points in the dairy business of the "New Dominion," and to have stated these with a conciseness and clearness that is a pleasant relief from the ordinary much-padded report.

PRICE OF CHEESE.

From a Canadian viewpoint, the most striking part is the table of comparisons, showing the relative prices of Canadian and New Zealand cheese, as compiled from weekly cable reports by the High Commissioner in London, Eng. The average difference in price in favor of New Zealand cheese is one cent a pound for 1905-06; nearly one-half a cent a pound for 1906-07. Commenting on this fact, the New Zealand Commissioner says: "With reference to the comparative figures for Canadian and New Zealand cheese, it may be pointed out that the higher prices for New Zealand cheese have been obtained at the part of the year when Canadian cheese is off the market; but, taking the twelve months, it will be seen that the price realized for our cheese has been higher than that obtained for Canadian."

Canadian cheesemakers, is this so? If so, why, when and wherefore?

CREAMERY BUTTERMAKING.

Under the heading, "Creamery Butter," the report says: "We have altogether too much but-

ter, excellent system of instruction in dairy work, it must be admitted that we are not reaching the careless patron and the indifferent dairy farmer. Our machinery is excellent, but are we getting results? Is there unity of purpose, combined with breadth of view, to meet the various conditions in different parts of Canada? We seem to fly from one thing to another, and do not continue one line of action long enough to secure results. One year we hear a great hullabaloo about an experiment station or stations in a cheese factory or creamery. Next year there is nothing said about it. None believe the reports we read each year about the great advances made in dairying in each of the various Provinces. We must be near perfection now, or else were very low at the beginning. It seems to us that we might very well take some lessons from the youngest member of the Royal Family on systematic dairy instruction, with a purpose in view.

Butter boxes are sometimes made of green timber, according to the report, which causes trouble with mould on the butter. We are somewhat surprised to hear that butter boxes are not paraffined at all times, which is a great improvement in preventing mould and wood taint. In respect of uniform shape of butter box, the New Zealanders are much in advance of Canadians. In Canada, nearly all the manufacturers have their own ideas about shape, fasteners, etc. A uniform type of Canadian butter box is needed badly.

HOW THEY FOSTER CHEESEMAKING.

The writer refers to the fact that more interest is now taken in cheese in New Zealand than in butter, owing to the fact that cheese prices have been so steady and uniformly firm throughout the season. Many of the directors of creameries are considering the advisability of being able to make either cheese or butter, though this

involves an expenditure in some cases of \$25,000 or \$50,000. Think of a Canadian dairy company being prepared to spend this amount of money on a dairy plant! This is sufficient to cause the average Canadian cheese or butter manufacturer to die of financial fright! The report calls attention to the fact that 1,000 tons of butter-fat, made into cheese, means 2,500 tons of cheese, and this, together with the increased production likely to accrue in other countries, may affect market prices adversely. The New Zealand Commissioner gives Canadians another rub when he says: "The competition which New Zealand butter



Mabel Denton 186243.

Jersey cow. Placed second in three-year-old class, Toronto, 1907. Sire Golden Fox, dam Flying Fox's Brunette. Owned by Wm. McKenzie, Kirkfield, Ont.

ter passing through the grading stores which merely scores the minimum number of points for first-grade, or little more; and, so far as I can see, there is no valid reason why the standard of quality in the greater portion of this butter should be raised to a higher level. Better raw material and closer attention to the well-known principles of practical buttermaking are required to bring about the desired improvement."

The writer also mentions, in this connection, that the pasteurization of cream has resulted in an improved quality of butter made in the cream-gathering creameries. Under "Points Relating to Manufacture," the graders suggest more care with the working of the butter, improved cooling at the creamery, and more attention to the uniform salting of the butter.

In order to improve the quality of dairy butter, an instructress has been appointed by the Government, who visits the farms for the purpose of showing private dairy people how the butter might be improved. In her report, the instructress says she visited 93 dairies during the year. Of this number, the majority were in a very fair condition, some of the others were far from passable, and a limited number should be condemned. She further reports an improvement in these latter since her first visit, where she suggested improvements. These improvements consisted of concrete floors, ventilation, drainage, cleaner byres (stables), cleaner utensils (the separator, churn and butter-worker are often covered with grease and dirt), purer water, and the use of drainage from cow sheds and dairies on the garden as manure.

It would seem as if in Canada we might attempt something along this line. With all our

meets on the British market is certainly very much keener than that which is met by New Zealand cheese." Immortal shades of much-vaunted Canadian cheesemakers' prowess, has it come to this? Are we in a Rip-Van-Winkle state of mind in Canada? Let the band strike up "The Maple Leaf Forever"!

Two shrewd observations of value to Canadians conclude the question under discussion: (1) There is ample room for the development of both the butter and cheese industries, and there is no occasion to develop one of them at the expense of the other. (2) The keener the competition for the milk between the different dairy companies and factory proprietors, the more difficult it becomes to obtain a good-flavored and sound supply. It is needless to say that poor-flavored or tainted milk means bad-flavored cheese.

TURNIPS AVAUNT!

In an extract from the report of one of the graders, we read: "The first shipment of spring cheese showed signs of turnip flavor. There is no doubt that the long and injudicious feeding of turnips is a serious menace to the dairy industry. The same may be said with reference to the feeding of turnips in Canada. Turnip flavors are prevalent at present.

Instructor Singleton, who, by the way, is a Canadian making his mark in dairy work in New Zealand, says of methods of shipping cheese, that they are not entirely satisfactory, and urges the importance of dairy trains running at night, having minimum of time en route. Apparently, trains with dairy produce on board have a similar habit in New Zealand to those in Canada, viz., arrive at their destination at "any old time." Mr. Singleton also refers to the efforts made

to have the cheese curing-rooms thoroughly cleaned and disinfected during the off season. "Mouldy cheese in a curing-room do not present a pleasing appearance, while a lot of clean cheese of uniform size, in a nice clean curing-room, certainly give an exceedingly favorable impression."

The value of ripening or curing cheese at moderately low temperatures, is also commented upon, and the Dairy Commissioner recommends that his Department be authorized to carry on some investigational work in this connection.

#### THE DIRTY MILK CAN.

Returning whey in milk cans seems to be the same bugbear there as here. "The practice is undoubtedly responsible for a quota of bad flavors." One factory has adopted the plan of having two whey tanks, each of which is capable of holding all the whey for one day. The one tank is thoroughly cleaned one day, while the other is being used, and next day the latter is thoroughly cleaned. The manager of this factory reports an improvement in the flavor of the milk supply as a result of adopting this plan. Here is a suggestion for Canadian cheese-factory owners.

The introduction of pure cultures or starters, says the report, has done more to improve the quality of our butter and cheese than any other change in the system of manufacture. It is now generally recognized that, unless a starter is kept going at the factory, trouble is likely to occur with regard to the quality of either butter or cheese. It would pay every cheese factory, and perhaps butter factories as well, to provide a special room in which to keep the starter going. This room should be fitted with facilities for heating and cooling milk, and be set apart altogether for this particular branch of work.

Similar troubles with reference to milk supply are apparently experienced in New Zealand as in Canada. The report says: "The dairymen who are careless or neglectful in the handling of the milk on their farms would appear to be quite oblivious to their responsibilities in this connection, or to the bad effect which ill-flavored milk has on the finished article." The writer mentions that as much as 6,000 to 7,000 pounds milk have been rejected in a single day at a single factory during the past season. If some Canadian factories rejected this much milk in a single day, the cheesemaker might as well engage to play baseball for the season—he would have nothing to do.

Under "Caring for Milk," it is advised to reduce the temperature of the night's milk to 60 to 65 degrees, the lower the better. Dairymen will find that the systematic and efficient cooling of milk will greatly enhance the value of the butter and cheese made from it, prevent losses by having the milk returned, and help to improve the good name of our dairy products generally. This is good advice for Canadians.

We were much pleased to see illustrations of covered milk-stands, and water coolers, etc., for proper cooling of the milk, as practiced on New Zealand farms.

#### THE MILKING MACHINE.

In this connection, "Milking by Machinery" is given considerable space in the bulletin. The following extracts will place the matter before Canadian readers:

"Milking machines are rapidly coming into favor among the dairy farmers, and it would seem that the time is not far distant when these machines will be in active operation in every dairying district in the colony. The difficulty of obtaining suitable hands to do the milking, and the uncertainty of the hands remaining in the employ of the farmers for any length of time, together with the high wages demanded for this class of work, have been the means of inducing quite a number of settlers to purchase machines."

"There can be no doubt that the milking machine has become an important factor in reducing the labor, from the dairy farmer's point of view." The writer goes on to say that, while this is all true, the machines have not been an unmixed blessing. "We have ample proof that some of the milk drawn by the new method is quite unfit for the manufacture of first-class butter or cheese." He, however, thinks this is due to carelessness on the part of operators, and says that clean, sound milk is delivered daily by farmers who thoroughly wash all parts of the machine. If nothing is done to check the delivery of inferior milk from this source, the milking machine will ultimately result in lowering the standard of quality of New Zealand cheese and butter, which it has taken years to build up."

Instructor Singleton says: "A number of samples of milking-machine milk have this season come under my notice. A number of these would not attract special attention for inferior quality, but a considerable percentage were very inferior indeed. One or two managers reported an improvement in the quality of the milk brought by some suppliers, but the majority I met reported the reverse, viz., that, prior to the installation of the machines the quality was good, but since that time the quality has been decidedly inferior. There is no doubt, in my opinion, that the general use of the machines will cause a greater inferiority in

flavor in a larger percentage of our already sufficiently inferior milk supply. In the hands of men who are exceptionally careful, better results may be obtained, but a number of suppliers who are getting the machines are not competent to look after them properly."

#### THE MILK-CAN THIEF.

Under "The Testing of Milk," it is recorded: "The Babcock test is now in use at practically every dairy factory in the colony." In this respect, also, our sister Dominion leads the procession. We look for an old-fashioned revival on this point before long in Canada, when the sinners who have been putting water in milk, or removing cream from milk sent to cheeseries, will become thoroughly aroused to the enormity of their sin. In this connection, may we relate a story told, if I remember rightly, by our mutual friend, ex-Gov. Hoard? A man who had the reputation of being a great cheat in the neighborhood, professed to get converted. It having been impressed upon him that before he could secure peace of mind he must restore fourfold to all those whom he had wronged, one night he made a public announcement that if he had wronged any man, he was willing to repair the wrong to the extent of four times the value of the injury. About 3 a. m. he was awakened by a loud knocking on the back door. He stuck his head out of the window and said, "Who is there?" A voice answered, "Jim Wiggs!" "Jim Wiggs? What are you doing here at this time of night?" "Wal," said Jim, "I heerd you say at the meetin' las' night, if you had wronged any man, you was willin' to restore fourfold, an' I thought I'd come airly, 'cause there's goin' to be a devil of a rush!" There ought to be a "rush" for honest payment of milk at Canadian cheeseries in 1908.

#### CREAM SEPARATION ON THE FARM.

We have only space to mention one more topic discussed in the bulletin, viz., "Separation of Milk on the Farm." After pointing out the advantages of separating milk on the farm, as compared with hauling milk to factories over long distances, more especially where the roads are of a heavy grade, or very bad, the Commissioner says: "As a matter of fact, the separating of milk on the farms has, in itself, no disadvantages if it is carried out under first-class conditions, or on similar lines to those adopted at the factories and creameries. Unfortunately, however, these conditions are seldom adhered to, or even attempted, on the dairy farm, and herein lies all the difficulty and danger in regard to this system of dairying. Thorough cleanliness, proper cooling of the cream, and its daily delivery to the factory, would reduce, if not remove, many of the objections raised against the system." He advises the following points to be observed by dairy farmers who run their own separators:

1. The separator should be set in a clean place, away from the milking shed and yard, preferably in a small, well-ventilated building, with concrete floor and drainage.
2. Wash the machine after each and every time of using.
3. Cool the cream immediately after it is separated.
4. Cream from night's and morning's milk should not be mixed until both lots are cooled.
5. Deliver cream to factory daily, if possible.
6. Protect the cans from the sun's rays during transit.

In addition to the meaty matter which has been briefly commented upon, the bulletin is well illustrated with a number of nice engravings which are clear and well drawn. On the whole, the Dairy Division of the New Zealand Department of Agriculture is to be congratulated on the excellence of the publication. H. H. D.

#### REFILLING MILK BOTTLES WITHOUT WASHING

Toronto news despatches of Nov. 20th announced that Medical Health Inspector Robert Wilson had determined to put a stop to the practice of certain milk dealers of filling uncleaned milk bottles. The bottles are taken from the doorsteps, in some cases with milk still in them, or adhering to the sides, filled in the wagons and re-delivered to customers. Jas. Hubbard, a driver, was charged in the police court with filling a bottle that had not been washed. His case was adjourned till called on, but Magistrate Kinesford gave him a warning that may keep others from the same practice.

A woman had complained to the inspector that she had, from her window, seen Hubbard deliberately take a dirty bottle from a doorstep and fill it. He delivered the bottle to her, and she complained to him about it. He remarked that "It was all milk any way." On another occasion she used a bottle of milk and found in the bottom a note which she had left in an empty bottle the day before. The note said "Tickets wanted immediately, one pint today."

Other cases have been reported to the inspector, and Magistrate Kinesford promises to punish offenders to the full extent of the law. Selling milk in bottles, and then refilling the bottles without thorough cleansing is a pernicious practice, offensive to

people of refined taste, and liable to spread disease, besides causing the milk to sour much more quickly than it would if put into sterilized bottles. Unless properly attended to, milk bottles are decidedly objectionable. It is a pity that official action should be necessary to prevent the bottling of milk in unwashed vessels. Common decency, to say nothing of business interest, should be enough to forbid it.

## POULTRY.

### AN UP-TO-DATE POULTRY-HOUSE.

Editor "The Farmer's Advocate":

The nature and habits of the domestic hen do not require that her shelter be very expensive. It is doubtful if any two poultry-keepers would be impressed in exactly the same way by any given style of house, for no two people are alike. Hens will not thrive in dark or damp places. It is therefore imperative that a poultry house should be dry. And if the birds are obliged to remain indoors for long periods, the floor-space should receive the direct light of the sun for a portion of the day at least.

Hens are exceedingly sensitive to drafts, and will certainly suffer if not shielded from them, especially while on the roosts at night. Being by nature an outdoor animal, the hen will not long retain good health if she is deprived, day or night, of pure air charged with oxygen.

Different climates demand different construction of poultry houses. The range of temperature in which hens are comfortable is great. A healthy, well-fed scratching hen will not feel cold with ten or twelve degrees of frost, but she will be decidedly uncomfortable at eighty degrees of heat. Excessive heat ruins more hens and more egg records than excessive cold, and should be guarded against with equal care. Therefore, our poultry houses should be so constructed that the confined hens will be as comfortable as possible day and night, summer and winter.

With this explanatory preamble, I will now describe what I consider the ideal poultry house. The house is 36 feet long and 10 feet wide; it is 6 feet high in front, and 8 feet high in the rear, from top of sill to bottom of plate. In the center of the house are two roosting rooms, each 6 by 10 feet (the width of the house). The partition between the two roost rooms divides the house into two equal pens, the 10 by 12 ft. space at each ending being a scratching-shed. The roost rooms each have a closed front, in which is a window. At the back of each roost room is a droppings platform, 22 inches from the floor. About one foot above this are the roosts, two in number, level, and distant about one foot from each other, and about the same distance from the rear wall and the front edge of the platform, respectively.

That portion of the roost room occupied by the roosts is roofed over at a height of five feet from the floor. This makes it possible, in sections where winter temperatures fall to below zero, to shut in the roosting birds at night by means of curtains, making a small, closed apartment that will hold the animal heat of the birds during the long, cold winter nights.

The boards over the roost rooms should be narrow boards, and about one inch apart, and the space between this roosting-apartment roof and the roof of the main house should be filled with hay or straw during the winter months, and removed in the spring to the floor of the scratching-shed. This space opens into each scratching-shed. The openings may be covered with netting in summer to prevent the birds getting from one pen to the other, when the straw is removed. The front of the scratching-sheds is closed as follows: The first 18 inches above the sill is boarded; the next 30 inches are glass windows, and the remainder of the space to the plate is curtain, which can be raised at any time, and should be raised all the time in the summer months, when the windows of the scratching-shed should be removed, and the space may be covered with netting. The roof, which slopes to the front, should have a projection of 12 to 15 inches, but will do without any projection at the ends or back of the house. I like this sloping in the scratching-shed gets the sunlight in the winter months, when the sun runs low, it is shaded by the projecting eave during the summer, poultrymen do not favor this style of roof, but I do, as experience teaches that this style, with low front and high back, is cooler in summer and warmer in winter than any other style of house that I have seen; and the low front and the projecting eave—if it projects enough—will keep the rain out of the house when the curtains are up and the windows out in summer.

The open space over the roosting apartments at the back provides a constant flow of fresh air from one scratching shed or room to the other, that thoroughly ventilates the high rear portion of the house, and yet causes no drafts along the bottom of the house where the birds are.

The house can be built of wood or cement. A

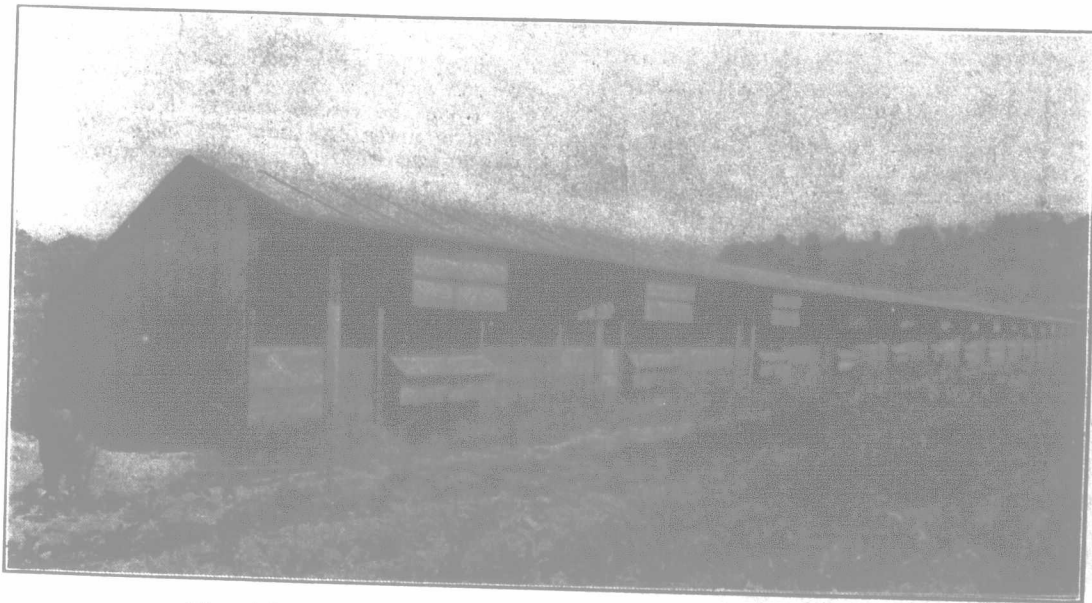
six-inch cement wall would be all right; or, if built with lumber, first board close on the outside of the studding, then put on two or three ply of good building paper or felt, then finish with matched siding. The roof should be close-boarded, then two or three ply of good roofing paper or felt, and finished with some kind of waterproof roofing. All inside partitions should be of matched, dressed lumber; also all doors, as wire-netting partitions in all cases cause drafts, as do also all houses built with alleyways. They are far behind the present up-to-date style of poultry house. The nests can be placed under the roost platform. Feed hoppers and grit boxes may be placed on the walls of the front part of the roosting room; also the water bucket right on the floor in the partition between the two pens, and serve both pens equally as well as two water buckets would do. I favor dark nests, and on the floor. This house will accommodate 45 or 50 fowl nicely. Scratching-shed part will do with a sand floor. This style of house can be extended to any desired length, as every 36 feet will make two pens. And, for convenience, there can be a door in the back of each scratching-shed, on the north side, at the roadway. This door will be very convenient for putting in and taking out scratching material of scratching-sheds.

I am aware that there are poultrymen—and many of them—that will laugh at the style of this poultry house. But to all who may criticise this style of house, I have to say, build the house and place 40 hens in it, and give them proper feed and care, and if they do not get more eggs in both winter and summer than they can get in any other style of house, then my name is not Dennis. Middlesex Co., Ont. A. DOUPE.

#### OPEN-FRONT POULTRY HOUSES IN BRITISH COLUMBIA.

Editor "The Farmer's Advocate":

I believe in the tightly-built poultry house, but I do not believe in thick walls or houses with air-tight sleeping places. Within a stone's throw from where I am writing is the open-front poultry house which is in use for the second year. The whole of the building is made of ordinary rough lumber. Over the roof and back is a cover of malthoid roofing. The front, facing south, is 6 feet high, 2 feet of which is boarded from the ground up; 4 feet is wire netting. The back is 3 feet high, and the hip of roof 7 feet 6 in. Width is 6 feet, length 300 feet, divided into 18-foot sections by solid partitions of rough lumber, and door in each, so that you can go from one end of the building to the other inside. There is also a door in front of each section. You will notice, by the cut I am enclosing, that the nest boxes are in the front of the sections, in the center, and over them is a box with slat bottom and front; that is, from the inside of pen, and is used for broody hens and extra male birds. The dropping-board is 18 inches from the ground at the back of pen, and 2 feet wide, with single



The Adare Open-front Poultry House, Victoria, B. C.

roosts the whole length of each 18-foot pen. Six inches from the dropping-board, in front of the roost, on the center scantling, is a curtain of canvas, which drops just below the dropping-board, for use during the winter and cold nights. The floor is just the sod covered with sand and gravel, also scratching litter, so that the whole of the floor space is available as a scratch pen. I keep an average of 18 birds in each pen, which allows six square feet to each bird. On the under side of the ridge-board is a cable, on which a pulley traveller, with hooks attached, carries the feed, water and eggs from end to end, which makes it both easy and quick work to feed and clean out, etc., besides being under cover during the wet seasons, which is also far better than doing the work from the outside, with the rain from the roof trickling down your back. Another advantage of going through your houses is that the birds get used to you and become far more tractable. You also see whether there are any eggs laid in the litter, or notice if any are sick or out of condition. Since having put my birds out of the solid houses to the open-front pens, I have had scarcely any sickness, the birds are more contented, their plumage is much brighter, and their egg production greatly increased. Feeding trough and water fountains are under the nest boxes.

Since this photograph was taken, runs have been put up, which adds much to the appearance of the houses, and all who have seen them admit them to be the best, and the most handy and economical houses yet invented. And they have proved so successful that two more are under construction. E. M. WROUGHTON. Adare Poultry Farm, Victoria, B. C.

#### GARDEN ORCHARD.

##### ANOTHER CASE OF SCALLION ONIONS.

Editor "The Farmer's Advocate":

I noticed your reference in Nov. 14th issue to the experience of an onion-grower who had several acres of poor onions from seed purchased in Toronto. I got some Red Wethersfield seed from a seed merchant in that city, and I think ninety-nine per cent. of the onions were poor stuff. I have a bed, sixty feet long, containing four rows, all scallions. My "silver skins" were all right. WALTER RIGSBY.

[Note.—From information supplied in confidence, we are in a position to state that the firm from whom Mr. Rigby obtained his seed was not the one through whom the Collingwood firm obtained theirs. It all goes, however, to show that the cause of thick-necks, or scallions, is chiefly, if not entirely, in the seed.—Editor.]

##### POLLINATION AND FRUITFULNESS.

At the Central Experimental Farm, Ottawa, the Lindley grape, which is commonly regarded as a rather shy bearer, produces large crops and good bunches. Prof. Macoun attributes this to the fact that they have some 200 varieties of grapes on the farm, and he expects it thus gets unusually well pollenized.

In the Annapolis Valley, Nova Scotia, he observed some Northern Spy apple trees that were producing exceptionally well, evidently because they were surrounded with some other kinds.

## Third Convention of Ontario Vegetable-growers' Association

The third annual convention of the Ontario Vegetable-growers' Association met in the City Hall, Toronto, November 14th.

The President, R. J. Bushell, Williamsville, Ont., reported the progress of the year, and emphasized the value of organization in securing suitable legislation, etc.

#### GREENHOUSE CONSTRUCTION.

The first paper read was on "Greenhouse Construction for Vegetable-growers," by J. D. Fraser, Leamington, Ont. The farmers of Leamington were forced into greenhouse work on account of the failure of the peach crop. As the snowfall is light there, it is possible to use wood-and-glass construction, but this is now being discarded largely. Cement walls are best. Supports are best made of gas-pipe. The glass is usually butted—not overlapped—and, if square glass, say 20 by 20 in. is used, you can have the choice of sides, and possibly make a better fit. For heating, Mr. Fraser would use hot water, forced through. He would also build his houses high, in order to secure better ventilation. Most of his benches would be on ground level, but he would have a few raised ones for forcing. Mr. Fraser's paper was full of practical hints for men who have the older style of greenhouses.

Mr. Robert W. King, Toronto, a greenhouse expert, led the discussion, and outlined the most approved methods of greenhouse construction of the present day.

The construction of greenhouses, of ridge-and-furrow plan, farther north, was a serious problem a few years ago on account of the heavy snowfall. But that is now settled by building iron gutters, with a couple of hot pipes below them for heat, which rapidly melts the snow. On account of

this simple construction method, greenhouses may be safely built anywhere. The single-house plan is good, if one has plenty of land. The houses can be placed 40 or 50 feet apart, and the sheltered land between used for crops; 50 to 60 feet is the best width for a single-span house.

#### HEATING THE GREENHOUSE.

The theory of heating was well discussed, because if the theory is understood the practice is usually correct. The reason why pipes are not placed on walls or in the center was well described by showing the courses of convection currents set up by them. The best results are now obtained in high buildings, with the pipes hung from the roof, 7 feet from the ground. Dunlop's last house had an 8-foot wall, and Dales, of Brampton, are putting up a 9-foot wall in their latest house. Even though there is a much larger space, actual tests show that they are more easily heated. With the pipes up 7 feet, and a short distance apart, convection currents of large extent are not created, no cold air falls on the plants, apparently there is good circulation, and, in large greenhouses, horse cultivation is easily pursued.

#### PAINTING GREENHOUSES.

Mr. King also emphasized the proper painting of any wood used in construction. Drier must not be put in paint for first coats. Put on, first, raw oil, allowing plenty of time to soak in; second, raw oil with a little white lead; third coat, add a little drier.

The discussion of greenhouse management largely turned on the growing of lettuce, and this crop inspired the chief discussion of the convention, both under the head of "Greenhouse Management," led by T. Delworth, Weston, and "The Marketing of Vegetable Crops," led by a paper of Frank Williams, Ottawa South.

#### LETTUCE ON THE TORONTO MARKET.

The members warmly discussed the lettuce methods. It was claimed that Toronto was not supplied with good lettuce; it was not supplied with lettuce in proper marketable form, and did not know how to use lettuce as many other cities in America use it. It was claimed by Mr. Fraser that they ought to eat twenty times as much, and could be educated to do so if good lettuce were put on the market and sold according to some real standard, and not by the "bunch." The bunch system was responsible for it all. It limited the growing of lettuce to near-by gardeners; the lettuce was put on the market in an immature state, and wilted quickly; it was forced in heated greenhouses; outside growers, who grew large, crisp heads, could not get into Toronto market, because they sold by the pound. The Toronto system was stoutly and warmly defended by the Toronto growers. The mass of evidence, however, showed that Toronto largely used lettuce for garnishing, etc., but did not yet use it as a food. When the bunch system was done away with, and the goods sold in heads, and 16 ounces to the pound, the business would increase.

#### TOBACCO-STEM SMOKE FOR GREEN APHIS.

The green aphis is the worst insect in Mr. Delworth's houses. He combats them and gets good results by using cigar-factory tobacco stems. The stems are dampened and burned, the thick, heavy smoke thus produced doing the killing quite effectively. Powdered stems, scattered among plants, is also quite effective, as considerable fumes are given off when water falls on the tobacco. The bad results from tobacco obtained by some, he attributed to the use of plug tobacco. In discussing the green aphis, Mr. McMeans, of the O. A. C., said they used a certain

commercial product, and two applications killed absolutely every one.

#### THE WHITE FLY ON CUCUMBERS AND TOMATOES.

Mr. McMeans also discussed the White Fly, which attacks cucumbers and tomatoes. Good results were obtained by the following solution: One-fifth ounce pot. sulphide, two-fifths ounce sulphuric acid, one ounce water—for every 1,000 cubic feet capacity.

The forcing of rhubarb was also recommended by Mr. McMeans, as cheap building covered with stable manure can be used. The method of using electricity in greenhouses was mentioned, where the copper was placed six inches below the soil at one end, and the zinc at the other. W. W. Rawsons, of Massachusetts, claimed excellent results from this.

#### HOW \$2.00 MUSK MELONS ARE GROWN.

To "Farmer's Advocate" readers who have ever experienced the exquisite pleasure of a slice of a Gorman Montreal melon, the following facts, delivered by Mr. Gorman himself, must be of interest. The methods of growing and maturing these world-famous fruits ought to be of great interest to nearly all Canadians, inasmuch as the same methods used anywhere in Canada ought to bring similar results, and Mr. Gorman assures all might do the same work as he if they only knew how. A detailed description of Mr. Gorman's methods follows:

The seed is selected from the finest melons. It is sown in a hotbed about April 1st, in drills six inches apart. When in first leaf, two plants are transplanted into a 5-inch pot, and placed in another bed. When these are grown to the third leaf, they are transplanted to beds where they are to be matured. The land where they are grown is changed every two years. It is given a heavy coat of manure when being prepared. Trenches 12 to 15 feet apart, and 18 to 20 inches deep and wide, are then opened up, filled with horse manure, packed firmly, and covered with several inches of soil. The next day, usually in the late afternoon, the plants are placed out, one pot under each sash. The frames are made 12 feet long, and each has three sashes; so that there are three hills to each frame. The sashes are taken off about 8 a. m., and placed on before the heat of the frame is lost in the afternoon. When the plants are placed out, the centers are pinched, to make them throw more numerous branches. They are then well watered—the only watering given, as advantage is taken of showers during the summer by removing the sashes. When the vines have grown about one and one-half feet long, they require "earthing." To do this, remove the sashes, weed, train out the vines, pinch out the center, level the earth between the beds, making a furrow for drainage, replace frames, but place a block or stone under each corner to allow the vines to run out. The fruits will soon begin to form. One week before they ripen, remove the frames. Turn the melons frequently, to prevent "blistering." Pick almost-ripe ones daily and store. The market for these melons appears to

be inexhaustible, according to Mr. Gorman. His fruits are sold from his storehouse for \$10.00 a dozen. They are always stamped "Gorman," to prevent fraud. They often sell at \$2.00 each. Such are the circumstances under which the famous Montreal melons are produced. Cannot citrons and watermelons be matured by using the same methods?

#### THE DESTRUCTIVE CUTWORM.

The address of Dr. Fletcher, Dominion Entomologist and Botanist, Experimental Farm, Ottawa, was, as usual, brimful of valuable information. His subject was "Insects That Trouble Vegetable-growers, and How to Combat Them." The first great remedy to remember is a short rotation of crops. The most destructive insects are cutworms, of which there are, in Canada, about 360 kinds. The eggs which hatch into the destructive larvæ, or worms, are laid by night-flying moths, mostly in the fall. The larvæ become partly grown and are ready for the crops in the early spring. The larvæ do their eating by night, so that they are rarely seen, as they burrow in the clay by day. Paris green, if eaten, will certainly kill insects, but may often take several days, as it is a slow-acting poison. The practical way to feed it to cutworms is by means of a bran mash. The method of preparing this is important. One pound of Paris green to 100 pounds bran, moistened slightly, is sufficient. To moisten the bran, put about one cupful of water into a pan of bran, and stir thoroughly. The bran will be thus slightly moistened, but will still be dry enough to run through the fingers. The slightly-moist surface of the bran will cause enough Paris green to adhere to do the work. If the bran is sown about the field, it does not injure birds or chickens, as they do not get enough of it. When tomatoes or cabbage are threatened by the cutworm, they may easily be wrapped with paper about 4 inches by 8 inches. The sheets of paper are nailed on the side of the basket when setting out, torn off one at a time, and really involve little labor. It is always done at the Central Experimental Farm. The variegated cutworm will climb trees at night and eat the buds. A band of cotton around the trunks will stop its excursions in that direction quite effectively. The habit of the Variegated in eating all summer, when other cutworms are mostly through in early summer, makes it a very troublesome insect.

#### THE CABBAGE BUTTERFLY LARVÆ.

The cabbage-butterfly larvæ also do a great deal of damage. This insect was imported to Quebec about 1860, and is now common all over America. The practice of putting on Paris green and water, or Paris green and flour, is not to be recommended. The best remedy is to use one pound Pyrethrum, or insect powder, and four pounds cheap flour. Mix in a closed jar or canister, leave 24 hours, and then apply. Can be kept a long time in a closed vessel. The Pyrethrum is an insect poison, and does not injure the higher animals or man to any extent. The Paris green is dangerous to apply to cabbage because insects often bore into the head of the cabbage,

a little Paris green gets in, and a very little will sometimes severely poison some people. The mixture of Pyrethrum and flour can be blown on by a bellows such as is used for Paris green, or may be dusted on in the following cheap manner: Put the mixture in a muslin bag tied by a string six inches long to a stick; with another light stick hit the bag over each cabbage, and enough of mixture will be deposited. In ten days, repeat the dose, and the insects will be cleaned up for the season.

#### ROOT MAGGOTS.

Root maggots are those white fellows we find in the roots of cabbage, turnips, radishes, etc. In seasons when they are numerous, they are very hard to manage. There is no practical remedy which will give complete immunity from attacks. The eggs are laid on the stem or root close to the ground, and, after the insects bore in, they cannot be got at. If a disk of fresh tarpaper is put on the plant, and pressed down to the ground, the winged adult often will not lay its eggs on account of the odor of the tarpaper. A remedy, when one knows the plant is infested, is to put one cupful of a mixture of two ounces of hellebore in a pail around each plant. The hellebore should be first dissolved in hot water.

For the onion maggot, carbolic wash, made of soap, water, and crude carbolic acid, put on once a week, will keep the maggot from laying its eggs. Gas lime, the supply of which, however, is limited, is effective when applied between the rows. It is also good fertilizer.

Poisoned bran is effective for grasshoppers.

#### TURNIP FLEA-BEETLE.

The turnip flea-beetle is often destructive. If turnips are sown the third week in June, which is a period between the time of the first and second broods, the seed leaves are likely to be unharmed, and a better quality of turnip harvested than from earlier or later sowings.

If the seed leaves are attacked by the pest, dust with Paris green mixed with flour, land-plaster or lime.

The Doctor concluded his address with a word of warning to those who use nozzles. Use a GOOD one and a NEW one. They wear out very easily. One day applying the lime-sulphur wash wears out the disk. Bad results are often caused by a poor spray.

#### DELEGATIONS.

A delegation waited on the Minister of Agriculture, asking that representations from the Vegetable-growers' Convention be given on the Advisory Board of the Horticultural Experiment Station at Jordan Harbor Station for fruits and vegetables; also, that legislation be made to compel seed dealers to give a guarantee with their seeds. This matter was beyond the jurisdiction of the Ontario Government, however, so that the delegates will seek the legislation from the Federal authorities.

The officers of the Convention are not appointed until the winter meeting.

J. W. JONES.

## The Important Question of Nursery Legislation.

At the 1906 convention of the Ontario Fruit-growers' Association there was quite a warm discussion on the advisability of enacting a law to control the nursery business. This year it was followed up by a couple of papers on "Nursery Control and Legislation in Other Countries," one from the nurseryman's standpoint, by E. C. Morris, of Brown's Nurseries, Fonthill, Ont., and one from the fruit-growers' standpoint, by Geo. A. Robertson, of St. Catharines. Mr. Morris' paper was read by Mr. Bunting.

Mr. Morris dealt with instances and arguments advanced at the convention last year, pointing out that often the nurseryman suffers blame for mistakes made by the growers in ordering their stock, and that no nursery company would, in this day and age, dare to deliberately send out stock untrue to name, for the sake of its own business success. We quote copiously from this paper as follows:

#### FROM THE NURSERYMAN'S STANDPOINT.

"Only a few years back there was no fruit industry. Buyers of nursery stock and growers of nursery stock were careless. To-day, all is changed. Mr. Robertson suggests 'pedigreed stock.' In theory, or on a small scale, this is practicable, but not in a large commercial nursery. Processes are too slow and expensive, as well as uncertain on account of fruit buds. All nurserymen, so far as they can, buy Tennessee natural pits for their peach-budding stock.

"Twenty-five years ago last April I first started in the nursery business, and, from that day to this, I do not believe I have met six men who would acknowledge they were at fault for trees dying, or were mistaken as to the varieties ordered and got, until they were shown their original order. There are as many misclaims regarding varieties ordered and got, as trees that turn out untrue.

"W. L. Smith last year referred to an orchard where one-fifth of the trees obtained from one of the

largest nurseries of Canada proved wholly valueless. Mr. Smith does not say on what ground the one-fifth of the orchard were valueless. Was the then present owner of those trees the original purchaser of them, or did he buy the farm with orchard planted thereon, and take the former owner's word for the varieties it contained? Did Mr. Smith see the original order or an exact duplicate to know for himself before pronouncing judgment? I ask these questions because experience has taught me that very often, through the fallibility of memory, purchasers are mistaken and forget, and then make erroneous claims and statements. It takes very few trees eight or nine years to show whether they are of the variety ordered or not, and the very first spring after a tree shows it is not right is the time to top-graft, and not wait till eight or nine years have passed. Then when he has top-grafted his tree, or budded it, the chances are three to one for even a stronger producer than had the tree been true at the start.

"At the last convention of this Association your committee reported: 'It is a fact that much of the nursery stock planted in years past has been of inferior quality and untrue to name.' That word 'much' should be defined. Mr. A. W. Peart, an extensive fruit-grower, says 'not five per cent.' of the thousands he has bought turned out untrue to name. That certainly is not much. A ninety-five-per-cent. yield of any crop is excessively large. A ninety-five-per-cent. sale of all manufactured products of any mill is very large. All loss that has fallen on the fruit-grower has been shoved off on the nurseryman, simply because the fruit-grower will not act along the proper lines, to save himself from as much loss as possible by top-grafting his trees. These eight or nine years lost are not counted in the fruit-growers' profit and loss' account. But it is awful when five per cent. of his trees turn out untrue (and he could save the larger part of this loss, if he would), and the other ninety-five per cent. are

yielding him 1,000 to 1,500 per cent. profit on his investment, and have sent his \$70-per-acre land to \$300, and in some cases \$500. No, that does not amount to anything—we want the whole 100 per cent. perfect.

"Some years ago the United States Congress was surprised to find a bill introduced to regulate traffic in trees, and make nurserymen responsible for correct labelling. The bill was never mentioned a second time. There is no State law that I am aware of that is enforceable on this point. Some States have license and bond laws, but the fruit-grower does not receive any direct benefit. It simply adds to the cost of the trees, and the fruit-grower must pay it in the end. Nurserymen are to-day far more careful than they were, and competition will clear up the trouble more quickly than anything else, as those mistakes and mishaps hurt the nurseryman more than the grower, and so they should, to make him careful. Putting nurserymen under bond accomplishes nothing. There is not a nursery of any size in Canada to-day that is not good for all its liabilities, and a bond does not make it one whit easier to collect damages, as you must sue the bond first and prove damages. Licensing agents accomplish nothing. People to-day are wise enough to know what to believe and what not to believe, and if they are not informed, it is very easy for themselves from the very clear and concise circulars issued by the Experiment Stations. Any man can get a license to sell trees, and without an examination as to his moral standing or veracity. This would not raise the standard at all. Common sense used by customers will protect them more than anything else. To pay 25 cents for a tree, grow it three years, and then expect a nurseryman to pay \$5, \$10 or \$25 for a tree that turns out untrue is not a fair proposition. I would like no better proposition than to buy trees at 25 cents, grow them three years, and get \$5 damages per tree.

"The nurseryman suffers no inconsiderable loss from

tree purchasers being mislabelled—marked 'good pay' by local parties. That is the other side, and only goes to show that we are all liable to mistakes; but please credit the nurseryman with a fair amount of honesty and good intentions, and, if any new legislation is deemed best, consider his interests, his problems, and his losses, as well as those of the fruit-grower. Our interests are mutual.

"Help the nurseryman by paying a fair price for his product, and I know that he will do his part toward delivering to you trees true to label; it's to his interest to do it without any further legislation."

FROM THE FRUIT-GROWERS' STANDPOINT.

The other side of the question was presented by Geo. A. Robertson, of St. Catharines, who pointed out that the introduction of numerous fungous and insect pests, necessitating much expense for spraying, have pared off the orchardists' profits, compelling him to cut out the unprofitable varieties, and incidentally calling attention to the fact that many varieties planted in previous years have turned out untrue to name.

"When I came into possession of my present premises," said the speaker, "there was on it a thrifty young peach orchard of some thirteen hundred trees. A chart furnished by the former owner called for some three hundred trees of the Early Rivers variety at one end. There was not an Early Rivers in the whole orchard, and the varieties were so mixed that it was necessary to go over the whole orchard during the entire ripening season so that none should be missed.

"My next experience was with cherries, and I placed an order for fifty trees each of the following varieties: Governor Wood, Knight's Early Black, Napoleon Bigarreau, Eckhern, Windsor, Black Tartarian, Large-fruited Montmorenci, and Early Richmond. The Governor Woods were about one-third true to name; the others are mixed varieties, many of them black, later-ripening, and some are unprofitable. The Knight's Early Black are conspicuous by their absence; not one of this lot of fifty trees is true to name, but they have proved to be a later, sweet, black cherry, many of inferior size, and shy bearers, and ripening along with Black Tartarian. A large cherry-grower, who visited the orchard, advised me to tear them out, as he had some of the same kind and that they would never pay. This is my reward for eleven years of care, manuring, spraying, cultivation and pruning. The Napoleon Bigarreau were apparently, on first inspection, nearly all true to name, but now the similarity is just in color. Perhaps one-third are true to name, the others differing a little in color, shape and time of ripening. The Large-fruited Montmorenci are not true to name, but are Montmorenci ordinary. Early Richmond and unknown varieties of the same type.

"My next experience was filling in my original peach orchard, so I went direct to a self-styled 'reliable' nurseryman, and in the place of Elbertas and a few other choice yellow-fruited varieties ordered, I got a number of trees which bear small, sour, white-fleshed peaches, that ripen about the time of the first frosts.

"My later plantings of pears, peaches and plums were procured elsewhere, and I really think the nurseryman attempted to fill the orders as ordered, they being largely true to name.

"My experience has been, I am sorry to say, similar to the experience of far too many; all suffer more or less. Only this year these small, white-fleshed peaches have cropped out in a neighboring orchard, under the assumed name of Yellow St. John, an on Nov. 1st they were none too ripe, but suffering the effects of a frost. Another intended to make sure of having his stock true to name, and, therefore, supplied the nurseryman with the buds to bud the stock, only to find after the trees came into bearing that they were some poor, worthless variety. One not interested in the commercial growing of fruit, especially tender fruit, cannot appreciate the losses direct and indirect through disappointments of this kind.

AN EXAMPLE OF LEGISLATION IN THE FRUIT MARKS ACT.

"Canadian fruit has borne a fairly good reputation, but it was deemed in the best interests of fruit-growing for the Dominion Government to pass the Fruit Marks Act. It was ridiculed by some people, and criticized as impracticable, but later revisions have made the law no less stringent, and now the wisdom of its enactment is becoming quite evident. And yet, notwithstanding its undeniable advantage and success, we find that as late as January 23rd to 24th, 1907, at the Western New York Horticultural Society, a committee on legislation, reporting on a resolution in favor of a federal law to define and fix the various grades of apples, and to provide for their inspection when in closed packages, reports:

"Such a law is unnecessary and not needed on account of public health and morals. Honest packers do not need an inspector. If a fixed grade were established, packers could not pack up to it on account of the lack of trained help, and the want of the necessary knowledge of growers and packers in general. It would give too much power to inspectors. To get the most out of fruit, the grower should be allowed to grade them according to variety or season, more or less. The proposed legislation suggests strongly the Canadian Fruit Marks Act, under which the growers and packers across the line do business, but which appears quite foreign to the free spirit of this country, or as another speaker calls it, the freedom we enjoy under the American flag."

NURSERY LEGISLATION ELSEWHERE.

Mr. Robertson then read synopses of legislation in other Provinces and States relating to the nursery business, but apparently only two or three of them have any law in any way corresponding to what is felt to be necessary by Ontario growers. Following are the abbreviations of a few of the laws:

Idaho.—All nurserymen doing business in this State are required to furnish a surety bond of \$1,000 (one thousand dollars), conditioned on the faithful compliance with the law requirements as follows:

- 1. Representatives must have a certificate showing that their firm or firms have given bonds.
2. That stock being shipped into the State has been examined by a duly-authorized officer, and a certificate of inspection attached to each package.
3. All trees, shrubs, plants, etc., must be true to name.
4. Any pit fruit coming from sections where peach yellows are known to exist is strictly prohibited.

Michigan.—All nurserymen shipping into the State must fumigate and have also a tag or certificate of inspection and one of fumigation attached to each package; a license fee of \$5.00 a year, and a bond of \$1,000 (one thousand dollars) must be filed. The conditions under the bond are that only inspected and fumigated stock will be sold, and a list of customers will be furnished, if requested.

Washington.—All nurserymen must secure a license before engaging in the business of selling and importing fruit trees. A license fee costs \$5; and for each agent is furnished a copy of the license for \$2.50 each, and is good for two years. The nurseryman also deposits a satisfactory bond for \$1,000 (one thousand dollars).

British Columbia.—All stock must be inspected on arrival at the inspection stations. Nurserymen are required to put up a bond of \$2,000 (two thousand dollars), and take out licenses before being allowed to sell nursery stock. The bond is given on condition that the company will pay all damages that may be occasioned to any person in the Province through the sale to such person by the licensee, his agents or agent, of any infected fruit trees, plants, or nursery stock, or any fruit trees, plants or nursery that are not of the variety and character as represented by the licensee, his agents or agent, at the time of sale.

Mr. Robertson concluded with the following suggestions for the enactment of a law:

- 1. No nurseryman shall be allowed by law to send or sell any known variety under a new name, or any other methods employed for deceiving the public.
2. No firm shall be allowed to do business under more than one name.
3. All stock shall be free from noxious insects and fungous and other diseases.
4. That the law should be made more stringent with reference to the proper fumigation of nursery stock.
5. Stock shall be guaranteed true to name when sold as such. This stock should be tagged with the name of the variety, and also the locality of production be attached to such stock.

DISCUSSION.

In the discussion that followed, one of the nurserymen remarked that Idaho, in many respects the most backward State of the Union, appeared to be the only one that had undertaken much legislation along the lines advocated by Mr. Robertson. He wondered why something of the kind had not been attempted in other States.

In reply, the point was very well made that inactivity or indifference in other States was no argument against action in Canada.

C. L. Stevens, of Orillia, said a law of this kind was badly needed in the northern part of this Province, where great loss had resulted from the causes outlined by Mr. Robertson. It was a common thing to find large numbers of trees not true to name, according to order. W. L. Smith stated, with reference to the instance mentioned by him last year and quoted by Mr. Morris, that the trees referred to had been planted by an old schoolmate, and turned out, after years of culture, to be a large, soft, white, valueless fruit. The nurseryman offered to replace the trees, but, as the orchardist had planted for his own use, and was then well on in life this was slight compensation for the disappointment. He knew of numerous other cases of disappointment and loss through this same cause of trees not turning out true to name.

Mr. Bunting thought there was real need for action along the lines proposed. G. C. Caston pointed out that nursery agents frequently force on people varieties that are useless for the localities, and thought the agents should first inform themselves by going to the local fruit experiment stations.

W. E. Wellington suggested that a committee of growers might get together with a committee of nurserymen and arrange the whole matter satisfactorily. The nurserymen were not deliberately trying to get rid of varieties under wrong names. Mistakes would sometimes occur, but they should be given credit for good intentions.

Some animated cross-firing then ensued, after which a committee of fruit-growers was appointed to go into the matter thoroughly. It consisted of: Robt. Thompson, W. H. Bunting and Geo. A. Robertson, of St. Catharines, and Secretary P. W. Hodgetts. The convention then did a rather unique thing (for an association of growers) by undertaking to name a committee of nurserymen to confer with their own committee. This, as nominated, consists of: E. D. Smith, Winona; W. E. Wellington, Toronto, and Mr. Morris.

DO APPLES PAY?

The profits of apple-culture are well illustrated by a five-acre orchard belonging to A. E. Sherrington, of Bruce Co., Ont. This orchard, which is about thirty years old, is composed of about two-thirds Russets (which Mr. Sherrington considers far too many), with the balance including Spies, Greenings, Manns, Ben Davis and Fameuse. In 1906, 546 barrels from this orchard went through the co-operative association, to say nothing of a considerable quantity of early apples sold about town. Net returns from this five acres amounted to about \$900. This year, again, at \$3.00 a barrel, he expects the proceeds to foot up to about \$600 or \$700.

WHY IS MIDDLESEX A "DEAD" COUNTY?

So far as fruit-growing is concerned, "Middlesex is a dead county," said A. E. Sherrington, of Walkerton, Ont., before the Ontario Fruit-growers' Association. "I've tried several times to work it up, but it's no use." This characterization, unfortunately too true, should cause orchardists in this favored district to wake up. It is astonishing that such a prosperous county as Middlesex, famous for its excellent soil, intelligent people, and progressive agriculture, should be so backward in the great branch of horticulture. What is the reason?

SPY GRAFTED ON BEN DAVIS.

At the Ontario Fruit-growers' convention, Prof. Macoun was asked whether he would consider the Ben Davis a good stock on which to graft Spies. The inquirer said he had a neighbor who had done so with good results. Prof. Macoun replied that the fact was an interesting one to note, but, as a general proposition, he would not approve the grafting of strong-growing scions on early-bearing stocks.

THE FARM BULLETIN.

A GOOD DAY TO START.

"I like 'The Farmer's Advocate,'" said an old-time reader the other day, "because it meets exactly so many needs in our home, and the folks all esteem it as a friend of the family as well as of the farm." In over forty years' experience the paper was never so widely read and highly prized as to-day. The renewal season for 1908 is at hand. If you have not already renewed by sending in \$1.50, we make you this favorable proposition: Send the names of TWO NEW subscribers and \$3.25 and we will advance your own subscription for one whole year, as well as send 'The Farmer's Advocate and Home Magazine,' regularly, to the new subscribers from Dec. 1st till the end of 1908. We cannot suggest a better, or easier, plan of paying your renewal subscription. The new subscribers will be delighted with every issue of a farm paper so useful and beautifully illustrated, and particularly with the Christmas number. Set out TO-DAY and get those two new subscribers.

A BETTER EDUCATIONAL DAY DAWNING.

Editor 'The Farmer's Advocate': Have read the various articles in your valuable paper on education, and was especially interested in Mr. Rice's last article. Mr. Rice spoke about children leaving the common schools for the high schools at the age of thirteen or fourteen, because there was no use of their continuing longer, and, being still under twenty-one, I would like to tell a little of my experience. Where teachers are changed every one or two years, there is always a change in the school work, and in the manner in which the various subjects are handled; and it is here that we notice the difference in the training of the teachers. For instance, one teacher said that grammar was dry stuff, and that she didn't see the need of it anyway; and, in consequence, we had about half a dozen lessons on it in the term; while still another had the same opinion of history, though in a milder form. It was with the advice of one of these teachers that I left the district school for the academy, at the age of fourteen, where I soon found I had a hard row to hoe. These two teachers were eaching on academy diplomas, while those who were graduates of the Normal School handled these subjects in a thorough and interesting manner. When I left the district school for the academy, I found myself baffled with the model grades, which are preparatory for the academy grades. Not caring to spend a year in the model form, I entered the academy department, and found the work extremely hard; whereas, if I had waited till I was seventeen or eighteen, the work would have been easier for me to master, as I have found it since in reviewing my work for the Macdonald College. Mr. Rice spoke, in his last letter, about the false pride of children in attending the district school after a certain age. It appears to me there is a good deal of false pride in the parents themselves who are anxious to have their children regarded as especially bright,

and so are quite willing to let their children be submitted to the cramming process without thinking that cramming at this age retards the development of the mind. The remedy for this evil would appear to me to be or to consist in a better understanding between the teachers in the academies and the district schools, and on a far more organized effort to keep the mind of the pupil developing steadily from the time he starts school until he finishes, without trying to turn out finished scholars at the age of fourteen or fifteen. It seems to me there is a brighter time coming soon for educational matters, when, by the aid of school gardens and nature-study work the mind of the pupil will develop more evenly, and be more ready to retain what it sees and hears. As we make progress in education, we will develop into an intellectual and cultured nation.

FARMER'S SON.

Huntingdon County, Que.

### MICHIGAN FORESTRY CONVENTION.

The third annual meeting of the Michigan Forestry Association was held at Saginaw, on November 12th and 13th. During this meeting there was a conference of the forestry officials from the Lake States, Michigan, Wisconsin, Minnesota, Ohio and Illinois. The conference was called in order to discuss and arrive at some definite policy in regard to the forestry problems confronting the above-named States, and Ontario officials were invited to attend and assist in the discussion.

The conference took the form of a discussion, and the topics were introduced by brief papers. The questions demanding the greatest consideration were: Taxation in Relation to Forestry; State vs. Private Forestry, Protection of Forest from Fire; Reforestation and Farm Forestry.

Taxation was shown to be a very difficult problem, and one upon which experts are very much divided. In America, we have not arrived at a satisfactory method of taxing forest property. The chief fault at present is that the assessment is liable to be made upon the value of the standing timber. When the private owner finds that he is being taxed upon this basis, it is natural that he should clear off the timber. It seemed to be the opinion of the meeting that a combination of annual ground tax and a harvest tax would be most conducive to conservative cutting.

At every forestry gathering in North America the fire problem takes probably the largest share of the programme. At the Saginaw conference we again heard that fire had destroyed in the past far greater quantities of timber than the lumberman had ever converted into lumber. Two systems of fire protection are in vogue at the present: Fire warden and fire patrol. The fire-warden system gives the warden in a certain district authority to call out men to assist in putting out fires at dangerous points. This system endeavors to put out fires after they are under way, while the fire-patrol system tries to keep them from starting, which is the only real protection. Ontario has had the patrol system since 1885, and has gradually developed and improved it so that now we are receiving valuable protection.

Reforestation received considerable attention, and it is gratifying to see the lumbermen are beginning to realize the practicability of replanting waste lands. Several prominent firms are carrying on planting operations. The policy of the Lake States at present is to buy back all non-agricultural land, where such land exists in areas large enough for management purposes, and place these areas under rational treatment as permanent forest lands.

Farm forestry occupied a prominent place on the programme, and was discussed under the topics of "Farm Wood-lot" and "When is Land Better Suited to Forestry than Agriculture?" The farm wood-lot has had very little consideration, and has not been thought of as a permanent part of the farm. It is the last stand of the forest against the march of agriculture. The farmer does not depend upon the wood-lot for revenue, and does not keep account of the amount taken from it from time to time. Much indifference, therefore, exists as to the condition of the woodland. Many are awakening to the fact that the well-managed wood-lot should be a permanent part of the farm equipment, and that it may be a source of revenue as well as protection. Probably the percentage of abused wood-lots is not so much greater than that of mismanaged farms. There exists about 8,500 square miles of farm woodlands in the Province of Ontario at the present time.

Ohio, Illinois, Minnesota and other States are aiding the private individual in tree-planting, either by the system of free distribution or bonus.

The system of free distribution with inspection is probably giving the best results, and was conceded by the conference to be a legitimate function of the State. Minnesota is paying, in the form of a bonus to planters, about \$20,000 a year, and has paid out \$700,000.

The idea of certain lands being "absolute forest soils" is gaining ground in America. It is very difficult to always say when land is better suited to forestry than agriculture. There exist extreme cases of sand formations or rock formations about which there is no argument. They were never intended for agriculture, and should not be opened for such settlement. If such lands have been mistakenly cleared in the past, it is the duty of the State to see that they are reforested and managed as forest properties for all time to come.

E. J. Z.

### PRIZES FOR ROAD IMPROVEMENT.

First and second prizes of \$500 and \$100, respectively, offered by Toronto members of the Ontario Motor League, for the best work in a mile of road improvement, have been won by the townships of Etobicoke and Markham, in York Co., Ont. Further prizes of \$50 and \$25 each were awarded to the supervisors in charge of these roads. The mile of highway in Etobicoke is on the Lake Shore Road, west from the Humber River to Mimico Creek. The awards were made on the recommendation of Mr. A. W. Campbell, Ontario's Deputy Minister of Public Works and Good Roads Commissioner, and by the chairman of the committee of judges for the competition, other judges being: William Dobie, of Toronto, on behalf of the League, and William Pugsley, representing the county of York.

Mr. Campbell, in reporting, commended very highly the work on the Lake Shore Road, where \$4,000 was expended. Part of the improvement consists of laying a foundation, 12 feet in width, throughout the length of the road, consisting of eight inches of flat rock, over which another foot of broken stone was laid, and the whole covered and rolled with road rollers. In all, eleven miles of road were entered in the competition by six municipalities. While all of these were not finished in time, the directors are well satisfied with the results of the competition.

The section of road which earned the first prize was described as the worst piece of road between Toronto and Hamilton. The additional section of the township of Etobicoke, as far as Etobicoke Creek, is now being improved, and will be finished next year. Peel County, which adjoins Etobicoke, has improved its section on the Lake Shore Road, while Wentworth County has just entered plans with the Government for road improvement, including the Lake Shore Road in that county.

As Wentworth is about to improve the section of road in that county, and Lincoln County, adjoining Wentworth in the Niagara Peninsula, has entered plans for the improvement of the roads in that county, the entire Lake Shore Road, not only from Toronto to Hamilton, but from Hamilton to Niagara Falls, is in process of improvement.

### IN THE EAST NEXT YEAR.

The only other highway outlet from Toronto in need of improvement is the Kingston Road, and it is probable that the Ontario Motor League will take steps next year to have the Norway Hill, which has been in a very bad state for a number of years, put in good condition. When all is completed, farmers living along the highways will probably have the pleasure of standing back and watching the automobiles spin.

### CONTROLLING THE BROWN-TAILED MOTH IN NOVA SCOTIA.

During the spring of 1907, nests containing caterpillars of the Brown-tailed moth were found in fairly large numbers in parts of King's, Annapolis, Digby and Yarmouth Counties, Nova Scotia. With the hearty co-operation of the citizens of these counties, many caterpillars were destroyed, and much temporary damage prevented. However, numerous caterpillars must have eluded even the most careful searchers, and there can be no doubt but that specimens of this serious pest will be observed not only in the sections infested last spring, but also in adjoining localities. The people of Nova Scotia are determined to suppress this insect, and it is, therefore, important that the men of the Provincial Department of Agriculture, in whom is reposed an oversight of these matters, and to whom the people are looking for information, should be kept informed as to its movements. A circular recently issued from the Agricultural College, at Truro, N. S., to teachers and citizens in various sections of Nova Scotia, solicits information as to the occurrence of the scale and co-operation with work of extermination. School teachers are particularly requested to find out the conditions existing in their sections, and report as soon as possible to Prof. M. Cumming, Secretary for Agriculture, Truro, N. S., or to Prof. H. W. Smith, Biological Department, Agricultural College, Truro, N. S.

The moth is described in the circular as follows: "The white moth, with golden-brown terminations to its body, and hence called the Brown-tailed moth, was flying during July, and has probably reached localities where it has not previously been found. Its eggs were laid and hatched during August. Since then, small brown caterpillars, not yet (November) a quarter of an inch long, which hatched out from these eggs, have been feeding on the leaves of fruit and other trees, and constructing the nests in which they will pass the winter. These nests may now be found usually attached to the young branches or spurs of the trees and generally toward their tips. Each nest consists of a tough web surrounding one or more leaves, and enclosing 200 to 300 small brown caterpillars."

Anyone reading this circular, who knows of a locality where these nests occur, is requested to communicate, at the earliest opportunity, with the Agricultural College, Truro, N. S. Anyone unacquainted with the moth or its nest, who finds any suspicious objects upon trees, particularly fruit trees, oaks, elms, or maples, should send them at once, in a strong paste-board box, to the College for identification.

### SPEAKERS FOR CHEESE FACTORIES.

A number of factorymen have taken advantage of the offer of the Ontario Department of Agriculture to send speakers to attend their annual meetings during the fall and winter months. A few of these meetings have already been held, and a number of others are being arranged. It is to be hoped that those who wish assistance in December will make application at once. Those who want assistance in January will also do well to apply immediately, or before Dec. 15th at the latest.

Dairymen will please remember that there will be no cost for sending speakers to these meetings, except that interested persons are expected to entertain the speaker while at the place of meeting; and, in cases where the speaker drives to the next place of meeting, the factories concerned will be asked to make arrangements for the transportation of the delegate without cost to the Department. For the most part, dairy instructors will be asked to attend these meetings; although, if the proprietors of the factories so desire, arrangements can be made to send a delegate who would be prepared to take up such subjects as: "The Selection and Improvement of the Dairy Herd"; "The Growing of Crops for the Feeding of Dairy Stock," etc. Applications should be sent to G. A. Putnam, Director of Dairy Instruction, Parliament Buildings, Toronto, Ont.

### FORTHCOMING EVENTS.

- Nov. 30th to Dec. 7th, International, Chicago.
- Dec. 2nd to 5th, Maritime Winter Fair, Amherst, Nova Scotia.
- Dec. 9th to 13th, Ontario Winter Fair, Guelph.
- Dec. 12th, 1 p. m., creamery meeting, O. A. C., Guelph.
- Jan. 6th to 11th, Eastern Ontario Fat-stock and Poultry Show, Ottawa.
- Feb. 12th to 14th, Ontario Horse-breeders' Show, Toronto.
- May 4th to 9th, Canadian National Horse Show, Toronto.

### CREAMERY BUTTERMAKERS TO MEET.

A strong programme is arranged for Dec. 12th (Winter Fair week), at the O. A. C., Guelph, which should attract creamery buttermakers from all quarters. John McQuaker will give the president's address. Frank Hems, Secretary of the Western Dairy Association, will review creamery instruction; Fred Dean and Mack Robertson will discuss creamery work of past season; J. H. Scott, the scales in taking samples for testing; J. W. Mitchell will give an address; then Prof. H. H. Dean, followed by W. W. Moore, Chief of the Markets Division, Ottawa, on the live topic, Transportation of Dairy Products; H. L. Fulmer, on methods of determining moisture in butter, and an address by Geo. A. Putnam, the director of instruction work. The discussions will be enlightening.

### D. WARD KING FOR THE ONTARIO WINTER FAIR.

Every Canadian interested in the good-roads movement will be pleased to learn that D. Ward King, of Missouri, the inventor of the split-log drag, is booked for a lecture on "Good Roads Right Now," to be delivered in the lecture-room of the Ontario Winter Fair, on Wednesday afternoon, December 11th, and the following day he will give one on the "Horse and His Master." From all accounts, Mr. King is a very pleasing and effective speaker, and all who can do so should make a point of hearing him.

Mr. A. W. Campbell, Ontario's efficient Deputy Minister of Public Works and Good Roads Commissioner, is also to deliver an address.

### A CHARMING CHRISTMAS PRESENT.

Christmas is coming, and people will be worrying what to purchase for their friends. Is there anything better than a good book? "Carmichael," the captivating story now running through our Home Magazine, is particularly well suited for this purpose, being handsomely bound and illustrated. How can you get it? In two ways for \$1.25 (postpaid) from this office, if your local bookstore happens not to have it on hand, or as a premium for obtaining only two new subscribers to "The Farmer's Advocate and Home Magazine" at \$1.50. Try the latter plan.

Our friends, everywhere, will confer a favor by promptly sending in their renewal to "The Farmer's Advocate and Home Magazine" for 1908.

**THE Savings of Years**

Should never be risked in uncertain investments. Much better to be **SURE** of your money and reasonable interest, than to risk loss of both through the unsafe depository or any get-rich-quick scheme.

**THE BANK OF TORONTO**

its Savings Department offers a perfectly safe depository for money. Its large resources, its conservative management and experience of over fifty years, ensure all depositors and other customers an unexcelled banking service.

**Interest Paid on all Savings Balances 4 Times a Year.**

**THE BANK OF TORONTO**

Capital - - - \$ 4,000,000  
 Res - - - - - 4,500,000  
 Assets - - - - - 38,000,000

**HEAD OFFICE, TORONTO, CAN.**

**MARKETS.**

**TORONTO.  
LIVE STOCK.**

Receipts of live stock at the Junction and City markets were again liberal last week, there being, all told, 324 carloads, composed of 5,074 cattle, 4,312 hogs, 7,868 sheep and lambs, and 299 calves. The quality of cattle coming still continues to be poor; in fact, the number of inferior animals is larger than at any time for years past. Trade was slow, with the exception of a few of the best, which sold readily. Prices generally were much the same as our last report.

Receipts of stock at the Junction on Monday were: twenty carloads; quality of cattle medium; trade dull. Exporters, \$4.60; bulls, \$3.50 to \$4; best butchers', \$4 to \$4.25; medium, \$3.50 to \$3.75; common, \$2.50 to \$3.25; cows, \$2.50 to \$3.75; milkers and springers, \$30 to \$55; calves, \$5.50 to \$6.50. Sheep, \$4 per cwt.; lambs, \$5 to \$5.10 per cwt. Hogs, \$5.50 for selects.

Exporters.—Prices last week ranged from \$4.25 to \$4.85, only one load bringing the latter figure. Export bulls sold at \$3.30 to \$3.75.

Butchers.—Few well-finished butchers' are coming forward. One lot of ten choice, well-finished cattle, good enough for the Christmas trade, were bought to ship to Bermuda, sold at \$5.75 per cwt. The next highest price paid was \$4.50, for a few picked cattle. The best loads of those offered sold at \$4 to \$4.25, and not many even got these prices. Medium cattle sold at \$3.60 to \$3.85, of these there was a large number; common, \$3 to \$3.50, and of these there was a still larger number; cows, \$2.25 to \$3.50; canners, 75c. to \$1.50 per cwt.

Stockers and Feeders.—Prices were unchanged, as follows: Best feeders, 1,000 to 1,100 lbs., \$3.25 to \$3.60; best stockers, 600 to 800 lbs., \$2.25 to \$2.60; medium stockers, 600 to 800, \$2 to \$2.25; common stockers, 500 to 700 lbs., \$1.50 to \$1.75.

Milkers and Springers.—Milkers and springers of good to choice quality are selling the best of anything coming on the market. A large number changed hands last week, at \$40 to \$65 each, the bulk selling around \$50 each; common to medium cows, \$30 to \$35, and \$37 each. One extra-quality Holstein milker sold at \$70.

Veal Calves.—While choice veal calves bring good prices, the bulk of those offered are not selling as well since poultry became plentiful. Prices ranged from \$3 to \$6 per cwt.

Sheep and Lambs.—Export ewes, \$4 to \$4.25; rams, \$3 to \$3.25; lambs, \$4.75 to \$5.25; picked ewes and wethers, \$5.30 to \$5.50.

Hogs.—Selects sold at \$5.75 to \$5.90; unfinished light hogs, \$5. Dealers paid \$5.50 to \$5.65, for h. cars at country points.

Horses.—Burns & Shepard report the horse market outlook as being a little brighter for the future, but there is little

doing in comparison with the last two or three years at the same season. They report one pair of draft horses, 1,600 lbs. each, as selling at \$400, and another pair at \$412. Ordinary, good workers sold from \$115 to \$175 each; second-class saddle and driving horses, \$70 to \$100; expressers, \$100 to \$150; good, sound horses, 1,200 to 1,400 lbs., sold from \$120 to \$160 each.

**BREADSTUFFS.**

Wheat.—No. 2 white, 98c.; No. 2 red, 96c.; No. 2, mixed, 95c.; Manitoba, No. 1 Northern, \$1.13, at Owen Sound; No. 1 Hard, \$1.14; No. 2, \$1.09.  
 Barley.—No. 2, sellers, at 72c.; No. 3, extra, 70c.

Oats.—No. 2 white, 51c.; No. 2, mixed, 48c. to 49c.

Peas.—No. 2, 86c.

Rye.—No. 2, sellers, 86c.

Corn.—No. 3 yellow, 70c., at Toronto.

Bran.—Sellers, \$21 to \$22, in bulk, outside.

Shorts.—\$23 to \$24, at outside points.

Buckwheat.—Sellers, at outside points, at 67c.

Flour.—Ontario, 90 per cent. patents, \$3.80 bid for export; Manitoba patents, special brands, \$5.80; second patents, \$5.20; strong bakers', \$6.

**COUNTRY PRODUCE.**

Butter.—The market remains about steady. Mr. Marshall, of Rutherford & Marshall, stated he did not expect much change. Discussing the arrival of Irish butter on the Montreal market, Mr. Marshall said he had been offered a consignment laid down in Toronto at about 26c.; but, even at that price, it would have little effect on the market, when quality is considered. At 26c. per lb., to the wholesaler, would mean 28c. to the retailer, and, to the consumer, not much less than 30c. per lb. Prices for butter on the Toronto market, Mr. Marshall quoted unchanged, as follows: Creamery, pound rolls, 31c. to 32c.; creamery, boxes, 30c. to 31c.; dairy, pound rolls, 28c. to 29c.; tubs, 27c. to 28c.

Cheese.—Market steady. Large, 13 1/2c.; twins, 13 1/4c.

Eggs.—Market slightly easier, at 28c. to 30c. per dozen for new-laid; cold-storage, 22c. to 23c. American eggs are likely to be offered on the Canadian market, which has had its effect.

Honey.—Market steady. Extracted, 18c. to 18 1/2c.; combs, dozen sections, \$2.75 to \$3.

Potatoes.—The market is firmer. Car lots, on track, at Toronto, are worth from 80c. to 90c. per bag.

Poultry.—Dressed poultry is quoted as follows: Turkeys, 14c. to 15c.; geese, 9c. to 10c.; ducks, 9c. to 10c.; chickens, 10c. to 11c.; old fowl, 6c. to 8c.

Beans.—Market unchanged, at \$1.80 to \$1.90 for primes; \$1.90 to \$2 for hand-picked.

Baled Hay.—Car lots of No. 1 timothy are worth \$18 to \$18.50 per ton.

Baled Straw.—Market steady at \$10 to \$10.50, on track, at Toronto.

Venison.—Hind quarters, 10c. to 11c.; fore quarters, 5c.; carcasses, 7c. to 8c.

**FRUIT MARKET.**

Apples are worth from \$3 to \$3.50 and \$3.75 per bbl., for winter varieties; fall apples, \$2.50 to \$3; Snows, \$3 to \$3.50. Grapes, small baskets, 25c. for white, and 30c. to 35c. for red, and becoming scarce.

**SEEDS.**

The William Rennie Co. report the seed market as being dull, little being done, owing to the money market not being conducive to speculation just at present. Alsike quotations are unchanged: Alsike, No. 1, per bushel, \$8.25 to \$8.60; No. 2 alsike, \$7.50 to \$8.

**HIDES AND WOOL.**

E. T. Carter & Co., 85 Front St., have been paying the following prices: Inspected hides, No. 1 steers and cows, 7 1/2c.; No. 2 steers and cows, 6 1/2c.; country hides, 6c.; calf skins, No. 1 country, 10c. to 11c.; horse hides, No. 1, each, \$2.75 to \$3; tallow, 5 1/2c. to 6 1/2c.; wool, unwashed, 12c. to 13c.; wool, washed, 22c. to 23c.; rejections, 16c.; lamb skins, 75c. to 85c.; horse hair, per lb., 28c. to 30c.

**BRITISH CATTLE MARKET.**

London.—London cables, 10c. to 12 1/2c. per lb., dressed weight; refrigerator beef, 10c. per lb.

**MONTREAL.**

Live Stock.—Shipments of live stock from the port of Montreal are now nearly over for the season, and, generally speaking, have shown a falling off, as compared with those of a year ago. Those for the week ending Nov. 16th amounted to 3,704 cattle and 300 sheep, as compared with 2,609 cattle and 1,550 sheep the previous week. In the local cattle market, supplies are increasing, last week's being quite liberal. The supply of choice, however, are light; lower grades and inferior plentiful. Canners' cattle, owing to the large number offered, showed a slight decline, and sales of these were made almost as low as 1c. a lb., 1c. being the top figure. Demand for choice cattle was excellent, and a brisk trade was done, principally for domestic account, there being very little trade with exporters. Sales of choice cattle were made here at 4 1/2c. to 4 3/4c., fine being about 4c., and good, 3 1/2c. to 4c.; medium, 2 1/2c. to 3 1/2c.; common, 2c. to 2 1/2c., and inferior, as low as 1 1/2c. The market in export sheep shows considerable weakness, and prices have declined 1/2c. per lb., owing, generally, to the increased supplies and the somewhat discouraging advices from abroad. Exporters were making purchases at 4c. per lb., while butchers were paying 3 1/2c. to 3 3/4c., culled sheep being as low as 3c. per lb. Lambs are in excellent request, and the supply is somewhat larger than usual, an active trade being done at 5 1/2c. to 6c. per lb. There has been a good demand for calves, and prices show very little change, being \$11 to \$15 each for choicest, \$6 to \$10 for good, and \$3 to \$5 for common. The live-hog market is very firm, and prices show an advance of from 25c. to 35c. per 100 lbs., as compared with a week ago, owing to lighter receipts and better demand from packers. Select hogs are being sold at 6 1/2c. to 6 3/4c. per lb. for 100 lbs., weighed off cars.

Horses.—Market dull; no demand. Heavy-draft horses, weighing 1,500 to 1,700 lbs., \$250 to \$300 each; light-draft, 1,400 to 1,500 lbs., \$225 to \$275; blocks, 1,300 to 1,400 lbs., \$200 to \$225; express horses, \$150 to \$225; common plugs, \$50 to \$75 each, and choice carriage and saddle animals, \$300 to \$500 each.

Dressed Hogs.—Abattoir, fresh-killed, dressed hogs, 8 1/2c. to 9c. per lb., demand good.

Potatoes.—Supplies have continued light, and demand is excellent, the result being a very firm market. Shipments have been made to a number of Western points, and there is no difficulty in disposing of all the stock received. Dealers are paying 75c. to 78c. per 90 lbs., carloads, on track, and selling, in the same position, at 80c. to 82c.; or, bagged and delivered into store, at 1c. a lb. Very few reds are offering, and about 5c. less is being realized for them.

Eggs.—Very few eggs arriving from the country, and those not the choicest. Really fresh-laid eggs sell at a very high figure, possibly about 35c. to 40c. The best of fall fresh eggs are selling here at about 30c. a doz. Cold-store stock is now being sold, and the supply of it is none too large. Prices are steady, at, from 24c. to 25c. a doz. for No. 1 stock, and 27c. for selects.

Butter.—The tendency last week in the country was towards firmer prices. At one or two markets, very firm figures were paid, making it impossible to sell here at a profit under about 29c. for best current makes. It is quite possible, however, to make purchases here at the present time at from 27c. to 28c. per lb., although September and early Octobers cannot be had at less than 28 1/2c. to 29c., and, in a few cases, a fraction more is being realized. Single packages of choicest butter bring 30c. per lb., while dairies are valued at about 26c., and a certain amount of separator creamery is being offered at a similar figure. Shipments from the port of Montreal the week before last amounted to the enormous number of two packages, as against 724 a year ago. This brings the total for the season up to 67,000 packages, as against 361,000 a year ago, and 553,000 in 1905.

Cheese.—The market is almost featureless, although the usual annual rush immediately preceding the close of navigation is now on, importers on the other side being anxious to get their cheese forwarded at the lowest freight rates. As a result, quite a number export orders

have been booked during the week. Prices are still quotable at about 11 1/2c. to 12c. for current makes of Quebec cheese, 12c. to 12 1/2c. for Townships, and 12 1/2c. to 12 3/4c. for Ontarios. Those who require choicest September and early October cheese will have to pay 13c. to 13 1/2c. Shipments for the week ending Nov. 17 amounted to 50,000 packages, bringing the total for the season up to 1,900,000, as against 2,200,000 a year ago.

Grain.—Market for oats is easier than for months. No. 3 Manitoba, 58c. Ontario or Quebec No. 2 are 55c. to 56c.; No. 3 at 53c. to 54c., and No. 4 at 52c. to 53c. There is a little yellow corn moving at 72c. to 73c.

Hay.—Very active demand; market holding quite firm. Dealers are retailing No. 1 timothy at \$20 to \$22 per ton, in the city. They are paying \$17.50 to \$18 for it; while for No. 2 they pay \$16 to \$17, and for clover-mixed, \$15 to \$15.50; for clover, \$14 to \$14.50.

Hides.—Another decline took place in the market for hides last week, and prices were carried down 1c. a lb. Dealers paid 5c., 6c. and 7c. per lb., Montreal, for No. 3, 2 and 1, respectively, and 8c. to 10c. for No. 2 and 1 call skins, respectively, and sold to tanners at an advance of 1/2c. a lb. Sheep skins advanced 5c., at 90c. to 95c. each. Horse hides advanced slightly at \$2, No. 1 being steady at \$2.25. Tallow has been slightly easier, at 1c. to 3 1/4c. per lb. for rough, and 6c. for refined.

**CHICAGO.**

Cattle.—Steers, \$4 to \$6.65; stockers and feeders, \$2.40 to \$4.65; cows, \$2.75 to \$4.50; heifers, \$2.50 to \$5; bulls, \$2.60 to \$4.85.

Hogs.—Choice heavy shippers, \$4.65 to \$4.75; light butchers', \$4.45 to \$4.75; light, mixed, \$4.55 to \$4.60; choice, light, \$4.65 to \$4.70; packing, \$4.60 to \$5.00.

Sheep and Lambs.—Sheep, \$2 to \$5.25; lambs, \$5.25 to \$6.50; yearlings, \$5.25 to \$5.50.

**BUFFALO.**

Cattle.—Prime steers, \$5.60 to \$6. Veals—\$5 to \$7.50.

Hogs.—Heavy, mixed, Yorkers and pigs, \$4.90 to \$5; roughs, \$4.20 to \$4.40; stags, \$3.25 to \$3.75; dairies, \$4.90 to \$5.

Sheep and Lambs.—Lambs, \$5 to \$6.90; yearlings, \$5.50 to \$5.75; Canada lambs, \$6.50 to \$6.65.

**Notes from Queen's Co., P. E. I.**

Editor "The Farmer's Advocate":

More than half of November has come and gone, at date of writing. Farmers, with scarcely an exception, have their crops all safely housed, but very few have finished their fall plowing. The plow has been stopped for nearly a week now by the frost. Compulsory vaccination is the order of the day here now. Any unvaccinated person, over three months of age, who refuses or neglects to comply with the law, subjects himself to a fine of five dollars; said fine to be collected every two months if he persists in refusing to be vaccinated. A pair of Brown Swiss calves have recently been brought to Prince Edward Island from a breeder in the United States. These animals are the only specimens of their breed on the Island. Messrs. Davies & Frazer, one of the largest pork-buying and packing firms on the Island, have notified farmers through the public press that they will not buy poorly-fattened or unfinished hogs at any price. The above firm deserve praise for this action, as, owing to grain being so high in price, a great many farmers will kill off their hogs before they are fit. This would have a tendency to lower the standard of Island bacon. Butter sells high here now. Dairy butter bringing from 22c. to 28c. per pound for crocks, print butter being correspondingly high. These prices will go up higher soon, as the demand is far greater than the supply. When butter brings such prices as these, and pork such a good price, it will pay farmers better to feed their grain than to sell it, even at the high price it brings this fall. Oats are selling at about 50c. per bushel, but dealers are expecting a drop in price soon. Messrs. Essery & McDonald have recently shipped a carload of carriage horses to Barbadoes. They have also shipped a lot of draft horses to the Quebec market.

Queen's Co., P. E. I. E. R. Y.





## Life, Literature and Education.

[Contributions on all subjects of popular interest are always welcome in this Department.]

### SOME ALTRUISTS IN CANADA.

[As they revealed themselves at the second annual convention of the Ontario Horticultural Association, which met in the City Hall, Toronto, November 14th and 15th, 1907.]

I had never been to a Horticultural Society Convention before, and, I must confess, went to the one which met in the City Hall, Toronto, on November 14th, with a feeling dangerously on the border of boredom. It seemed to me a city affair, born and bred in the town, a sort of hot-house product, dealing with conservatory matters, with the disposition of checker-board front lawns and clothes-line back yards, and pretty much foreign in interest to us of the broad fields and true country. It is with great pleasure, however, that I confess a complete enlightenment before the end of the first session.

My little band of city people, circumscribed by the horticultural necessities of the town alone, turned out to be a large and representative gathering, composed almost exclusively of town-folk, it is true, but of town-folk whose sympathies ranged over almost every foot of ground of this dear old improvable Dominion. Neglected cemeteries, defacing bill-boards, desert-like schoolyards, treeless highways—all these were brought in for the scathing they deserve, and, while the beautification of the rural home itself was not especially touched upon, it was auspicious to hear the assertion made by one of the members, Mr. Pearce, Park Commissioner of London, Ont., that, "The country needs improving as much as the town." This is true, and the fact that attention was thus called to the matter is an added earnest of an altruistic attitude on the part of the members, and a possible anxiety that people from the rural districts should become members also, and join hand in hand with the city in changing the face of the Dominion of Canada into one of uninterrupted beauty.

Altruism was, in fact, a striking characteristic of the whole convention. The Horticultural Society is not a money-making concern. It gets (often more inadequately than it deserves) only to give "in good measure, pressed down and running over." The money received in fees and donations is expended in premiums (flowers, vines, shrubs, etc.), and in prizes for the horticultural exhibitions; and the members are urged to give freely, when the root-dividing seasons come round, to their neighbors who are unable to buy. Above all, the Society recognizes the influence of beautiful surroundings on the moral root and fibre of the people, the refinement, the added interest, the added happiness in life that come from a love of the beautiful. The sordid man, the one whose chief aim in life is money-getting, is not the happiest

man; and this the Horticultural Society fully realizes.

To come back to the Convention itself—I did not count the attendance, but judged that about a hundred delegates and others, representing every part of the Province of Ontario, were gathered about the tables in the big, red-carpeted, olive-walled, grape-friezed room of the City Hall, in which the meeting was held.

The retiring President, Mr. Burgoyne, of St. Catharines, who has filled the position most acceptably for the past two years, occupied the chair during the first part of the session, yielding it, after the election of officers, to the new President, Major H. J. Snelgrove, of Cobourg.

Mr. H. B. Cowan, the Secretary-Treasurer of the Association, in presenting the report for the last year, spoke of the encouraging growth of the Society, and the consequent hope of a larger Government grant.

The new Superintendent of Horticultural Societies, Mr. J. Lockie Wilson, followed in an exceedingly felicitous address, which will appear in full in a later edition of "The Farmer's Advocate." Before closing, he issued a cordial invitation to the members of the Association to visit him at any time at his office in the Parliament Buildings, to talk over the progress of the work. This invitation will no doubt be taken advantage of by many, who will go

and Major Snelgrove followed with an exposition as to "What Horticultural Societies Can Do to Promote Civic Improvement." As both of these very excellent papers reached the very pith of many things which concern the rural districts quite as much as the town, we have made arrangements to have them published in full in "The Farmer's Advocate" at an early date.

### A PRACTICAL DISCUSSION.

In the discussions hinging on these papers, many important points were brought up. Mr. Pearce emphasized the necessity of cleaning up and beautifying the cemeteries. They should, he said, be planted according to a plan which would produce an attractive and harmonious whole. "The Horticultural Society requires many speakers," he continued. "We can't have too many of them, whether local or from the outside." The work must also depend largely on horticultural literature, which should, he considered, be incorporated in the school books. Every Horticultural Society should have flower shows, and the children should be given a division in each exhibition. Through them, the parents may be most easily influenced.

### ADDRESS BY PROF. MACOUN.

Professor Macoun, of the Experimental Farm, Ottawa, on arising to speak, received an ovation. He con-

which should surely book him for a speaker at agricultural conventions, did the proper authorities get hold of him. Leaving floriculture pretty much alone, he came out flat-footed in favor of "agricultural" education as a branch of the public-school course. Agriculture and horticulture should, he considered, be compulsory in public schools. A resolution to that effect had been adopted in Philadelphia, and a similar one might well be considered by this Association. The horticultural societies he looked upon as a great means of breaking down the dividing line between town and country.

As a result of the foregoing discussion, a special committee, consisting of Messrs. Burgoyne, Pearce and Rev. A. H. Scott, was appointed to draw up a resolution and present to the Government in regard to the embodiment of agricultural and horticultural instruction in the proposed new series of school books.

Following a discussion on the bill-board nuisance, a committee, consisting of Messrs. Pearce, Snelgrove, and Rev. Mr. Harris, Guelph, was also appointed, to draught a memorial to the Ontario Legislature, asking that the disposition and size of bill-boards be regulated. It was noted that in many places bills may be posted only upon cylinders made for the purpose.

Major Snelgrove's paper also gave rise to a spirited discussion on trees. Hard maple, Norway maple and elm were especially recommended as decorative trees in Canada, provided they were grown not closer than 30 feet apart. Great care should be taken in pruning any kind of trees; only those who thoroughly understood the work should be permitted to do it. A big limb should never be cut off a tree, except, possibly, the soft maple, as the result would likely be to kill the tree in a short time.

Rev. Mr. Harris, of Guelph, spoke interestingly of the work done as a result of the distribution of flower and vegetable seeds among the children of Guelph, a work which will be undertaken for the children of the Province at a later date by Prof. Hutt, of the O. A. C. Mr. Harris thought the back yard needed especial attention, and that a vegetable garden might well be regarded as a place of interest and beauty, as well as of utility.

### AN ACTIVE LADY MEMBER.

A discussion which ran into next morning's session was launched by Mrs. McDowall, the delegate from Owen Sound, who wished to know how to draw out members to the meetings of the local societies. Various schemes were suggested as having been effectual in different localities. In Grimsby monthly meetings had been held at the houses of the members, and one paper discussed at each. Object lessons, e.g., tables of flowers, etc., were also found to be a help. In Ottawa a plan was to hold meetings during the summer, from May to October. At these meetings flowers, for which prizes were given, were placed on exhibition, and afterwards, as a rule, given away to members of the audi-



An Attractive Home in P. E. I.

Farm home of Mr. D. P. Irving, Vernon.

back carrying new inspiration to the various local branches of the Society.

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Following his address, the question as to how corporations, etc., might be approached for funds was brought up. "When you go for a grant," said Mr. Cowan, "don't go begging. Go as if it was your right. Go to the council with a line of work prepared, and show them you are doing a good work."

When the matter of getting funds had been satisfactorily settled, Rev. A. H. Scott, of Pembroke, read a most timely paper on how to expend them to the best advantage.

trasted the beautiful homes of the cotters of the Old Country, which are veritable bowers of vines and flowers, with the harsh bareness of thousands of homes in this country. If a house has no architectural beauty, it may be covered with vines, flowering clematis, bitter-sweet, etc. These may be got cheap by ordering in quantity. Such shrubs as Tartarian honeysuckle and lilacs are very cheap, and should be thrust on the people. We spend too much money on seeds and bulbs which are only of temporary value.

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Mr. Gammage, florist, of London, commented on the subject in a way

ence. In London a stimulus had been found in three or four extensive annual flower shows held in the City Hall, at which members were sure to meet and discuss horticultural matters informally. In London these flower shows were entirely free; in St. Catharines an entrance fee of 15 or 25 cents was usually charged.

Mr. R. B. Whyte, of Ottawa, and others, among them the veteran secretary, Mr. Joseph Parker, of Kincardine, who is, as he said, "eighty-two years young," placed much stress on personal canvass, with a vigorous presentation of the aims and results of the work. The advantage of enlisting the local press, and of offering good premiums of shrubs, flowers, etc., were also strongly emphasized. Mr. Parker had found an especially good "weapon" in the Presbyterian church of Kincardine, the sympathy of whose pastor he had enlisted.

OFFICERS OF THE SOCIETY.

A feature of the second day's session was the election of officers, which resulted as follows. Mr. J. Lockie Wilson being, of course, Superintendent:

President—Major H. J. Snelgrove, Cobourg.

1st Vice-Pres.—Mr. R. B. Whyte, Ottawa.

2nd Vice-Pres.—Mr. Roderick Cameron, Niagara Falls.

Rec. Secretary and Treasurer.—Mr. H. B. Cowan, Toronto.

Corresponding Secretary and Editor.—Mr. J. Lockie Wilson, Toronto.

Directors: District No. 1 (Eastern counties)—Rev. A. H. Scott, Pembroke.

Dist. No. 2 (Frontenac to Durham and north)—Mr. W. J. Diamond, Belleville.

Dist. No. 3 (Toronto and counties north to Muskoka)—Mr. H. R. Frankland, Toronto.

Dist. No. 4 (Lincoln, Norfolk)—Mr. A. Alexander, Hamilton.

Dist. No. 5 (Grey, Huron and Bruce)—Mr. I. Langstroth, Seaforth.

Dist. No. 6 (Brant, Wellington and Waterloo)—Mr. J. T. Rose, Brantford.

Dist. No. 7 (Kent, Essex, Lambton, Elgin, Oxford, Middlesex and Perth)—Mr. J. S. Pearce, London.

Honorary Director—Mr. Burgoyne, St. Catharines.

Auditors—Mrs. McDowall and Mr. J. O. McCullough.

ADDRESS BY HON. MR. MONTEITH.

President Snelgrove, after a felicitous address on taking the chair, introduced the Hon. Mr. Monteith, Minister of Agriculture, who, after being tendered a hearty reception, addressed the audience in strongly commendatory and encouraging words. Representing the Department of Agriculture, he felt that the Department had a responsibility to co-operate with the Horticultural Society. During the past year a great work had been done by systematic spraying, but there are many other lines which recommend themselves to co-operation. In matters of co-operative packing and shipping, for instance, we are yet in our infancy. Then the Department of Agriculture might well co-operate with the Horticultural Societies in other lines—testing varieties, grappling with insects—a great field. In launching the new experimental farm in the Niagara district the Dept. felt a great responsibility. The breeding of new varieties is a slow process. He would ask that those who are interested be patient and sympathetic.

SELECTION AND CLASSIFICATION OF FLOWERS.

Mr. Cavers, Oakville, delivered an interesting and scientific address on "The Selection and Classification of Flowers," dealing particularly with the perennial phlox, gladiolus and Japanese iris. Much confusion has arisen in regard to the naming and classifying of these beautiful flowers, and he thought some step should be taken to clear it away. In many cases comparatively old flowers are exploited under new names, occasioning much loss and trouble. Mr. Groff's best new gladioli are now named before being put on the market. No flower should be exploited before being submitted to some com-

petent authority. Often confusion arises from the inability of the one who names the flowers to fully comprehend tints and shades. Color charts help greatly in this, and a good new one has recently been issued in France in five languages. In phlox especially the coloring is often very complicated. He thought a better standard of nomenclature should be adopted, and that the sister States across the line should be asked to co-operate in the work.

An interesting discussion followed the reading of this paper, but is not given in full, as it concerns professional florists and investigators rather than the agricultural world. Prof. Macoun thought the facilities for exhaustive work of this nature were somewhat limited in Canada. He mentioned that a bulletin of perennials, over 2,000 varieties, with information pertaining thereto, is about to be published at the Experimental Farm at Ottawa. Mr. Hunt, O. A. C., Guelph, thought much might be done. He suggested that specimens might be brought to the meetings of the Horticultural Societies for demonstration; also that a committee might be appointed to report on new flowers and new kinds advertised. As a result of the discussion a committee for this purpose was formed, consisting of Messrs. Hunt, Cavers, Cameron, Cowan, and Prof. Macoun; this committee to present a report to the association at the next meeting, especially dealing with phlox, gladiolus and Japanese iris.

CITIES AND TOWNS BEAUTIFUL.

Mr. Pearce, Park Commissioner of London, next delivered a most instructive address on "Cities and Towns Beautiful," which is also lightly touched upon here because it concerned chiefly conditions of the town. His observations regarding the painting of "useful structures," e. g., bridges, telegraph poles, etc., may, however, be well applied to the rural districts. The colors daubed upon these things he characterized as "usually intolerable." "A wave of improvement," he said, "is extending over both town and country."

This country is in need of the civic heart. We should plan for the future." Mr. Pearce strongly advocated the employment of a professional landscape gardener wherever public plots or streets were to be dealt with. He thought it was the duty of the Ontario Government to provide such men, to be at the

service of any city or town that wanted them.

ADDRESS BY MR. C. C. JAMES.

Mr. C. C. James, Deputy Minister of Agriculture for Ontario, when called upon for an address, dwelt upon the necessity for agricultural instruction. Referring to the new agricultural work in certain High Schools, he said that it will be some time before considerable classes are worked up. He anticipated beneficial results from the agricultural offices which the instructors of these classes had opened up in the towns, and hoped that we would soon have such an office in every town. The improvement of public school grounds he looked upon as a great work. At present, he said, most of these are a "discredit to the country."

THE GROWING OF PEONIES.

Mr. R. B. Whyte, Ottawa, read an interesting paper on peonies. The peony belongs to the buttercup family, which is distinguished for wonderful variety of form; the hepatica and larkspur, for instance, are also members of it. Of late there has been an enormous increase in the popularity of the peony. Many varieties are offered for sale, but the earliest flowering, the "Tenuifolia," and some of the perfumed rose and albi-flora varieties are among the best. Peonies are valuable not only for the beauty of color and form of the flowers, but also because of the foliage, which is enduring and an ornament to the garden. The plant, moreover, gives little trouble. It is remarkably free from insect pests, is very hardy, and does not need shifting. He knew plants in Ottawa that must be fifty years old. Its duration of bloom, by having different varieties, lasts from May 10th to June 10th, or even up to July 15th or 20th. When used for cut flowers, peonies should be cut just as the buds begin to open. In the garden it is advisable to place a hoop about the plants to keep the flowers from being beaten down by rain. To grow large flowers for exhibition purposes it is necessary to take off all the buds but one to a stalk. When dividing roots for propagation, do not drive a spade in among the tubers; take the whole "root" out and divide gently. If you have a bit of root without an eye it will develop probably into a different variety. When you plant the seeds you never get the same variety. The seed should be gathered when ripe, kept in moist sand during winter, and

planted out later. Plants so grown bloom in four years. In preparing a peony bed, make the soil very rich and dig deep. Take out the soil to a depth of 2 ft., lay in a good layer of manure, then fill up. If the soil is clayey, mix in some sandy loam. . . . Recently American growers recommend planting in September, when the plants are quite ripe in our summer. When importing from abroad the plants should be put in in spring, as they mature later in the old countries. Do not place the eyes too close to the surface, never nearer than two inches, and put the tubers three feet apart. Narcissi and lilies should be planted between to keep up a succession of bloom when the peonies are not in flower. A good coating of manure should be applied in fall to prevent thawing and freezing in spring. Mr. Whyte enumerated a number of good varieties, among which were officinalis rubra, festiva maxima, tenuifolia plena, Marie Lemoine, Duke of Wellington, Queen Victoria, Floral Treasure, Lady Curzon, Glory of Somerset, Bunch of Perfumes. He also referred appreciatively to the single varieties, now becoming very popular.

FRUITS THAT CAN BE GROWN ON A CITY LOT 66 x 99 FEET.

This subject was comprehensively dealt with by Mr. Alex. McNeill, Chief of the Fruit Division, Ottawa. The address was chiefly of interest to city dwellers, but contained some thoughts profitable to all. He, too, spoke strongly in favor of beautiful school grounds and school gardens. The education of the future, he considered, will be as largely devoted to horticultural instruction as that of the past has been to the dead languages. Horticulture will be taken up for culture, to broaden the intellect. Proceeding, he told what can be done with a small lot. A dwarf apple tree may be trained to form a beautiful arbor. You can train an apple or pear tree into any shape you like. We are behind the Old Country in the niceties of horticulture. We don't know yet how to train and prune, nor the extent to which fruits may be improved. He thought it would be inadvisable to plant blackberries or blackcaps in a limited garden area, but highly recommended the Herbert raspberry, originated by Mr. R. B. Whyte, of Ottawa. The clay for such small-fruit gardens may be made of whatever consistency is required. Add clay if too light, sand if too heavy.



Asters by the Acre.

The market garden of Mr. C. A. Wade, Sarnia.

WILD FLOWERS WORTH GROWING

The last address of the session was delivered by Mr. John Dickson, of Hamilton, on the above topic. The gardener who would make a success of wild flowers should visit them in their natural haunts. Among the earliest flowering of the wild flowers which may be cultivated in gardens is the hepatica, with white, blue or pink sepals, woolly stems and flowers borne on scapes. Thickly set, these flowers make handsome borders. . . The American bloodroot appears best after becoming well established. The flowers resemble orange blossoms, and the foliage is very handsome. Among other flowers he recommended the trillium, so common in our woods; the bellwort, with numerous pale yellow, nodding, bell-shaped flowers; violets; aquilegia canadensis, with scarlet flowers; phlox subulata, or moss pink; northern bedstraw; flowering spurge; showy lady's slipper, which requires deep mould or peat, and the yellow variety, which is more easily grown; butterfly weed or swallow wort; evening primrose, especially primula grandiflora; lilytum Philadelphicum or wood-lily; Turk's-cap lily; wild bergamot or bee-balm; lobelia cardinalis or cardinal flower, growing by brook-sides; asters, many of which will repay cultivation in gardens, especially if grown in clumps, the New England aster being especially good. . . He also emphasized the fact that most of our native shrubs and vines may be successfully grown in any garden.

Mr. Scott, of the Toronto Normal School, in commenting on Mr. Dickson's paper, added a few other varieties: Thalictrum or meadow-rue; ranunculus repens; smilacina stellata, a species of Solomon's seal; some of the gentians and rudbeckius. After all, however, he thought there was nothing like going out to the woods. The flowers are best in their own environment. As Emerson says:

"I thought the sparrow's note from heaven,  
Singing at dawn on the alder bough;  
I brought him home, in his nest, at even;  
He sings the song, but it cheers not now,  
For I did not bring home the river and sky;—  
He sang to my ear,—they sang to my eye."

In closing this report I can only express my regret that space considerations forbid the publishing of every address and discussion verbatim. . . But we have one word more. Why should there not be a branch of this Horticultural Society in every village and town in the country, through which town-folk and farm-folk might meet to discuss the problem of rooting out ugliness from our country and substituting for it a beauty which cannot fail to lift even the most prosaic, at times, from merely sordid considerations? There is inspiration as well as instruction awaiting at such meetings, and the social intercourse, which, whatever the recluse may say, is very necessary to well-balanced human nature. . . Again, why should not women of Canada take a greater interest in this thing? As Superintendent Wilson truly remarked, "The women know how to make things beautiful." Why, then, should they not be active in the societies and send more representatives to the conventions? There were only about seven women at this convention, and two of them were merely reporters. Cannot the women of Canada do something towards stirring up this matter during the following months? The evenings are long, and winter is usually regarded as a rest-time among farmers' wives. It is theirs to see that it is not merely a hibernating time, but a season for the mental improvement which is to so great an extent crowded out by the necessary manual labor of the busy summer months. The Horticultural Society, and its sister institutions, the Farmers' and Women's Institutes, are of mental as well as practical value.

May our farming population fully recognize this and let no opportunity pass without avail during this winter season of 1908, and may the next convention of the association be attended by not one hundred, but many hundred horticultural altruists.

"FARMER'S ADVOCATE" REPRESENTATIVE.

OUR ENGLISH LETTER.

AROUND AND ABOUT OLD WINCHESTER.

III.

In my previous letters, which told you in condensed form something about old Winchester itself, I omitted to make special mention of the name of Bishop Walkelin, the cousin of William the Conqueror, who over eight hundred years ago might almost have been considered as the actual founder of its wonderful cathedral. Although much of his original work has been lost to it by the destroying hand of old Father Time, there still remain the majestic Norman Transepts, and here and there other remnants of his artistic taste.

Here is an anecdote worth repeating, as throwing a little side-light upon his individuality, and giving proof, not only of the forcefulness of character which enabled him to carry out under very adverse conditions a work of such magnitude, but also of his sense of humor. There is a village in Hampshire, not far from Winchester, which is said to be the site of what was once Happening Wood. Of this wood the Conqueror had somewhat rashly made the promise to his cousin, Bishop Walkelin, that he

That, of course, is very ancient history indeed, but had Hampshire no historical interest at all, it has a beauty all its own in its wide stretch of downs, its wood-dotted undulations and mounds, some of them with a claim to the title of hills (such as St. Catherine's Hill, which smiles or occasionally frowns down upon St. Cross), some of these spots having clumps of trees, to nearly all of which some story is attached. In approaching Winchester one could see a veritable panorama of villages, with their churches and rural surroundings, if only one could soar on outstretched wing instead of being a mere prosaic traveller in railway train or carriage. There would be Alresford and Alton, Tichbourne and Hursley, with its memories of the saintly Keble, and quaint little Croslebury, which claims not only to be the scene of the story of the "Mistletoe Bough," but the present possession of the very chest in which the tragedy occurred.

It seems that one conspicuous object has disappeared which existed as a kind of prelude to the telegraphic service of our own day, i. e., the "Semaphore," from which started a continuous line of signals to convey intelligence from Southampton and Portsmouth to London in 1795, at the time of the French war. But if I linger so long on my way, I shall tire you before I ask you to come with me to St. Cross.

ST. CROSS.

Under the name of St. Cross is included not only the grand old Norman church of almost cathedral dimensions, built by Henry de Blois,

Now all the old locks are in ruin, and for the Ithen, as for the fine old St. Cross Brothers, "working days are over."

At its foundation the Hospital of St. Cross was placed under the charge of the knights of St. John of Jerusalem, to whom is owing the adoption of the "Tan" or Jerusalem cross, a Crusader badge which has been worn on the left breast of every



Facsimile of the Silver Cross Worn on the Cloak of Each Old Brother of St. Cross.

beneficiary since the days of the Crusades. Its four arms, pointing N., S., E., W., are intended to signify the universality of the Saviour's redemption.

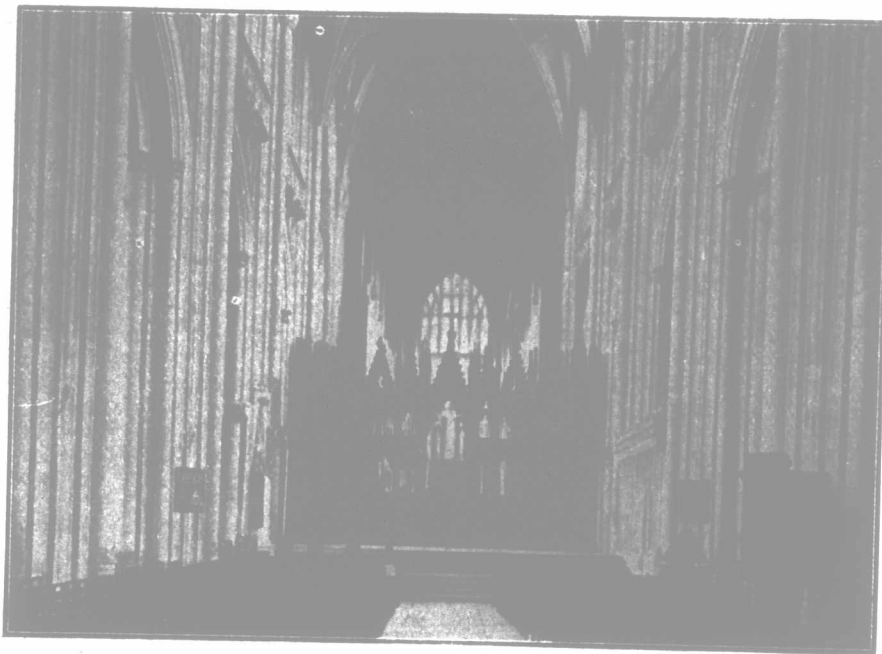
As the years rolled on many abuses in the management of the funds crept in, and the intention of its founder was often forgotten, but under the famous William of Wykeham, and later of Cardinal Beaufort, who has been considered the real restorer of St. Cross, brighter days dawned. Its financial history, even up to the last fifty years, has not been without blemish, but I am thankful to know that the clouds have been finally lifted, and a wise change of management has added to its income and widened its scope of benevolence.

Even in my young days the marble of the massive pillars of the church was hidden by whitewash, bats and birds made eerie noises in the clerestory during our Sunday services, and our pews were mere seats grouped together in an "anyhow" fashion, which somewhat resembled tents pitched in a wilderness. Now reverent hands have restored much of its earlier beauty, whilst architectural treasures have been revealed which have been lost to sight for centuries.

Memory crowded upon memory as I passed under Beaufort Tower, and had a few words of greeting with the wife of the "Brother" in charge, who had, it was most delightful to find, once been a scholar in the Sunday School founded by my mother in our own grounds, when space in the rooms above the old Cloisters had been denied her by the cross-grained and self-greedy old master of St. Cross, under the old regime of mismanagement.

As I have said before I say again, when you visit Winchester do not fail to visit St. Cross. Ask to be shown the Cloisters, the old hall with its Minstrel's Gallery and the leathern bottles hanging therefrom; the kitchen in which the meats and doles are prepared, which is a perfect museum of old-time cooking appliances. Ask also for the "wayfarer's dole," of a bit of bread, with its horn of very small beer, which you may drink or not as it may please you. Request to be shown the table of Purbeck marble, which stands in an alcove in the Cloisters, upon which, it is recorded, that the money was placed in readiness for its being paid to the original masons and builders of nearly 800 years ago. Then before you return to Winchester, by road, if driving, or by the water-meadows, if walking, stroll around outside the church until you come to the quiet little burial ground in which repose until the day of resurrection many of those who in life were either bestowers of or participants in the benevolence which brought into existence this fine old church, with its "Hospital of Noble Poverty." H. A. B.

"Souvenirs.—Are the Gildays back from their wedding tour?" "Yes." "How are they?" "Doing nicely. She has had a kernel of rice removed from her left eye, and the doctors are in hopes she can see again, and his broken collar-bone where the old shoe struck him—is knitting favorably."



Choir and Nave, Winchester Cathedral.

might have for his cathedral as much wood from it as he could cut down in a day; whereupon the Bishop got together so great a posse of laborers from all the country round that he cut down the whole wood! The comment of Peter Lombard, from whom I quote, upon this little bit of Episcopal sharp practice, was as follows: "The King's language may be better left unrecorded, but at last he grew calm, and after a good blow-up forgave the Bishop."

Referring to the coming pageant, to be held at Winchester in 1908, the same writer says: "Pressed down and running over are the memories which come pouring in to our national archives as we think of Winchester," and of St. Cross he says: "There is not a more charming spot in all England. I hope we shall have it well to the front in the pageant," whilst for miles and miles around Hampshire villages, churches, mansions and manor houses are built upon historic ground. From Southampton Water to the Ithen valley the tribes of Saxons spread themselves, joining hands with aboriginal Britons and "Angles" in repelling their common enemy the Danes, thus forming the Kingdom of Wessex, which became afterwards the Kingdom of England, under Eglbert, in 802.

brother of King Stephen, but the Beaufort tower and gateway, the "dunred men's hall," the cloisters, and beautiful quadrangle of green-sward around which have stood for ages the grey-stone, creeper-covered homes, which comprise what its founders designed as "The Hospital of Noble Poverty," thus making a provision for the members of the nobility of their day whom war or other exigencies had impoverished. Now its beneficiaries need have no claim to "blue blood," but are generally of good tradesman stock, who have outlived former prosperity and who are thankful to don the cassock-like cloak, with its silver badge, and take undisturbed possession of the suite of rooms apportioned to each "Brother," as a vacancy by death may occur. St. Cross is one of the very few remaining foundations of its kind which still preserves almost unchanged the customs of the middle ages, and presents a picture of the social and religious life of that time. Behind the church are the water-meadows, through which flows in a central and divided stream the river Ithen, of Isaac Walton fame as regards its good fishing, but it was once called the Barge river, when before the advent of railways, barges brought coals and heavy merchandise from Southampton to Winchester.

# The Quiet Hour.

## THE MIGHTY POWER OF HABIT.

As His custom was, He went into the synagogue on the Sabbath day.—St. Luke iv.: 16.

He knelt upon his knees three times a day, and prayed, and gave thanks before his God, as he did aforetime.—Dan. vi.: 10.

"All common things, each day's events,  
That with the hour begin and end,  
Our pleasures and our discontents,  
Are rounds by which we may ascend."

Yesterday I heard a clergyman addressing a number of Sunday-school children, and he began in this way:

"You know the story of Aladdin, and perhaps you think it would be very delightful to have a big, strong giant to do your work for you, as Aladdin had. But really you have such a giant, and his name is 'Habit.'"

He then went on to explain how necessary it is to keep the upper hand, when dealing with a giant, lest, instead of being the slave he should become the master.

I don't believe we fully realize the mighty power of Habit, its power of helping us, and its dangerous power of binding us hand and foot with invisible, yet very real chains. Every act that is often repeated is hardening into a habit, and the habits of years are something like the twists in the limbs of an old apple tree. It is not an easy matter to straighten them out.

Habit is a valuable servant. We should be worn out with the daily routine of life if we did not learn to do a great many things unconsciously. Our feet make the necessary steps, our eyes and ears look out for danger, almost automatically—but they are really obeying the giant, "Habit." One who has lived for years in a city hardly knows that he is on guard as he crosses the street, looking first to the left and then to the right. When he goes to Europe, this habit may cause real danger, because carriages go in the opposite direction, and when he is watching for a clear passage on the left, an automobile may be running him down on the right. We are all forming habits—but what kind of habits are they? In the two texts I have chosen, we read of good habits, which, happily for us, are even more binding than bad ones. Our Lord, when visiting the home of His boyhood, attended the synagogue service on the Sabbath, as a matter of course. It had for long years been "His custom," and He would have felt very uncomfortable if anything interfered with this habit. And Daniel, as the second text tells us, had been accustomed to kneel in prayer three times every day; and the habit of years dragged him to his knees though he knew that his life was put in great danger by the act.

Do we not all know men and women who are always in their place in church, rain or shine? It is no effort to them. They have trained the giant Habit to bring them there, and it would require far greater effort to stay away. Then, let us hope there are still men—like Daniel, who would not leave their daily prayers unsaid, even though death were the penalty of saying them.

Let us take an outside view of our habits, and see which of them are our very good servants—servants that can be safely trusted to do what is needed, without much oversight—and which of them are slowly but surely enslaving us, and must be conquered.

St. Paul says: "I keep under my body, and bring it into subjection: lest that by any means, when I have preached to others, I myself should be a castaway." This body in which we live must be "kept under," then, or it will drag us down instead of helping to lift us up. The common events of every day may be "rounds by which we may ascend," or they may be weights, clogging our progress.

Yesterday, a poor, forlorn-looking creature came up to me and asked for money. His hand and voice were shaky, and his tainted breath told the cause; and the bad habits of years had written their names unmistakably on his face. Poor fellow! he surely never intended to sink into such a miserable condition.

Probably he was once a bright young man, with every intention of keeping straight. But he carelessly allowed the drink-habit to gain control over him, and when he tried to escape—as he must often have done—his weakened will was powerless to fight against the giant that had grown so strong and masterful. It is a very dangerous thing to say: "This time doesn't count," when you know that each time you make up your mind to do a thing—and are too weak to enforce the resolution—you are allowing your will to become enslaved. If you find yourself in that condition, find that your daily path is paved with good resolutions that have been shattered to pieces, it is time to bestir yourself and conquer your habits before they tie you hand and foot. Habits grow strong so stealthily. The boy who cheats in a game grows into the man who is not quite straight in his dealings, and the habit of unfairness creeps into his very nature, unknown to himself. Then he is suddenly tempted to steal, and is as much surprised as anybody else to find that he is a thief. The woman who makes the most of every trifling ailment or discomfort, insisting on sympathy from everybody if her head aches or if any little thing has gone wrong, does not know how this apparently harmless habit is poisoning the home atmosphere. She wonders, perhaps, why her husband and children seem so glad of an excuse to be away from home. She wonders why other people have good times, and nothing pleasant ever comes her way. And yet it is only that habit has blinded her eyes to the good times she is having, or might be enjoying. The other day I saw a man and a woman

prayers, day after day, without any real reaching out after God, we are cutting our spirits off from the only source of spiritual strength. And the worst of such a habit is that it lulls the conscience to rest by telling it that the duty of praying has been attended to, and all is well. Why, it would be almost better to give up saying the prayers altogether rather than to make them such a mockery. Then, at least, the conscience could hardly be drugged with false statements. And the habit of searching out evil in our fellow-sinners, and of dragging it to the light, is as loathsome as a vulture's love of carrion. Why should we take pleasure in the sins of others? If we don't take pleasure in it, why do we publish it unnecessarily? The habit of unkind gossip is one we should try to kill at the root. If we find that we have broken our resolve, and have spoken unkindly about anyone, let us at once go to our Father and not only ask His forgiveness for our sin against love, but also bring the one whose sins are so plainly visible to us, and ask Him to help that brother or sister with pardon and strength.

Then there is the habit of doing good from a secret desire for the approbation of men. If you hear many words of praise addressed to you, be on your guard, lest the fair actions spring from an ugly motive, and so are displeasing to God. That is a terrible saying in the fourth chapter of Genesis: "Unto Cain and his offering He had not respect." If we look within our own hearts we may find that some of the things we have been praised for are offerings that God will not accept. As Keble says:



Winchester Cathedral.

caught fast in the turnstile that guards the elevated railway. They had both tried to go through at the same time, and the thing stuck, so they were fast in a cage. A crowd of spectators soon gathered to watch their frantic struggles. Both were exactly in the same plight; but, while the man was furiously angry, the woman was laughing as though the whole affair were only a huge joke. She must have found the habit of seeing the funny side of a predicament, and so found it easy to enjoy the very thing that made her companion utterly frantic.

Some people have formed the habit of speaking rudely or crossly to members of their own family, while others have so cultivated habits of courtesy and kindness, that they hardly know how to be ungracious. Such habits, when cultivated, make life much smoother and easier for all around. They may be difficult to acquire at first, but they are worth striving after.

There are many subtle habits that we all have to be on our guard against. There is the habit of wandering thoughts, dragging our words of prayer and praise down to earth when they should be rising to the throne in Heaven. There is the habit of seeing the worst side of other people, and the habit of talking unkindly about our neighbors. Such habits may seem to be trifling, but they are terrible in their power of injuring us. When we say our

"When mortals praise thee, hide thine eyes,  
Nor in thy Master's wrong  
Take to thyself His crown and prize;  
Yet more in heart than tongue.

Woe to that Christian heart,  
Who in man's praise would walk on high,  
And steal his Saviour's part!  
And ah! to him what tenfold woe,  
Who hides so well his sin,  
Through earth he seems a saint to go,  
Yet dies impure within.  
Pray we our Lord, one pang to send  
Of deep remorseful fear  
For every smile of partial friend—  
Praise be our Penance here!"

Even the habit of doing good may be an evil thing, a thing which is rightly scorned and despised—even the shameful, creeping sin of hypocrisy. Our characters are being built up, piece by piece, and it is not the act so much as the motive that leaves its indelible mark, for good or for evil, on the soul. Absalom, the charming, deceitful son of David, deliberately used all his grace of manner and all the courteous arts he could assume; and by hypocritical kindness and pretended sympathy he "stole the hearts of the men of Israel." In this crafty, wicked fashion he undermined his father's influence before he rose in open rebellion. So habits that are fair-spoken must be

challenged and required to prove that they are really what they pretend to be, before it is safe to let them rule in our daily lives. For we are forced to let the giant Habit have a great deal of power over us. We get up early or lie in bed late, from habit. We start the day with prayer—if that is our habit—or we forget all about our morning prayers, if our habits in that respect have been careless. We do the ordinary work of the day either cheerily and well or grudgingly and carelessly—as our custom has been in the past. And even in an unexpected crisis the power of habit generally decides the question—as, for example, the man and woman whom I saw struggling in the turnstile.

While, in one sense, our past has gone, in another it most truly lives with us. For our man-consciousness holds in itself our child-consciousness, while old age contains both. The "now" of the actual life is never only the present moment. It is a compound, a distillation. Its essence is an extract of all that has gone before.

Let us never fall into the mistaken idea that "just this once doesn't matter." It is always the present moment that does matter. "Now" is the accepted time, "Now" is the day of salvation. The present is the only solid thing we can lay our hands upon to build into the eternal fabric of character. The past has been swept out of our reach, and the future is always just too far away to grasp. Let us try to make the most of the present—doing its duty, making the most of its gladness, patiently enduring its testing and purifying discipline. Habits are being formed today, so we are making our own future while we live in the present.

"We have not wings, we cannot soar,  
But we have feet to scale and climb  
By slow degrees, by more and more,  
The cloudy summits of our time.

HOPE.

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Grow old along with me!  
The best is yet to be,  
The last of life, for which the first was made:  
Our lives are in His hand  
Who saith "A whole I planned,  
Youth shows but half; trust God; see all,  
nor be afraid!"

—Browning.

### EARLY ADVENTURES IN CANADA

The man who founded the city of Quebec was a Frenchman, named Samuel Champlain. Getting tired of everyday life at home, and being anxious to see some fighting, he started off for the new country across the ocean. And very exciting adventures he had, as you may read in Parkman's book, "The Pioneers of France in the New World." I am going to give you an account of one of his later adventures from this book.

Champlain had been visiting a village of Hurons. The lot of the favored guest of an Indian camp or village is idleness without repose, for he is never left alone, and the repetition of incessant feasting. Tired of this inane routine, Champlain, with some of his Frenchmen, set forth on a tour of observation, while waiting for the arrival of allies for the fight with the Iroquois. Journeying at their ease, they passed, in three days, five palisaded villages. The country delighted them, with its meadows, its deep woods, its pine and cedar thickets, full of hares and partridges, its wild grapes and plums, cherries, crab-apples, nuts and raspberries. It was the 17th of August, 1615, when they reached the Huron metropolis, Cahigue, in the modern township of Orillia. A shrill of rejoicing, the fixed stare of wondering squaws, and the screaming flight of terrified children, hailed the arrival of Champlain. Here was the chief rendezvous, and the town was filled with gathering warriors. There was cheering news; for an allied nation had promised to join the Hurons in the enemy's country, with five hundred men. Feasts and the wardance consumed the days, till at length the tardy bands had all arrived; and, shouldering their canoes and scanty baggage, the naked host set forth.

At the outlet of Lake Simcoe they all stopped to fish—their simple substitute for a commissariat. On the morning of the 16th of September, Champlain, shivering in his blanket, awoke to see the meadows sparkling with an early frost, soon to vanish under the bright autumnal sun. The Huron fleet pursued its course along Lake Simcoe, across the portage to Balsam or Sturgeon Lake, and down the chain of lakes which form the sources of the River Trent. As the long line of canoes moved on its way, no human life was seen, no sign of friend or foe. They stopped and encamped for a deer hunt. Five hundred Indians, in line, drove the game to the end of a woody point, and the canoe men killed them with spears and arrows as they took to the river. Champlain and his friends keenly relished the sport, but paid a heavy price for their pleasure. A Frenchman firing at a buck, brought down an Indian, and there was need of liberal gifts to console the sufferer and his friends. The canoes now issued from the mouth of the Trent. Like a flock of venturesome wild fowl, they put boldly out upon Lake Ontario, crossed it in safety, and landed within the borders of New York, on or near the point of land west of Hungry Bay. After hiding their light craft in the woods, the warriors took up their swift and wary march, filing in silence between the woods and the lake, for four leagues along the strand. Then they struck inwards, threaded the forest, crossed the outlet of Lake Oneida, and, after a march of four days, were deep within the limits of the Iroquois. On the 9th of October some of their scouts met a fishing party of this people, and captured them, eleven in number, men, women and children. They were brought to the camp of the exultant Hurons. As a beginning of the

jubilant, a chief cut off a finger of one of the women; but desisted from further torturing on the angry protest of Champlain, reserving the pleasure for a more convenient season.

On the next day they reached an open space in the forest. The hostile town was close at hand, surrounded by fields with a slovenly and savage cultivation. The young Hurons in advance saw the Iroquois at work among the pumpkins and maize, gathering their rustling harvest. Nothing could restrain the hare-brained and ungoverned crew. They screamed their war-cry and rushed in; but the Iroquois snatched their weapons, killed or wounded five or six of the assailants, and drove back the rest discomfited. Champlain and his Frenchmen were forced to interpose; and the report of their pieces from the border of the woods stopped the pursuing enemy, who withdrew to their defences, bearing with them their dead and wounded.

It appears to have been a fortified town of the Onondagas, the central tribe of the Iroquois confederacy. Champlain described its defensive works as much stronger than those of the Huron villages. They consisted of four concentric rows of palisades, formed of trunks of trees, thirty feet high, set aslant in the earth, and intersecting one another at the top, where they supported a kind of gallery, well defended by shotproof timber, and furnished with wooden gutters for quenching fire. A pond or lake, which washed one side of the palisade, and was led by sluices within the town, gave an ample supply of water, while the galleries were well provided with magazines of stones.

Champlain was greatly exasperated by the desultory and futile procedure of his Huron allies. Against his advice, they now withdrew to the distance of a cannon shot from the fort, and encamped in the forest, out of sight of the enemy! "I was moved," he says, "to speak to them roughly and harshly enough, in order to incite them to do their duty, for I foresaw that, if things went according to their fancy, nothing but harm could come of it, to their loss and ruin." He proceeded, therefore, to instruct them in the art of war.

In the morning, aided doubtless by his ten or twelve Frenchmen, they set themselves with alacrity to their prescribed task. A wooden tower was made, high enough to overlook the palisade, and large enough to shelter four or five marksmen. Huge wooden shields, or movable parapets, were also constructed. Four hours sufficed to finish the work, and then the assault began. Two hundred of the strongest warriors dragged the tower forward, and planted it within a pike's length of the palisade. Three arquebusers mounted to the top, where, themselves well sheltered, they opened a raking fire along the galleries, now thronged with wild and naked defenders. But nothing could restrain the ungovernable Hurons. They abandoned their mantelets, and, deaf to every command, swarmed out like bees upon the open field, leaped, shouted, shrieked their war-cries, and shot off their arrows; while the Iroquois, yelling defiance from their ramparts, sent back a shower of stones and arrows in reply. A Huron, bolder than the rest, ran forward with fire-brands to burn the palisade, and others followed with wood to feed the flame. But it was stupidly kindled on the leeward side, without the protecting shields designed to cover it; and torrents of water, poured down from the gutters above, quickly extinguished it. The confusion was redoubled. Champlain strove in vain to restore order. Each warrior was yelling at the top of his throat, and his voice was drowned in the outrageous din. Thinking, as he says, that his head would split with shouting, he gave over the attempt, and busied himself and his men with picking off the Iroquois along their ramparts.

The attack lasted three hours, when the assailants fell back upon their fortified camp, with seventeen warriors wounded. Champlain, too, had received an arrow in the knee, and another in the leg, which, for the time, disabled him. He was urgent, however, to renew the attack; while the Hurons, crestfallen and disheartened, refused to move their camp unless the five hundred allies, for some time expected, should appear. They waited five days in vain, beguiling the interval with frequent skirmishes, in which they were always worsted. Then



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they began hastily to retreat, carrying their wounded in the center; while the Iroquois, sallying from their stronghold, showered arrows on their flanks and rear. The wounded, Champlain among the rest, after being packed in baskets made on the spot, were carried each on the back of a strong warrior, "bundled in a heap," says Champlain, "doubled and strapped together in such a fashion that one could move no more than an infant in swaddling clothes. The pain is extreme, as I can truly say from experience, having been carried several days in this way, since I could not stand, chiefly on account of the arrow wound I had got in the knee. I never was in such torment in my life, for the pain of the wound was nothing to that of being bound and pinioned on the back of one of our savages. I lost patience, and, as soon as I could bear my weight, I got out of this prison, or rather out of this place of torment."

At length the dismal march ended. They reached the spot where their canoes were hidden, found them untouched, re-embarked, and crossed to the northern shore of Lake Ontario. So ended the great war-party of the valiant Hurons.  
C. D.

**Current Events.**

Sir Wilfrid Laurier celebrated his 66th birthday recently.

The Provincial Government will discontinue the distribution of immigrants in Ontario on January 1st.

Owing to vigorous sanitary measures, Winnipeg is now reported as one of the most healthful cities in the world.

Dr. Graham Bell, of telephone fame, has constructed an airship, which is being experimented with.

Mr. Ernest Thompson-Seton, who has returned from an extended trip in the far Northwest, reports vast areas in the Athabasca region suitable for settlement.

Much trouble is being experienced this season with the shipping of low-grade wheats, which seem to be sweating in the cars. The peculiarity is attributed to the unusually cold and damp character of the ripening season.

The testimony of the officers and engineers of the Phoenix Bridge Company, made public by the Canadian Royal Commission on November 20, throws the entire blame of the Quebec bridge disaster upon consulting engineer Cooper, who, they say, changed the length of the principal span from 1,600 to 1,800 feet, without making adequate changes in the supports to the main span to compensate for the difference.

The Cupard steamship *Mauretania*, sister steamship of the *Lusitania*, sailed from Liverpool on her first transatlantic voyage on November 16th, carrying £2,500,000 in gold for distribution in America.

At a conference of the Conservative Associations, in London, England, on November 14th, the platform of the party was defined—the broadening of taxation, a preferential arrangement with the Colonies, and protection. Mr. Arthur Balfour, on the same day, aroused much enthusiasm at Birmingham by appealing for tariff reform and adoption of a preferential tariff within the Empire. In touching upon protection, he declared that duties should be small, should not touch raw material, nor increase the burdens of the working classes.

Secretary Cortelyou, of the U. S. Treasury, announced, on November 17th, that, as a means of affording

relief to the financial situation, the Treasury will issue \$50,000,000 of Panama bonds, and \$100,000,000 certificates of indebtedness, the latter to run for one year, and bear interest at 3 per cent.

**Carmichael.**

BY ANISON NORTH.

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CHAPTER VI.

An Adventure in the Forest.

During the days which followed I did much thinking about Henry Carmichael. Almost my first thought, on awakening in the morning, was to wonder would he do anything that day by way of carrying out his threat to be even with my father; and for a good fortnight, while the wheat and oats were being cut and gathered into stooks, I stood out every day for hours watching, that I might give warning on the approach of Henry Carmichael across the fields. Sometimes, indeed, I thought it rather curious that one who could be so kind to old Yorkie Dodd could be so harsh and bitter toward another; but then it was such a terrible calamity that had come upon Yorkie.

However, as the days went by and my father continued to come in regularly at meal-times and at nights, and was never found lying shot behind a fence or among the grain ricks, I began to breathe more freely again; and, as Henry Carmichael seemed to have regained all his good humor, and my father never once mentioned the affair of the stolen timber in my hearing, could presently feel that a great crisis had been safely passed.

When next I met Carmichael it was at the turning of the summer, just before the first red banners of autumn began to hang out here and there from the vast green wilderness of the woodland.

I think I have mentioned my dread of thunderstorms, and, oh, what a summer of thunderstorms that was! First a few days of sunshine and intense heat, then a terrible hurricane of winds and rain, and piling clouds, all shot with the lightning—that was the record of almost every week of July and August, until people began to talk of putting up lightning rods, and to wonder if the clearing away of so much of the woods were not the cause of the trouble.

Upon the occasion of which I speak, I had gone, late in the afternoon, to look for the cows. They were not in the pasture, and so, seldom afraid in the woods, I plunged boldly into the green wilderness, with Jap bounding ahead of me in delight, and making a thousand deviations after scurrying red squirrels and other such interesting game. The woods always filled me with keen pleasure, and this evening my steps became slower and slower as I looked up through the green gold of the leaves, all flushed with the slant, evening sunlight, and marked the red shafts of brightness that struck through, here and there, to the moist brown earth below. It was delightful, also, to look at the solemn, great trunks, standing up like pillars, myriads of them, as far as eye could reach, and to note the soft, green patches of maiden hair and other dainty, woody things, scattered here and there below, as though safe in the protection of the great canopy above.

At the little brook I paused for a moment to listen to the music of the water; then, after plucking a few spikes of the scarlet lobelia, plunged again into the thick of the woods. There was still no trace of the cows, but a part of the rough slash fence, which marked this portion of the boundary between our farm and the Carmichael's, was broken down, and I judged that possibly the cattle had gone through, and were somewhere



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in the Carmichael woods. After a little hesitation, I decided to follow them.

For a little way the cow-path, which I presently came upon, and which led upward from the watering place, was pressed closely on either hand by a dense mass of undergrowth, maple and beech saplings, pin-cherry trees and raspberry bushes; but, as the older woods beyond were reached, these thickets gave way, and again I could see vast, dimly-lighted spaces all interspersed with gray trunks, and roofed in by thick, green leafage above. Here, however, where the way was not so familiar to me, the vastness of the forest became a thing to be felt, and I began to be oppressed by a vague dread of I knew not what. Jap, too, seemingly less sure of his bearings, gave up his racing about, and trotted along nearer to me, ever and anon thrusting his damp, friendly nose into the palm of my hand. But his presence reassured me, and so I did not once think of turning back. There was an old clearing just beyond; where, possibly, I might find the cows.

At a few paces farther, and as an index to this clearing, the undergrowth again began to press upon either hand, so closely that it formed here a mass impenetrable to the eye, with branches sometimes stretching across the path, so that it was necessary to raise them in forcing one's way. The path, too, still went upward in a succession of knolls, and glancing up from the foot of one of them I saw a sight that made my heart stand still.

It was only Henry Carmichael, looking down at me. He was standing quite still, with the thick, green leafage on either side and behind him; and in his arms he held a lamb which began to bleat pitifully, as though in pain, a late lamb, already grown almost into a sheep, but, on his broad bosom, looking quite young and helpless; yet, for the instant, while knowing that it was Carmichael, I did not realize that it was he.

I think, however that it must have been, most of all, the expression on his face which fascinated me, and brought up from the past, as a sort of vision, that memory from my baby years. In later life, thinking of it, I knew that pity for the lamb, with its broken leg, and wonder at the wild little apparition I must have been, with my black hair streaming over my shoulders, my startled eyes, and my scarlet lobelias held to my breast, had combined to form that tender, pitying, wondering expression—for, when I knew him better, I knew that, unless when under leash, Henry Carmichael's heart lay on his countenance as the print on an open book—but, however that may be, at the time it was not only Carmichael with his bleating lamb and the greenery pressing all about him that I saw.

Years before, when but a very little child, I had seen, when with my mother, in some city church, somewhere, a picture which had fascinated me, and which I had watched and watched all the time of the service with the drone of the white-gowned clergyman growing fainter and fainter in my ears. It was in a window of stained glass, and the morning sun, shining through it, had touched into what seemed a strange glory to my childish eyes the figure of the good Shepherd, with a little lamb in his arms, and the sheep following Him down a path that ran, with green bushes pressing on either hand, through a green, green meadow. Above all was the glory centered in the face, with the golden halo shining above it, and I had gazed and gazed until the sweet lips seemed to smile, and the gentle eyes to look down in pitying tenderness just on me.

So to-day, the sudden appearance of Henry Carmichael startled me, as though the glowing apparition of my early childhood had projected itself, by some miracle, into the path in Carmichael's wood.

The next instant a sort of horror

seized me, child though I was, that I should have confused Henry Carmichael, that man of wicked words, with such a memory; and with the sudden reaction all my old terrors of him came back. Before he could move or speak, for with such lightning-like rapidity occur the transitions of the mind, I had darted like a startled fawn into the underbrush, and was flying on and on through the woods.

"Peggie! Peg Mallory!" I heard him calling, but instead of answering I threw myself down in a dense copse where the green light could scarce suffice to reveal my slight little shivering form or the scarlet blossoms heaving up and down as I pressed them to my bosom. Jap, who had followed me in great glee, and had been nosing around in the copse, evidently under the impression that nothing less exciting than the finding of a fox's or groundhog's hole could be at the bottom of such precipitancy, came up to me, disappointed, but with ears raised in expectancy. I was afraid he would yelp and divulge my whereabouts, for, having run away, I now felt all the trepidation of a fugitive; but when I raised my hand, he came close to me to be petted, licking my face at every opportunity. Afterward he snuggled close to me, and so we lay, looking out into the woods which now seemed to be darkening strangely. Rapidly, in the distance, the myriad tree-trunks seemed to be dissolving, or rather moving nearer to one another, and merging into an indistinguishable mass. At the same time the noise of waving tree-tops, which had kept up all the way like the murmur of a distant rapid, suddenly ceased, and all the forest seemed to be waiting in expectancy, while the darkness settled down like some vast pall falling silently from the heavens.

More terrified than ever, I darted out of the copse, and at the same time a low mutter of thunder and a sudden suffusion of red light through all the leaves heralded the beginning of a storm.

Glad, now, of the proximity of a human being, I lost my fear of Henry Carmichael in my greater fear of the storm, and darted with unerring step, like any wild thing of the woods, after him.

I came upon him in the open, just beyond the brook, when the flashes were beginning to come fast, and the thunder to roll louder and louder like the roar of approaching artillery. He heard the patter of my feet behind him, and half turned.

"Come on, come on!" he said. Scared of the storm? Here, hang on to my coat-tail. This great sheep takes up both of my hands."

I did not like to take hold of his coat, but was glad to run along beside him in the fields, even though he did not speak, nor even look at me again all the way.

The rain did not begin to patter until we had reached the lower barn, where Dick was fastening in a flock of turkeys.

"Run across to Mallory's, Dick," said Mr. Carmichael, "'n' tell them Peggie's here, 'n' 'll be home all safe when the storm's over."

Immediately Dick set off on a run, while I followed his father into the sheep-house, and watched him while he set the lamb's leg between two bits of wood and bound it about with strips torn from his handkerchief. I thought he must be hurting the poor thing dreadfully, for it struggled a little, and bleated pitifully; but I knew he did not mean to, for all the while he kept talking to it, calling it "poor lambie!" and "poor little chap!" and assuring it it would be all right soon.

While watching the operation, I was too much interested to pay much attention to the storm; but once it was over, and the lambie laid down on a bundle of clean straw, I felt very nervous, and wretched indeed, and cowered back as far as I could from the open door.

(To be continued.)

### EASY TO MIX THIS.

What will appear very interesting to many people here is the article taken from a New York daily paper, giving a simple prescription, as formulated by a noted authority, who claims that he has found a positive remedy to cure almost any case of backache or kidney or bladder derangement, in the following simple prescription, if taken before the stage of Bright's disease:

Fluid Extract Dandelion, one-half ounce; Compound Kargon, one ounce; Compound Syrup Sarsaparilla, three-ounces. Shake well in a bottle, and take in teaspoonful doses after each meal and again at bedtime.

A well-known druggist here at home, when asked regarding this prescription, stated that the ingredients are all harmless, and can be obtained at a small cost from any good prescription pharmacy, or the mixture would be put up if asked to do so. He further stated that while this prescription is often prescribed in rheumatic afflictions with splendid results, he could see no reason why it would not be a splendid remedy for kidney and urinary troubles and backache, as it has a peculiar action upon the kidney structure, cleansing these most important organs and helping them to sift and filter from the blood the foul acids and waste matter which cause sickness and suffering. Those of our readers who suffer can make no mistake in giving it a trial.

I dreamed I slept in an editor's bed  
When the editor was not nigh,  
And I thought as I lay in that downy couch  
How easy editors lie!

### DR. W. A. McFALL

Special attention given to the treatment of rheumatism. Address:  
168 Spadina Avenue, Toronto.

You cannot possibly have a better Cocoa than

# EPPS'S

A delicious drink and a sustaining food. Fragrant, nutritious and economical. This excellent Cocoa maintains the system in robust health, and enables it to resist winter's extreme cold.

# COCOA

Sold by Grocers and Storekeepers in ¼-lb. and ½-lb. Tins.

### MAPLE SYRUP MAKERS, ATTENTION!

How can you reasonably expect to get satisfactory returns from out-of-date sap pans? Give your maple grove a show

by using a Champion Evaporator, and you will receive the best and quickest returns for the time spent of any work done on the farm. This crop requires no fertilizers, no plowing, seeding or harrowing, and comes at the season of the year when other farm work is not pressing. Write for description catalogue of the Champion Evaporator, made in 25 sizes.

THE GRIMM MFG. CO.,  
58 Wellington St., Montreal, Que.

## RURAL TELEPHONE BOOK 112 Pages

**Largest and Most Complete Ever Published.**

Tells how to organize, build, manage and operate a Rural Telephone Line or Exchange. Indispensable to every one interested or contemplating building a Rural system. Write for it today

Century Telephone Constr. Co.  
Dept. K, Buffalo, N. Y.  
BRANCH, KANSAS CITY, MO.

FREE

**Ont. Farmers' Institute Meetings.**

Farmers' Institute meetings will be held in the Province of Ontario from November 29th to December 20th, as indicated below. An effort has been made this year to select speakers who are specially qualified to take up those subjects which are of greatest interest in the localities concerned. It will be understood, of course, that the speakers will not attempt to deal with all the subjects given herewith. The local Institute officers will make selections therefrom, and a definite programme will be prepared for each place. All farmers, and others interested in agricultural topics, are invited to be present at these meetings. At the evening sessions there will usually be a limited amount of music, and addresses by local men. The delegates will be furnished with illustrative material, and will be able to make their addresses even more practical and instructive than heretofore.

**REGULAR MEETINGS.**

**Div. 6.**

Speakers and Subjects.—W. C. Shearer, Bright, December 4th to 6th: Rotation of Crops and Selection of Seed; Breeding and Feeding the Bacon Hog; The Dairy Cow for Profit; Growing Corn Successfully. Evening: Farming Profitably.

Miss B. Maddock, Guelph, Dec. 4th to 6th: Breadmaking; Our Women's Institutes and How to Make Them Interesting; Bacteria: Their Relation to Health and Disease; Different Cuts of Meat: Their Selection and Preparation; Hygiene and Economic Values of Food; A Girl's Possibilities; Preserving and Canning Fruits and Vegetables; The Sanitary Home; Home Architecture.

Bethany, C. Wellington ..... Dec. 4  
Metz, C. Wellington ..... " 5  
Ospringe, C. Wellington ..... " 6

**Div. 7.**

Dr. J. Standish, Walkerton, Nov. 29th to Dec. 17th: Breeding of Horses; Selection and Feeding of Beef Cattle; Requirements of the Bacon-hog Industry; Diseases of the Digestive System of Cattle; Unsoundness in Horses and the Best Means of Detecting the Same. Evening: Training of the Young Horse.

Geo. Carlow, Warkworth, Nov. 29th to Dec. 17th: Selection and Feeding of the Dairy Herd; Eradication of Weeds; Crop-growing for the Silo; The Farm Dairy. Evening: Agricultural Education; Cultivation of the Soil.

Mrs. Colin Campbell, Windsor, Nov. 29th, 30th, and Dec. 4th to 7th: The Care and Uses of Milk; Canning Fruits and Vegetables; Poultry-raising; Practical Housekeeping; A Comparison of Our Common Foods; The Housekeeper and Her Importance to the State.

Dr. Annie Backus, Aylmer, Dec. 14th: Hygiene of the Home and Aids in Nursing; Consumption and Its Prevention; The Importance and Meaning of Women's Work; Training in the Home; Education of Girls; Poultry-raising; The Horse: Its Use and Abuse.

Orangeville, Dufferin ..... Nov. 29  
Shelburne, Dufferin ..... " 30  
Mono Mills, Peel ..... Dec. 2  
Streetsville, Peel ..... " 3  
Weston, W. York ..... " 4  
Woodbridge, W. York ..... " 5  
Aurora, N. York ..... " 6  
Newmarket (aft.), N. York ..... " 7  
Queensville (eve.), N. York ..... " 7  
Agincourt, E. York ..... " 9  
Stouffville, E. York ..... " 10  
Sunderland, N. Ontario ..... " 11  
Pentypool (aft.), E. Durham ..... " 12  
Bethany (eve.), E. Durham ..... " 13  
Bailieboro (aft.), E. Durham ..... " 14  
Millbrook (eve.), E. Durham ..... " 14  
Kendal (aft.), W. Durham ..... " 16  
Orono (eve.), W. Durham ..... " 16  
Bowmanville (aft.), W. Durham ..... " 17  
Campton (eve.), W. Durham ..... " 17

**Div. 8.**

T. G. Raynor, Ottawa, Dec. 3rd to 7th: Feeds and Feeding (illustrated); Forestry; Grading Up a Herd or Flock; Corn and Clover; Soil Cultivation; The Production of Pork; Noxious Weeds and Methods of Destroying Them; A Forward Movement in Field Agriculture; How to Increase Our Dairy Profits; The Farmer and the New Seed Control Act. Evening: Agricultural Development; Mistakes in Farming.

E. C. Drury, Crown Hill, Dec. 7th to 10th: Rotation Crops, Including Cultivation; Weeds and How to Combat Them; Soil Moisture and Its Control;

The Farmer's Flock of Sheep; The Breeding and Feeding of Beef Animals; The Dual-purpose Cow. Evening: The Social Side of Farming.

Dr. Annie Backus, Aylmer, Dec. 3rd to 10th, Dec. 16th to 18th: Hygiene of the Home and Aids in Nursing; Consumption and Its Prevention; The Importance and Meaning of Women's Work; Training in the Home; Education of Girls; Poultry-raising; The Horse: Its Use and Abuse.

Oakwood, W. Victoria ..... Dec. 3  
Lindsay, W. Victoria ..... " 4  
Fenelon Falls, E. Victoria ..... " 5  
Bobcaygeon, E. Victoria ..... " 6  
Ennismore, W. Peterboro ..... " 7  
Lakefield, W. Peterboro ..... " 9  
Warsaw, E. Peterboro ..... " 10  
Keene, E. Peterboro ..... " 11  
Warkworth, E. Northumberland ..... " 12  
Codrington, E. Northumberland ..... " 13  
Menie, E. Northumberland ..... " 14  
Springbrook, N. Hastings ..... " 16  
Madoc, N. Hastings ..... " 17  
Tweed, E. Hastings ..... " 18

**Div. 9.**

H. G. Reed, V. S., Georgetown, Dec. 4th to 20th: Principles and Practice of Stock-breeding; Horse-breeding for Profit; Horse-breeding and Care in Relation to Diseases; Diseases of Digestive System of Cattle; Brood Mare and Foal; Pasturient Diseases of Dairy Cows.

Hy. Glendinning, Manilla, Dec. 4th to 13th: Feeds and Feeding; Growing Clover and How to Save It; Growing Red and Alsike Clover for Seed; The Dairy Cow; The Farm Water Supply; Cultivation of Soil and Destruction of Weeds. Evening: Beautifying the Farm Home; Farm Conveniences.

Miss B. Maddock, Guelph, Dec. 17th to 18th: Breadmaking; Our Women's Institutes and How to Make Them Interesting; Bacteria: Their Relation to Health and Disease; Different Cuts of Meat: Their Selection and Preparation; Hygiene and Economic Values of Foods; A Girl's Possibilities; Preserving and Canning of Fruits and Vegetables; The Sanitary Home; Home Architecture.

Emerald, Amherst Island ..... Dec. 4  
Stella, Amherst Island ..... " 5  
Sunbury, Frontenac ..... " 6  
Glenvale, Frontenac ..... " 7  
Odessa, Lennox ..... " 9  
Napanee, Lennox ..... " 10  
Newburgh, Addington ..... " 11  
Centreville, Addington ..... " 12  
Deseronto, E. Hastings ..... " 13  
Wallbridge, W. Hastings ..... " 17  
Frankford, W. Hastings ..... " 18  
Grafton, W. Northumberland ..... " 19  
Harwood, W. Northumberland ..... " 20

**Div. 10.**

W. F. Kydd, Simcoe, Nov. 29th to Dec. 17th: Am I Raising the Most Profitable Horse?; The Dairy Cow; Her Summer Feed and Winter Care; Small Fruits and Care of Grapevines; Potato Spraying; Ventilation of Farm Buildings. Evening: Dropped Stitches.

A. M. Campbell, Maxville, Nov. 29th to Dec. 7th: Care and Feeding of the Dairy Cow; The Breeding of Dairy Cattle; Cultivation of Corn and the Silo; The Bright Side of Farm Life.

E. A. Calnan, Allisonville, Dec. 9th to 17th: The Building Up and Maintenance of the Dairy Herd; The Raising of Fodder for Dairy Cattle; Co-operative Cheesemaking from the Producers' and Manufacturers' Standpoint. Evening: The Relation which Should Exist Between Milk Producers and Cheese Manufacturers; The Improvement of Crops by Seed Selection, and the Part Which the Boy Can Take Therein.

Miss I. Rife, Hespeler, Dec. 6th to 7th: Helpfulness in Women's Institutes; Sunshine, Pure Air and the Bath; Consumption: Education, Prevention and Cure; The Value of Physical Development; The Home in Its Attitude to the School; The Hygiene of Cheerfulness; Education for Girls.

Middleville, N. Lanark ..... Nov. 29  
Clayton, N. Lanark ..... " 30  
Smith's Falls, S. Lanark ..... Dec. 2  
Perth, S. Lanark ..... " 3  
Merrickville, N. Leeds ..... " 4  
Oxford Mills, N. Leeds ..... " 5  
Inkerman, Dundas ..... " 6  
Morewood, Dundas ..... " 7  
Spencerville, S. Grenville ..... " 9  
North Augusta, S. Grenville ..... " 10  
Caintown, Brockville ..... " 11  
Addison, Brockville ..... " 12  
Delta, S. Leeds ..... " 13  
Seeley's Bay, S. Leeds ..... " 14  
Fermoy, C. Frontenac ..... " 16  
Picadilly, C. Frontenac ..... " 17

When watches disagree, the hands that set them right are the hands of the

# ELGIN WATCH

the timepiece that's ever right



Every Elgin Watch is fully guaranteed. All jewelers have Elgin Watches. An interesting, illustrated booklet about watches sent free on request to ELGIN NATIONAL WATCH CO., Elgin, Ill.

## \$20.00 IN PRIZES.

### MAGNET Cream Separator

**FREE. Competition. FREE.**

To any girl or boy under 15 years of age, living on a farm in Canada, a beautifully illustrated 'MAGNET' calendar, lithographed in eight colors.

All that is required is to write us a letter, giving us the names of fifteen neighbors who keep cows, and who have no cream separator.

**\$20 in prizes will also be awarded in sums of one dollar each to the twenty best written letters selected from the replies to our calendar advertisement.**

Order of merit:  
Good writing.  
Correct spelling.  
Neat arrangement.  
Letter must be written on one side of paper only.

All letters competing for these prizes must be received before January 15th, 1908, addressed to The Petrie Mfg. Co., Limited, Hamilton, Ont., "Calendar Department."

The prizes will be awarded February 15th, 1908, by Mr. A. B. Petrie, whose decision will be final.

In addition to the calendar sent to each letter writer, we will enclose our new 1908 booklet, beautifully illustrated, which will give a lot of valuable information about the wonderful success of the MAGNET Cream Separator.

We call your special attention to the ONE-PIECE SKIMMER of the MAGNET, making it the easiest to clean, and the BEST SKIMMER on the market.

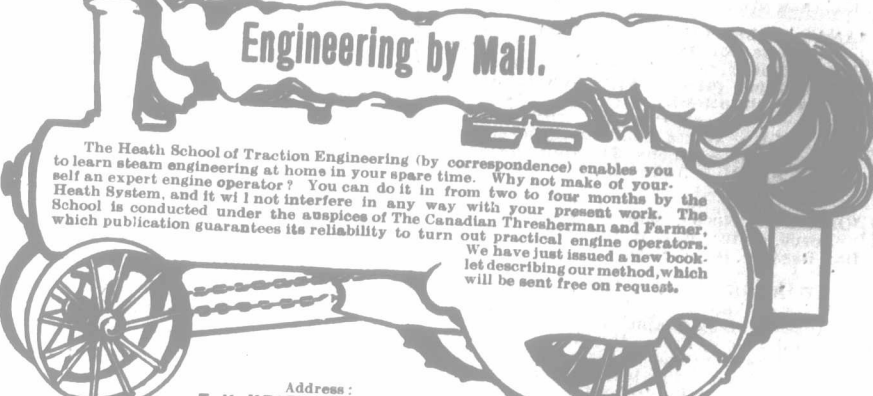
The greatest step yet taken towards perfection in cream separators is admitted by all to be embodied in the much-talked-of **MAGNET Skim**. Look for a description of it in book, or see it working on the machine. "It's a wonder."

All writers must mention the paper in which they read this advertisement.

**THE PETRIE MANUFACTURING COMPANY, LIMITED.**  
Hamilton, Ont.      Winnipeg, Man.      St. John, N. B.



## Engineering by Mail.



The Heath School of Traction Engineering (by correspondence) enables you to learn steam engineering at home in your spare time. Why not make of your self an expert engine operator? You can do it in from two to four months by the Heath System, and it will not interfere in any way with your present work. The School is conducted under the auspices of The Canadian Thresherman and Farmer, which publication guarantees its reliability to turn out practical engine operators. We have just issued a new booklet describing our method, which will be sent free on request.

Address:  
**E. H. HEATH CO., LIMITED.**  
Dept. T.      Winnipeg, Can.

**When Writing Advertisers Please Mention this Paper.**



**ZAM-BUK'S WONDERFUL SUCCESS**

The following remarkable cures are convincing proof that Zam-Buk is the most wonderful skin cure known. Zam-Buk succeeds when all else fails, and no home is complete without it.

**ECZEMA.**—Twenty-five long years Mr. T. M. Marsh, 101 Delerimier Ave., Montreal, wore gloves day and night, his hands were so bad with eczema. Five Doctors failed to cure him, but Zam-Buk triumphed. Ask him about it.

**CHRONIC ULCERS.**—Forty years suffering from Ulcers, which covered her body, made Mrs. Jane Beers, of l'Original, Ont., long for death. A few weeks' trial of Zam-Buk brought complete restoration. If you suffered like Mrs. Beers, and received such a wonderful healing, you, too, would say, as she did: "The like of Zam-Buk has not been seen since the Great Healer left the earth."

50c. a box, of all druggists and stores, or postpaid on receipt of price from Zam-Buk Co., Toronto. 3 boxes, \$1.25.

**See that Lock**

It is the perfect fitting, patented side lock on **EASTLAKE METALLIC SHINGLES**

no other shingles have it. This famous device makes Eastlake Shingles the easiest and quickest laid—and also insures the roof being absolutely leak proof. Eastlake Shingles are fire, lightning and rust proof.

**OUR GUARANTEE**—We guarantee Eastlake Metallic Shingles to be made of better material, more scientifically and accurately constructed, more easily applied and will last longer than any other. Eastlake Shingles have been made since 1888.

Our cheapest grade will last longer and cost less than the best wooden shingles. Our best Metallic Shingles should not be mentioned in the same breath with any other roof covering, shingles, slate or tin. Write us for reasons.

**The Metallic Roofing Co., Limited,**  
Manufacturers, Toronto and Winnipeg.

WOOD SHEETING  
"AQUAPROOF" PAPER

**POULTRY AND EGGS**

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30 cents.

**CANADA'S** best exhibition and laying White Leghorns for sale. Grand utility hens, cockerels, pullets, one dollar each. Must sell at once, hence low prices. Write to-day. Jas. L. McCormack, Brantford.

**FOR SALE**—White Holland turkeys, \$7 a pair; toms \$5; hens \$4. Buff Orpington cockerels, \$1. Miss Anderson, box 104, Sutton West, Ontario.

**FOR Barred Rocks, White Wyandottes, Leghorns, write:** Rev. Walter Rigby, Sarnia Indian Reserve, Box 2, Sarnia.

**INGLE NOOK** Poultry Farm offers a few choice cockerels in White and Brown Leghorns (heavy-laying strains), Rhode Island Reds (single and rose comb). It will pay to order your breeders from the above, as they will be sold very cheap, and the birds are choice. W. H. Smith 41 Spruce St., Toronto.

**MAMMOTH** Bronze turkeys. Bell's strain. Toms, \$3; hens, \$2.50. S. L. Anderson, Crossland, Ont.

**PURE-BRED** White Wyandotte cockerels and pullets for sale. T. Smith, Vigo, Ont.

**LOCHABER STOCK FARM** offers several choice Shorthorn Bulls at different ages for sale. And a nice lot of Berkshires. Also M. B. turkeys, Barred Rocks, W. S. L. and R. Wyandottes and imp. Pekin ducks. Stock A1. D. A. GRAHAM, Wanstead, Ont.

Div. 11.

J. N. Paget, Canboro, Dec. 2nd to 20th: Care and Production of Milk; Profit and Loss in Dairying; Handling the Finished Product Until It Reaches the Consumer; The Growth of Alfalfa and Its Importance to Dairymen. Evening: The Relation Which Should Exist Between Producer, Proprietor and Maker.

W. J. Kerr, Ottawa, Dec. 2nd to 16th: Commercial Fruit-growing; How to Dispose of Surplus Fruit; Marketing of Fruits and Vegetables; Short Talk on Poultry; The Farmers' Fruit Garden; How to Interest the Young Folks in the Home; Decorating the Home Grounds.

Miss I. Rife, Hespeler, Dec. 12th to 16th and 20th: Helpfulness in Women's Institutes; Sunshine, Pure Air and the Bath; Consumption: Education, Prevention and Cure; The Value of Physical Development; The Home in Its Attitude to the School; The Hygiene of Cheerfulness; Education of Girls.

Berwick, Cornwall	Dec. 2
Finch, Cornwall	" 3
Avonmore, Stormont	" 4
Monkland, Stormont	" 5
Moose Creek, Stormont	" 6
N. Lancaster, Glengarry	" 7
McCrimmon's, Glengarry	" 9
Vankleek Hill, Prescott	Dec. 10 and 11
Russell, Russell	Dec. 12
Metcalfe, Russell	" 13
North Gower, Carleton	" 14
Richmond, Carleton	" 16
Renfrew, S. Renfrew	" 17
Killaloe, S. Renfrew	" 18
Queen's Line, N. Renfrew	" 19
Beachburg, N. Renfrew	" 20

**GOSSIP.**

The annual meeting of the American Oxford Down Record Association will be held Wednesday, December 4th, 7.30 p. m., at the general meeting rooms of the Live-stock Record Building, on Exchange Avenue, Union Stock-yards, Chicago, Ill.—W. A. Shafer, Hamilton, Ohio, Secretary.

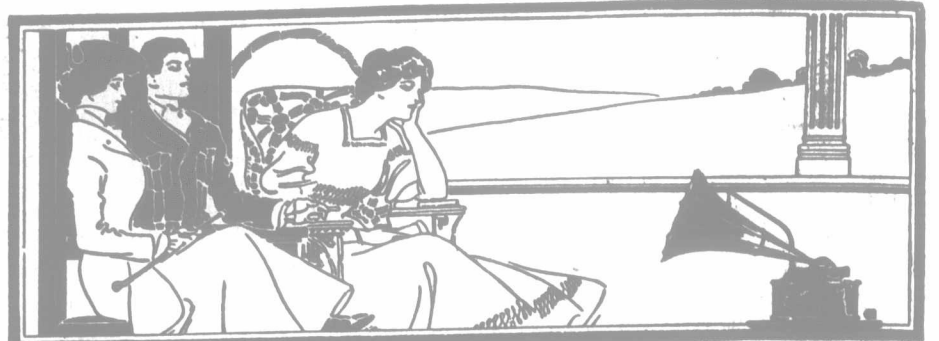
**SALES DATES CLAIMED.**

- Nov. 28th.—Mossom Boyd Co., Bobcaygeon, Ont., Polled Herefords, at Windsor, Ont.
- Dec. 3rd.—Wm. Meharey, Russell, Ont., imported Clydesdales, at Ottawa.
- Dec. 4th.—G. M. Wigle, Ruthven, Ont., Percheron horses, also cattle and hogs.
- Dec. 20th.—W. S. Carpenter, Simcoe, Ont., Shropshire sheep.
- Jan. 6th, 1908.—Estate of Wm. Hendrie, Hamilton, Ont., Shorthorns.
- Jan. 8th.—H. M. Vanderlip, Cainsville, Ont., Berkshires.

As will be seen by his advertisement in this paper, Mr. O. Sorby, of Guelph, Ont., must have a remarkable and renowned lot of stallions on hand at present. It is questionable if there are as many good ones in any one stable in America, and it would be well worth any interested horse-lover's time to visit Mr. Sorby's stable, whether wanting to purchase or not, to see such a collection of Scotland's best. It is gratifying to Canadians to find Mr. Sorby's stock horse, Acme, taking eighth place amongst the greatest Clydesdale sires of Great Britain. No other horse imported to Canada has ever taken such a leading position, and the test of produce is the test that tells. Roselle, another included in this stable, has stood well up in this list.

**CANADIAN STOCK AT THE INTERNATIONAL.**

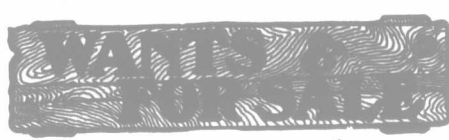
In the list of entries for the International Live-stock Exposition at Chicago, the first week in December, totalling several thousands, are 310 by Canadian breeders, in the breeding classes of Clydesdales, Hackneys, Shropshires, Hampshires, Leicesters, Lincolns, Cotswolds, Southdowns, Dorsets, Oxfords and Suffolk Downs; and in the fat classes for sheep, 196 entries. The exhibitors of horses from Canada are Graham Bros., Claremont; Graham-Renfrew Co., Bedford Park; Oak Park Stock Farm Co., Brantford, and R. Ness & Son, Howick, Que., whose entries in all total 45, leaving entries of 460 sheep, something over 100 of which are supposed to be entered for the auction sales to take place during the Show.



**The EDISON PHONOGRAPH**

**NO** way of amusing people is so sure of results as by means of an Edison Phonograph. Start one anywhere and everybody gathers around it. It will draw a crowd in the house or in the street; it will amuse any kind of a gathering and it can be had very cheaply for cash and very easily on the instalment plan. Hear the new model at your nearest dealer's.

**WE DESIRE GOOD, LIVE DEALERS** to sell Edison Phonographs in every town where we are not now well represented. Dealers should write at once to **National Phonograph Co., 160 Lakeside Ave., Orange, N. J., U.S.A.**



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock.

**TERMS**—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

**FARMERS** and stock feeders who want Western frozen wheat for feed, supplied in sacks in carloads to any station in Eastern Canada. Address: Vassar Tanner, Broker, Winnipeg, Man.

**WANTED**—Farmers in every district to sell Anglo-Baxon Stock Food and specialties on commission. Apply: Post-office box 523, London, stating city references.

**WANTED**—A few good subscription agents for The Farmer's Advocate and Home Magazine. Liberal terms. The William Weld Co., Ltd., London, Ont.

**WANTED**—An indoor servant. One qualified to take charge Small family. Comfortable home and highest wages. Address: Mrs. E. Gunn, Dunrobin Farm, Beaverton, Ont.

**WANTED**—Experienced man as head herdsman. Also good man or two for farm Cottages provided. Address James Smith, Mgr., Pine Grove, Rockland, Ont.

D. A. Graham, of Lockaber Stock Farm, Wanstead, Ont., reports his stock going into winter quarters in fine shape, with Lord Blossom 59625 at the head of the Shorthorn herd, and the noted Concord Triumph at the head of the Berkshires, and a nice lot of poultry and other stock for sale at reasonable prices, and the quality is A1.

**A NEW BUTTER RECORD FOR JERSEYS.**

Last year was published the authenticated yearly butter record of the Jersey cow, Peer's Surprise, owned by the Ladd Estate, at Portland, Oregon, her yield being 769 lbs. 10 ozs. estimated butter. Now comes a letter to the Jersey Bulletin, from A. F. Pierce, Winchester, N. H., backed by the Hatch Experiment Station, at Amherst, Mass., giving the record of Olive Dunn, of the same breed, which is 794 lbs. 4 ozs. estimated butter. The Jersey record in authenticated butter-fat tests is steadily drawing nearer the 1,000-lb. mark, and is no longer an improbability. Olive Dunn's reported milk yield, for the twelve months, was 10,121 lbs., testing (monthly average): lowest, 4.6 per cent.; highest, 8.49. Her highest Babcock test, for any twenty-four consecutive hours is given as 10.45 per cent. Her largest fat production for any one month was 64.43 lbs., equivalent to 76 lbs. estimated butter, an average of 2 lbs.

7.2 ozs. per day, and this in the ninth month of her test. In that month she had a severe sickness, said to have been caused by eating wilted cherry leaves, which caused her milk to fall off to nearly 100 lbs. less than the previous month.

**TRADE TOPIC.**

**THE STOCK-TONIC IDEA.**—Now that agricultural science has given an insight into the actual principles which lie at the foundation of feeding for meat or milk, it is a mere matter of applying them in daily practice to get good profit for ourselves. Feeding corn meal, or any combination of feeds, won't necessarily make beef or produce milk. The steer or cow has got to digest and use its ration or the manure heap will be the richer and the feeder poorer. The act of feeding doesn't always produce results. The new idea on feeding tells us, first of all, that the steer or cow is like a machine, and that the feed each gets is raw material to be turned into flesh, fat or milk. Now, if the steer or cow, as machines, don't work properly, a greater or less percentage of the feed is bound to be wasted; that is, animal digestion must be absolutely right if the greatest gain is to be made. It is almost impossible to keep the stomach and intestines working right when they are constantly forced beyond natural limitations, and that is what most feeders of live stock are doing when feeding for market or for milk. It follows that anything capable of continuing the digestive function in healthy activity during the weeks or months in which the fattening process is going on, may be used with prospects of advantage. A preparation containing true tonic elements, blood builders and nitrates (which are well known as cleansing the system) is considered by some authorities as needed betimes in the cattle business. Just as well expect to preserve your own health and stuff with rich food for a period months as to expect your stall-fed steer or cow to do so. Hence, the "food tonic" idea in the cattle-feeding business; in other words, the use of those mild elements which writers like Professors Winslow, Quitman, Finley Dunn and others recommend as beneficial to horses, lambs and swine.

"I figure that advertising costs me a couple of thousand dollars a year more than I can afford—" "What are you talking about, you don't advertise." "No, but the department stores do, and my wife has the bargain habit."



TELEGRAPHY

has long been the best starting point for a successful railway career. Nearly every railway manager and superintendent began at the key.

IT PAYS VERY WELL

now at the start T. Richardson, a young man of the ordinary type, spent from January to July—6 months—in training, and writes that his September salary was \$65.50. Not bad for 3rd month! He is with C. P. R. at Sturgeon Falls.

THE DEMAND IS KEEN.

Our graduates have no trouble at all in securing employment. The railways write: "We can take all the good material you can turn out. Send them to us."

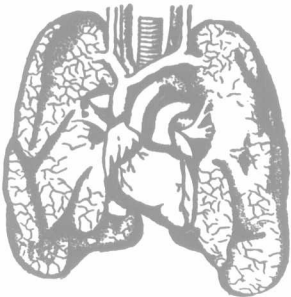
"GUIDED BY THE KEY"

is the title of a book which explains how you may become an operator. You may have it, with sample lesson containing Morse Alphabet, by sending four cents in stamps to the

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W. H. SHAW, T. J. JOHNSTON, PRESIDENT, PRINCIPAL.

YOUR LUNGS



ARE THEY WEAK OR PAINFUL? Do you spit yellow and black matter? Are you continually coughing and hawking? Do you have night sweats? Do your lungs ever bleed? Have you pains in chest and sides? Do you have pains under your shoulder blades?

THESE ARE REGARDED SYMPTOMS OF LUNG TROUBLE AND CONSUMPTION

You should take immediate steps to check the progress of these symptoms. The longer you allow them to advance and develop, the more deep seated and serious your condition becomes.

We Stand Ready To Prove To You absolutely, that Lung-Germine the German Treatment has cured completely and permanently case after case of advanced Consumption, (Tuberculosis) Chronic Bronchitis, Catarrh of the Lungs, Catarrh of the Bronchial Tubes and other Lung Troubles.

Many sufferers who had lost all hope and who had been given up by physicians have been permanently cured by Lung-Germine. It is not only a cure for Consumption but a preventative. If your lungs are merely weak and the disease has not yet manifested itself, you can prevent its development, you can build up your lungs and system to their normal strength and capacity.

Lung-Germine has cured advanced Consumption, in many cases over four years ago, and the patients remain strong and in splendid health today.

Here is Evidence From One Case

Under date of Mar 11, 1907, William Schmidt, 1901 Coitman St., St. Louis, Mo., writes: "It is now nearly four years since my cure of Consumption was made complete by your Lung-Germine, and I am happy to say that I remain as well and strong today as the day I was cured. I am healthy and able to work every day."

We will gladly send you further proof of many other remarkable cures, also a FREE TRIAL of Lung-Germine, together with our new book on the treatment and cure of Consumption and Lung Trouble.

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GOSSIP.

MORE CLYDESDALES FOR CANADA.

The Donaldson liner, Lakonia, sailing from Glasgow on Nov. 2nd, had on board a large consignment of Clydesdale horses and fillies. Many different buyers were represented, but the heaviest shippers were Messrs. John A. Turner, Calgary, Alta., who had nineteen head, and Oswald Sorby, Guelph, Ont., who had fourteen head. All of these, with the exception of a Clydesdale colt and filly and a Hackney stallion, bought from the Seaham Harbour Stud, Ltd., were purchased by Mr. Turner from Messrs. A. & W. Montgomery, Netherhall and Banks, Kirkcudbright. Messrs. Turner & Sorby's big shipment were selected by Mr. Turner personally. Among the horses and mares shipped by him are quite a number of well-known prizewinners. One is the noted Baron's Charm (12441), own brother to Benedict, Baron Fergus, and other well-known prizewinners. He was first at Ayr and the Highland and Agricultural Society's Show at Perth in 1904, and the Kelso premium horse in 1906 and 1907. Being got by Baron's Pride, out of the celebrated mare, Mary Macgregor (12864), which has produced so many prizewinners, Baron's Charm is pretty certain to prove a big success in Canada. Another of these horses is Abbey Fashion (12793), a powerful big three-year-old horse, got by the Machars and Bute prize horse, Fickle Fashion. Abbey Fashion had the Scone, Strathord, and Murthly premium in 1907, and is a horse of great weight and substance, likely to breed cart horses in any country. Yet a third is the choicely-bred Baron Carrick (12817), bred at Houdston, and got by Baron's Pride, out of Mr. Kerr's well-known prize mare, Elsie Macdonald, whose sire was the Cawdor-cup champion, Royal Garty (9844). Baron Carrick had the Lammemoors premium in 1907, and, with his unique breeding, is pretty certain to leave his mark. The big, grand horse, Medallion (12247), own brother to the Seaham Stud horse, Silver Cup, is an exceptionally well-bred animal. His sire was Baron's Pride, and his dam the noted prize mare, Balmedie Vesta, by Macgregor. This big horse had the Hexham premium in 1907, and cannot fail to be a successful sire. An uncommonly good colt is Garty Standard (18494), got by the champion Everlasting (11331), out of Garty Forecast, by the Highland and Agricultural Society's champion horse, Prince Thomas (10262), with grandam by the Cawdor-cup champion, Prince of Carruchan (8151), and great-grandam by the celebrated champion horse, Flashwood (3604). Alike in respect of breeding and merit, it would be difficult to beat this colt. Another very promising two-year-old was got by the Aberdeen champion horse, Prince of Craigwillie (11462). This colt was third as a yearling at Aberdeen, where his sire has several times been first and champion stallion. The rest of this shipment, so far as colts are concerned, is worthy of the company in which they find themselves. They are got by the Kirkcudbright prize horse, Majestic (11421); the Machars of Wigtown prize horse, Durbar (11695); the choicely-bred horse, Baron Afton (11253); another of the same class, Baron Houdston (11607), and the dam of this colt is an own sister to the great champion horse, Hiawatha (10067). An uncommonly well-bred colt is the rightly-named Baron Montrave, his sire being Baron's Pride, and his dam a daughter of the great £3,000 champion horse, Prince of Albion (6178). Other colts of outstanding merit are by the fine breeding and prize horses, Baron Robgill (10689) and Royal Edward (11495), two of the most successful breeding horses, got by the champion Baron's Pride, and there are also gets of the Highland and Agricultural Society champion, Prince Thomas (10262), Airies Prince (10667), and Prince Victor (12707). The colt and the filly from Seaham Harbour are excellent representatives of that stud, well-bred, and likely to prove prizewinners in Canada. The Hackney is a stylish, gay horse, which it will be easy to cash on the other side. Besides the stallions, Mr. Turner had several fillies from the Netherhall and Banks studs, in particular a two-year-old by Baron's Pride, out of a MacMeekan mare. She won first and female championship at Dalbeattie this year, and is a very fine animal. A

three-year-old filly, by the Hamilton prize horse, Mercutio, a noted son of the great Hiawatha, and a yearling filly, by Prince of London, which won first at Park Royal, are likely to be heard of. Three Hackney stallions complete this notable shipment.—[Scottish Farmer.

Contentment.

I would not give my humble cot. Sequestered 'neath the stately pines, For all the gold that men have wrought From Orphir's mines.

I would not lose the sweet content, The peace of mind that I enjoy, The blessings that my God has sent,— For their alloy.

Nor barter 'way the sleep and rest, The strength of body and the health, The quietude that fills the breast— For all their wealth.

Nor for their hidden treasures rare Would I be false unto myself, A heritage exempt from care Exchange for pelf.

Here let me live, here let me die, And lasting peace may tenure hold, Return my all to God on high— But not in gold.

—Andrew R. Simpson.

DRAKES AND DUCKS.

Colonel Fulton G. Berry, a California capitalist, has a small farm near Fresno, California, whence vegetables and poultry are sent to him in town for his personal use. A Chinese foreman is in charge of the place. Recently Mr. Berry visited the farm in question and inquired of his Chinese foreman: "Sing, whole lot ducks; what for no catchem eggs?" "Mister Bjelly," explained Sing, "too muchee 'man' duck; sixty-tee 'man' duck, two 'cow' duck. 'Man' duck him no lay egg."

"The people and the corporations," said Senator La Follette, in Madison, Wis., the other day, "remind me of a woman and her little boy. There was a very large chicken and a very small duck on the table, and the woman, pausing with the carving knife raised, said: 'Johnny, which will you take, chicken or duck?' 'Duck,' piped Johnny. 'But the mother shook her head. 'No, Johnny,' she said in a firm, yet kindly voice, 'You can't have duck, my dear. Take your choice, darling, take your choice, but you can't have duck.'"

Some years ago, when Head-Consul Boak, of The Western Jurisdiction, Woodmen of the World, was travelling through the South, the train stopped for some time in a small town, and Mr. Boak alighted to make a purchase. The storekeeper could not make the correct change for the bill which was presented, so Mr. Boak started in search of someone who could. Sitting beside the door, whittling a stick, was an old dorky. "Uncle," said Mr. Boak, "can you change a ten-dollar bill?" The old fellow looked up in surprise; then he touched his cap, and replied: "Deed, an' ah can't boss, but ah 'pre-cciates de honor, jest de same."

QUESTIONS AND ANSWERS. Veterinary.

ENLARGED JOINT.

Colt got fetlock joint cut last winter. It healed, but the joint is quite large, and the hair has not grown. It is somewhat sore to pressure. E. H. M. Ans.—It is not probable the hair will ever grow. It will be good practice to blister to remove tenderness and reduce the enlargement to some extent. Take two drams each of biniodide of mercury and cantharides, and mix with two ounces vaseline. Clip the hair off all around the point. Tie so that he cannot bite it. Rub well with the blister once daily for two days. On the third day wash off and apply sweet oil. Turn loose in a box stall now, and oil every day. Repeat the blistering once every month all winter.

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Contains 183 Large Engravings

This book cost us over \$3,000 to produce. The cover is a beautiful live stock picture, lithographed in colors. The book contains 180 pages, size 6 1/2 x 9 1/4, gives history, description and illustration of the various breeds of horses, cattle, sheep, hogs and poultry. Many stockmen say they would not take five dollars for their copy if they could not get another. The finely illustrated veterinary department will save you hundreds of dollars, as it treats of all the ordinary diseases to which stock are subject and tells you how to cure them.

Mailed Free Postage Prepaid Write for it at once and answer the following questions:

- 1st—Name the paper you saw this offer in. 2nd—How many head of stock do you own?

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Father.—A-r-r-r. So I saw you kissing my daughter, did I? Young Cooley.—I trust there is no doubt, sir. The light was rather dim, and I should feel vastly humiliated if it should turn out that I had been kissing the cook.

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**CAUSTIC BALSAM.**  
A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all bunches from horses. Impossible to produce scar or blemish. Send for circulars. Special advice free.  
**THE LAWRENCE-WILLIAMS CO., Toronto, Canada**

**Bone Spavin**

No matter how old the blemish, how lame the horse, or how many doctors have tried and failed, use **Fleming's Spavin and Ringbone Paste**. Use it under our guarantee—your money refunded if it doesn't make the horse go sound. Most cases cured by a single 5-minute application—occasionally two required. Cures Bone Spavin, Ringbone and Sidebone, new and old cases alike. Write for detailed information and a free copy of **Fleming's Vest-Pocket Veterinary Adviser**.  
Ninety-six pages, durably bound, indexed and illustrated. Covers over one hundred veterinary subjects. Read this book before you treat any kind of lameness in horses.  
**FLEMING BROS., Chemists, 75 Church Street, Toronto, Ontario**

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Cures Strained Puffy Ankles, Lymphangitis, Bruises and Swellings, Lameness and Allays Pain Quickly without Blistering, removing the hair, or laying the horse up. Pleasant to use. \$2.00 per bottle, delivered with full directions. Book 5-C, free.  
**ABSORBINE, JR.,** for man-kind, \$1.00 Bottle. Cures Strains, Gout, Varicose Veins, Varicocele, Hydrocele, Prostatitis, kills pain.  
**W. F. YOUNG, P.D.F., 73 Monmouth St., Springfield, Mass.**  
Canadian Agents: **LEMAN BROS. & CO., Montreal.**

**Cures Spavins**

The world wide success of **Kendall's Spavin Cure** has been won because this remedy can—and does—cure Bog and Bone Spavin, Curb, Splint, Ringbone, Bony Growths, Swellings and Lameness.  
**MEAFORD, ONT., May 22 '06.**  
"I used Kendall's Spavin Cure on a Bog Spavin, which cured it completely."  
**A. G. MASON.**  
Price \$1—6 for \$5. Accept no substitute. The great book—"Treatise on the Horse"—free from dealers or  
**Dr. B. J. KENDALL CO., Enosburg Falls, Vermont, U.S.A.**

**Imported Clydesdales**

Just arrived, a choice shipment of stallions and fillies; dark colors; all first-class breeding. Inspection invited. Terms to suit.  
**Geo. G. Stewart, Howick, Que.**

**Iceland, Welsh and Shetland Ponies**

**FOR SALE:**  
One piebald Shetland mare, 5 years old, bred. One black bred. Pair of bay and white Iceland ponies rising two years, one of each sex; well matched and driven some. One piebald gelding, rising two, from imp. Iceland sire and dam, and others. Also suitable for ponies. Apply to:  
**E. DYMENT, Copetown, Ont., Wentworth Co.**

**CLYDESDALES AND SHORTHORNS—**

Canadian-bred, registered. One stallion, rising 3, by Imp. Macqueen. Two stallions, rising two, by Imp. Primrose. Also my stock bull, Gilbert Logan 3624.  
**W. D. PUGH, Clarendon P. O. and Station.**

**Clydesdales, Shorthorns and Cotswolds—**

For richest bred and choicest individuals of above breeds, write me. My new Cotswold and Clydesdale importation will arrive early in the season.  
**J. C. ROSS, Jarvis P.O. & Sta.**

**Sunnyside Herefords**

Present offering: Twenty good breeding cows, yearling heifers, good sappy heifer calves; also some very promising bull calves, the get of Onward and Protector 2nd. In ear lots or singly. Come and see them, or write and state what you want. Satisfaction guaranteed.  
**ARTHUR F. O'NEIL, Maple Grove, Ont., Middlesex Co.**

**Herefords**

We have some choice females for sale—all ages—of the right sort; also a few young bulls fit for service. Correspond with us. We can please you.  
**J. A. LOYERING, Coldwater P. O. and Station.**

**THE SPICE OF LIFE.**

The friends of Senator Chauncey M. Depew denounce as grossly exaggerated the report that, as a retail and wholesale dealer in anecdotes of all varieties, he has reformed. In fact, somebody asked the Senator about it not long since, and Mr. Depew replied:  
"My reformation is only partial. I used to relate a joke in the face of all protest; now, however, I have learned a little wisdom: when I am telling a man a story I stop short if I see a certain peculiar gleam in his eye."  
"The gleam that means he's heard it before?" inquired the curious one.  
"No," replied the Senator; "the gleam that means he's busy thinking of one he means to tell me."

Some years ago in a country district in Maryland a case was tried in which the evidence of the plaintiff failed to establish his claim. After his attorney presented his case, the plaintiff asked him if he would allow him to say a few words. The lawyer, considering his case lost, consented. He said:  
"Squire, I brought this suit, and the evidence, except my own, is against me. I don't accuse anyone of lying, squire, but the witnesses are the most mistaken lot of fellows I ever saw. You know me, squire. Two years ago you sold me a horse for sound that was as blind as a bat. I made the trade and stuck to it, and this is the first time I have mentioned it. When you used to buy grain, you stood on the scales when the empty wagon was weighed, but I never said a word. Now, do you think I am the kind of a man to kick up a rumpus and sue a fellow unless he has done me wrong?"  
It took just five minutes for the jury to decide for the plaintiff.

A small boy was asked to take dinner at the home of a distinguished professor. The lad's mother, in fear lest he should commit some breach of etiquette, gave him repeated directions as to what he should and should not do.  
Upon his return from the great occasion the mother's first question was, "Harold, did you get along at the table all right?"  
"Oh, yes, mamma, well enough."  
"You are sure you didn't do anything that was not perfectly polite and gentlemanly?"  
"Why, no—nothing to speak of."  
"Then something did happen. What was it?"  
"But I fixed it all right, mamma."  
"Tell me at once."  
"Why, I got along pretty well until the meat came; but while I was trying to cut mine it slipped off on the floor. But I made it all right."  
"What did you do?"  
"Oh, I just said, sort of carelessly, 'That's always the way with tough meat.'"

In Montana they tell the following tale on one investigate spinner of tales. He was out riding, and at the crest of a hill overlooking a little valley, which was nothing but a meadow, he met a stranger.  
"Could you tell me whose land all that is?" asked the stranger, pointing to the valley.  
"That is my land," replied the rancher with evident pride.  
"And whose cattle may all those be that I see below us?"  
"Those are my cattle, five thousand head, sir," replied the rancher with growing self-importance.  
"And those horses?"  
"Mine, sir."  
"And those sheep on yonder hill?" persisted the stranger.  
"All mine," answered the rancher, waving his hand with a grand air.  
"How many horses and sheep have you?"  
"Ten thousand sheep and two hundred horses," said the rancher in a most grandiose manner.  
"I'm so glad to hear it," quickly answered the stranger. "I'm the new assessor."  
"Great heavens, man," cried the rancher, almost jumping from his saddle. "You must have heard of me. I'm Jim Easton, known as the black blanket bar in the State."



Scientists claim that with the average stove 80 per cent. of the heat goes up the chimney and is wasted. The  
**Winnipeg Heater**  
saves nearly all this waste heat, heats another room with it, and yet costs you nothing for additional fuel.  
It can be readily attached to any ordinary stove or furnace pipe.  
Ask your stove dealer or write to  
**THE 1900 WASHER COMPANY,**  
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I am prepared to offer for sale more **Old Country premium** and **H. and A. Society Winners** than any other importer in America, consisting of such horses as **Acme, Monarch Marquis, Rozelle, Ardethan Goldsmith, King's Seal, Baron's Charm** (a full brother to Benedict), **Baron Carrick, Abbey Fashion, and Medallion** (a full brother to the great horse Silver Cup), and many others equally as good. Thirty-six in all. Prices will be found most reasonable, and within the reach of every one.  
**Oswald Sorby, Guelph P. O., Ontario.**

**CLYDESDALES**  
At Columbus, Ont., the home of the winners, this year's importation just arrived. The pick of Scotland's best. For size, style, conformation, quality and royal breeding, they eclipse any former importation we ever made. Look them up in our barn on Exhibition Grounds. Over 30 head to select from.  
**SMITH & RICHARDSON, COLUMBUS, ONTARIO.**

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We have imported more **Royal, H. A. S., Toronto** and **Chicago** winners than any other Canadian importers. This year's importation has just arrived, and we think are away the best lot we ever imported; leading Scotch winners among them. Look up our stable on Exhibition Grounds.  
**GRAHAM BROS., CLAREMONT, ONTARIO**  
Long-distance 'phone. C. P. R.

**CLYDESDALE STALLIONS**  
Our new importation has just landed. An exceedingly good lot. Some extra big fellows. They may be seen at our stables, Fraser House, London. Call and see them, or write  
**MESSRS. DALGETY BROS., GLENCOE, ONT.**

**Largest Importation of Clydesdales, Hackneys and Percherons of the Year.**  
My latest importation has just arrived home. I have now on hand for sale: 20 Clydesdale stallions from 1 to 5 years of age; 25 Clydesdale fillies from 1 to 4 years of age; 12 Hackney stallions from 2 to 8 years of age; 12 Hackney fillies, all young; and 4 Percheron stallions 3 and 4 years of age. A total of 73 head, with size, quality and action, and bred in the purple. Largest selection in Canada. Will be sold right, and on terms to suit.  
**T. H. HASSARD, MILLBROOK, ONT.**

**Oak Park Stock Farm** **IMP. HACKNEYS, SHROPSHIRE, AND BERKSHIRES.** A large number of Hackneys (stallions and fillies), imp. and out of imp. stock; all ages; show stock. Shropshire and dam. Everything strictly high class. **T. A. COX, Manager, Brantford, Ont.**

**Imp. Clydesdales (Stallions and Fillies), Hackneys, Welsh Ponies.**  
I have now on hand Clydesdale stallions and fillies—Scotland prizewinners and champions; Hackney fillies and Hackney pony; also Welsh ponies. There are no better animals, nor no better bred ones, than I can show. Will be sold cheap and on favorable terms. **A. AITCHISON, GUELPH P. O. AND STATION.**

**SIMCOE LODGE CLYDESDALES**  
Our stable of imported and Canadian-bred Clydesdale stallions and fillies was never so strong in show stuff as now, although we have had some very strong lots. Call and see what we have before buying elsewhere. **HODGKINSON & TISDALE, BEAVERTON, ONT., G. T. & C. N. R.** Long-distance 'phone.

**IMPORTED CLYDESDALES!** 9 stallions, 1 to 6 years of age; 10 fillies, 1 to 3 years of age, several of them in foal; 1 two-year-old Hackney stallion; 1 two-year-old Shire stallion; 3 Percheron stallions, 3 years old. All are selected animals, bred in the purple. Will be sold cheap and on terms to suit. **T. D. ELLIOTT, BOLTON, ONT.**


**Imp. Clydesdale Stallions and Fillies.**  
Our new importation of stallions and fillies are the best we could select in Scotland, Show-ring stuff. Come and see them. Will sell on terms to suit.  
**JOHN A. BOAG & SON, RAVENSHOE P. O., BROWN HILL STA.**

**25 Imported Clydesdale Stallions and Fillies 25**  
Two Clyde stallions, 1 Hackney stallion, over 20 Clyde mares and fillies, from 1 to 5 years of age. Many high class show animals among this lot. Many winners in Scotland among them. They have size, quality, style, action and breeding. Come and see them.  
**GEO. A. BRODIE, Bethesda P. O., Stouffville and Gormley Stations.**


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Every Tudhope Sleigh is guaranteed to be free of any imperfection in material or workmanship. And this guarantee is backed by a Canadian house established in 1855.

**TUDHOPE No. 43**  
Two beams Democrat Bobs. Body 7 feet 5 inches long. Supplied with one or two seats, pole or shaft, as desired. A splendid family sleigh—excellent for general use. Let us send you a free copy of the Tudhope Sleigh Book, THE TUDHOPE CARRIAGE CO., Ltd., ORILLIA, Ont.



## AUCTION SALE

There will be sold by public auction on  
**Wednesday, December 4th,**

at lot 9, second concession, Gosfield South, Village of Ruthven, the following valuable farm stock and implements: **11 FINE PEROMERON HORSES**—4 registered, viz.: Takou, 7-year-old stallion, imported; Brito, 2-year-old stallion, imported; Daisy, 3-year-old mare, in foal; Brette, imported mare, in foal;—a number of cattle; 60 hogs; a quantity of hay and straw; a large quantity of grain of all kinds; all kinds of farm machinery, nearly all new and in first-class condition; some household effects; buggies and wagons; one new pneumatic bike buggy; all kinds of articles found on an up-to-date farm. Nothing reserved. Apply for information and sale bills to

**GARNET M. WIGLE, Proprietor,**  
RUTHVEN, ONT.  
Auctioneers: Prosser, Clark, and Atkins.

## Imp. Clydesdale Fillies by Auction

**15 TWO AND THREE YEARS OLD, AT OTTAWA, ONT.**

Will offer 15 extra good fillies. Large and smooth, with the best of quality and breeding, in good condition, and all bred to good horses in Scotland. Registered in both books. Sale at one o'clock.

**TUESDAY, DECEMBER 3, 1907.**

TERMS—Seven months without interest, on bankable paper; 5 per cent. off for cash.

**WM. MEHAREY, RUSSELL, ONT.**

## Imp. Clydesdale Stallions

My latest importations are the sons of Baron's Pride, Up-to-Time, Baron Hood, Fickle Fashion and Sir Christopher; are up to a ton in weight; with strong, flat bone, the best of feet and ankles, and big, smooth, flashy tops. A choice lot. My past 47 importations and straight way of dealing are my guarantee.

**Wm. Colquhoun, Mitchell P. O. and Station, 'Phone.**

## Graham - Renfrew Co.'s

**CLYDESDALES and HACKNEYS.**

Our Clydes now on hand are all prizewinners. Their breeding is gilt edged. Our Hackneys, both stallions and mares, are an exceedingly high class lot. We also have a few high-steppers and carriage horses. Young street cars pass the door every hour. 'Phone North 4483.

**GRAHAM-RENFREW CO., LTD., Bedford Park, Ont.**

**Subscribe for the Farmer's Advocate.**

**QUESTIONS AND ANSWERS.**  
Miscellaneous.

**SHREDDED VS. UNSHREDDED CORNSTALKS.**  
Is shredded cornstalks better for stock than unshredded, and which do stock do better on?  
C. G.  
Ans.—See article in this issue headed "Wintering Yearling Cattle."

**FIXING A CEMENT FLOOR.**  
Horse-stable cement floor is very smooth and slippery.  
1. Could I put a coat, about 1 1/4 inches thick, with rough-finish cement over it?  
2. Put about 1 inch on cow-stable floor two years ago, but it is breaking off now. What way would you advise putting it on to be durable?  
C. G. F.

Ans.—1. Yes, first thoroughly cleaning the surface of the original coat, but it is late in the season for such work now. Some have overcome this trouble by laying planks over cement in the stall. We saw a slippery cement stable floor remedied lately by simply chipping little holes at intervals with an old axe.  
2. Using Portland cement, one part to five of good sharp gravel, first mixing thoroughly dry and then applying the water, should make a lasting job, if the cement is good and the floor is allowed time to set.

**"CORN" OR "MAIZE"?**  
Will you please state which is the proper name in the English language for the grain known as "corn"? Is it corn or maize?  
SUBSCRIBER.

Ans.—In America the favorite name is "corn." In England, the proper name is "maize." Custom establishes propriety in such matters. Originally, "corn" signified "the seeds of cereal plants used for food, such as maize, barley, rye, wheat or oats." In England, "corn" is a comprehensive term, meaning wheat, barley, rye and oats, collectively, or, more specifically, wheat. In Scotland, it generally means oats. In America, it has, by usage, come to have another specific meaning, being applied only to the Indian corn, and, as such, is defined in our dictionaries, although the earlier meaning is also given.

**CROSS-FERTILIZATION OF ONIONS.**  
I grew onion seed from two kinds of onions (yellow, and red). I would like to know if bees would cross them. I planted them side by side. If they would, what would be the result?  
SUBSCRIBER.

Ans.—It is not at all unlikely that different varieties of onions, growing side by side, would be more or less cross-fertilized, either by conveying of pollen by bees or, possibly, by wind; but it is impossible to say what the results will be in the crop grown from such seed. This will depend largely upon the potency or impotency of the pollen making the cross. Such problems as this can be solved only by direct experiment, and I have no data at hand upon any test of this kind.  
O. A. C. H. L. HUTT.

**Veterinary.**  
**WOUNDED HOCK.**  
About two months ago my mare got cut just below the hock. Blood poisoning resulted, and I employed my veterinarian, and, in about a month, she appeared to be all right. We let her out, and in two days the joint began to swell and became hard. It has broken and discharged matter in three places, and is three times the normal size. She cannot put her foot to the ground.  
L. P.

Ans.—This is a case that requires prompt and skillful treatment, and it is doubtful if she will recover. The openings through which pus is escaping should be injected three times daily with a three-per-cent. solution of carbolic acid in water, and the joint bathed several times daily with hot water or hot poultices applied. It would probably be well to place her in slings. If any fresh abscesses form, they should be lanced and treated as above. If she recovers, repeated blistering will tend to reduce the enlargement. I would advise you to send for your veterinarian to attend her.  
V.

## Lump Jaw

The first remedy to cure Lump Jaw was

### Fleming's Lump Jaw Cure

and it remains today the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in Fleming's Vest-Pocket Veterinary Advisor. Most complete veterinary book ever printed to be given away. Durable bound, indexed and illustrated. Write us for a free copy.

**FLEMING BROS., Chemists,**  
75 Church Street, Toronto, Ontario

**CATTLE FATTEN QUICKER**  
—take on weight faster—make better beef—when dehorned. Cows give more milk—and half the danger in shipping by rail or boat is eliminated.

**KEYSTONE DEHORNER**  
does the work in 2 minutes. Cuts from 4 sides at once. Write for free booklet, R. W. McKenna, 219 Robert St. Toronto, Ont. Also of Fiston, Ont.

## Brown Swiss Cattle

**FRENCH-CANADIAN HORSES.**  
We are offering for sale cattle of both sexes and almost any age; the greatest dual-purpose breed alive. Horses of all ages. Stallions, mares and fillies. The best stud in Quebec. Write us for prices. We represent exactly as the animal is.

**C. E. STANDISH, Ayer's Cliff P. O.,**  
Treebarthe Farm, Quebec.

## W. R. BOWMAN, MT. FOREST.

Durham bulls, roans and reds, sired by imported Newton Prince, \$75. Shropshire ram and ewe lambs, \$10 to \$15 each, sired by our stock rams—Prokide (Imp.), a Chicago winner, and Dickins (Imp.). A few choice breeding ewes at \$12 to \$15 each. Yorkshire sows due to farrow in February, sired by an imported boar, weighing over 200 pounds, at \$20 each. One boar ready for service at \$15. A Jersey bull, two years old, a winner at London; quick sale \$20.

## ABERDEEN - ANGUS

For sale, 50 head to pick from, males or females by imported sire. Drumbo station.

**WALTER HALL, Washington, Ontario.**

## Hawthorn Herd of Deep - milking SHORTHORNS

6 YOUNG BULLS.

by Aberdeen Hero, Imp., =28940=. Also females all ages.

**Wm. Grainger & Son,**  
LONDESBORO P. O.

## SCOTCH SHORTHORN BULLS.

Woodfield Prince, sire the \$2,100 Goldenp, imported, =80088= (=6064), dam Trout Creek Missie 20th =66907=; red, little white; calved July 6th, 1906; a show bull. Also four extra bull calves, 8 to 10 months, by the Lavender bull, Trout Creek Wonder =55187= (=24781), out of Scotch cows; imported by W. D. Platt; eligible for American Hardbook. Write for pedigrees, Gibbs' Woodfield Stock Farm, St. Catharines, Ontario.

## CEDARDALE SHORTHORNS

Owing to scarcity of feed, am offering at specially low figures for quick sale: 37 heifers, one to three years old; 4 young bulls from six months to one year old; 16 cows, in calf or with calf at foot. Both beef and deep-milking strains.

**T. S. Sproule, M.P.,**  
Markdale, Ont.

## SUNNYSIDE STOCK FARM

Bulls in service: Queenston Archer =48998=, Trout Creek Stamp =67660=. A number of first-class young bulls, red and roan, and a few cows and heifers, for sale. Prices right.

**JAMES GIBB,**  
Brookdale, Ont.

## SHORTHORN FEMALES.

I have sold all my young bulls advertised in Advocate, but have some good females, representing the families of Village Maids, Claret, Crickshank Village Blossoms and Ramsdens.

**Box 556,**  
**HUGH THOMSON, St. Mary's, Ont.**

## ATHELSTONE SHORTHORNS!

Pure Scotch Rosewood, Fossilind and Countess strains. Ten one and two year old heifers of the above strains, the get of the Village-bred son of Imp. Knuckle Duster, Vicar 32855, and the Bruce Mayflower bull, Star Prince; also young bulls from 6 to 12 months old. Prices reasonable.

**Wm. WALDIS,**  
Box 324, Stratford, Ont.

Subscribe for "Farmer's Advocate"

## Free to the Ruptured

Simple Home Cure that Anyone Can Use Without Pain, Danger or Loss of Time from Work

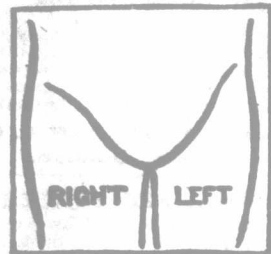
SENT FREE TO ALL

I cure rupture without operation, pain danger or loss of time. When I say cure I do not mean hold, but a cure that stays cured and does away with trusses for all time.

To convince you and your ruptured friends that my Discovery actually cures I want you to test it without one cent expense to yourself. Remember, I am not trying to sell you a truss, but I offer you an absolute, perfect and permanent cure that means freedom from pain and suffering, a largely increased physical and mental vigor, a fuller enjoyment of life's blessings and years of comfort and satisfaction added to the length of your life. Don't send any money, simply fill out the coupon below, indicate on the diagram the location of the rupture, and mail it to me. Don't neglect this important matter a single day or continue to be tortured any longer by cheap, ready-made trusses. My remarkable offer is the fairest ever made and should be taken advantage of immediately by all rupture sufferers.

### Free Treatment Coupon.

Mark on the diagram the location of the rupture, answer the questions and mail this to Dr. W. S. RICE, 865 Main Street, Adams, N. Y.



Age.....  
Time Ruptured?  
Does Rupture pain?  
Do you wear a truss?

Name.....  
Address.....

## SHORTHORNS

For want of stable room will sell cheap 10 heifer calves, 12 yearling heifers, 4 two-year-old heifers in calf, and 3 red bulls about 14 months old. Right good ones. **CLYDESDALES.** Two-year-old mare in foal, and a good pair 4 and 5 years old. Write, or come and see them.

**JAMES McARTHUR,**  
GOBLES, ONTARIO.

**JOHN LEE & SONS,** Highgate, Ont.



### SHORTHORNS & LINCOLNS

The champion herd of High Kent and Essex counties. For Sale: 6 choice young bulls 8 reds and 8 roans, of grand type and quality; also good selection of young cows and heifers. Visitors welcome.

### Spring Valley Shorthorns

Bulls in service are: Bapton Chancellor (imp.) = 40359 = (78286), Clipper Chief (imp.) = 64290 =. Stock for sale at all times.

**RYLE BROS.,** Afr. Ontario.



### John Gardhouse & Sons

Importers and breeders of Scotch Shorthorn cattle, Shire and Clydesdale horses, and Lincoln sheep. Call and see us.

Highfield P. O., Weston Station 3 1/2 Miles. Telephone.

### MAPLE GROVE SHORTHORNS

Scotch and dairy bred; up-to-date in type; prize-winners at the local shows. A number of 1 and 2 year old heifers 1 year old bull, and one 5 moe. old—the last will make a show bull. Flora bred—will be sold easy. **L. B. POWELL,** Wallenstein P. O. and Stn. G. P. R.

### YOUNG SHORTHORN BULLS!

Am now offering 2 grand ones from Scottish Peer (imp.). Will make show animals. Also Leicester sheep. A number of young breeding ewes to sell. **JAS. SNELL,** Clinton, Ont.

### Brown Lee Shorthorns!

Nonpareil Victor = 63307 = at head of herd. Young stock for sale at all times. Prices very reasonable. Afr. C. P. R.; Drumbo, G. T. R. **DOUGLAS BROWN,** Afr. Ont.

### ELM PARK STOCK FARM

Shorthorns, Clydesdales and Berkshires. Stock for sale at all times. Herd headed by British Flag (50016) (82971). **JOHN M. BECKTON,** Glencoe, Ont. G. T. R., C. P. R. and Wabash R.

### Scotch Shorthorns

Representing the choicest strains. Young stock of both sexes for sale. **F. W. EWING,** Salem P. O., Elora Stn.

### QUESTIONS AND ANSWERS. Miscellaneous.

#### TOP-DRESSING WINTER WHEAT

Would you kindly tell me as to when is the best time to top-dress wheat, before or after the ground is frozen?

SUBSCRIBER?

Ans.—Top-dressing with short, well-rotted manure before or just after sowing the wheat is preferred; but if not done at that time, we should prefer to wait till the ground is frozen sufficiently to carry the horses and wagon, otherwise the ground would likely cut up pretty badly. Green manure, with considerable straw, may be used at this time, but should be thinly scattered to avoid smothering the plants. Such a dressing holds the snow and protects the wheat.

#### INFERIOR ONION SEED.

I send to you a parcel of vegetable which have been called onions. I should be pleased to have you examine them, and tell me, if possible, the name and character of the seed from which they grew. I should be glad to know, also, what effect soil or weather might have on this class of seeds. C. W.

Ans.—Evidently you got some of the poor onion seed which was put on the market this year. We have had many complaints similar to yours sent in from various parts of the country. It is impossible to tell, from the specimen sent, the name of the variety; but evidently they are from poor seed, that is, seed which has been gathered from immature onions. Soil and season sometimes affect the ripening of the onion crop; but this year the trouble has been with the seed rather than soil or season. O. A. C. H. L. HUTT.

#### WOOD SHAVINGS AS MANURE.

I require some 300 or 400 loads of manure every season for my market gardens. Owing to the scarcity of straw, our liverymen and hotelmen have been using shavings for bedding their animals. These shavings are from the planing mills, where large quantities of lumber are planed here in transit from the north to places in the south and west of us. Owing to their abundance, there is very little good straw manure to be had in town. The shavings are from all sorts of lumber, but, I think, the larger part is from birch and spruce. I write to ask your opinion as to the effect such manure would have on my crops; whether it would be likely to cause fungous growth of any sort? My land is of considerable variety—some stiff clay, some black muck, and some clay loam with hardpan bottom, also eight or ten acres of light sandy soil, which has been heavily manured for fifteen or twenty years, and is now in very good condition. I can secure plenty of this manure, but am afraid to use it until I know something of what its results may be on my crops, which are principally as follows: onions, tomatoes, cabbage, celery and corn. G. M.

Ans.—We have never found any injurious effects from the use of manure of this kind. I know of one grower who uses it nearly altogether, and he says he has never seen any injurious effects from its use, even when used in large quantities. I might add, however, that his soil is somewhat of a heavy clay loam. I am of the opinion that it should be used sparingly upon light sandy soils, as it might tend to make them too loose and open; but upon heavy soils it would have the desirable effect of making them more open and friable. Probably the chief difference between manure of this kind and that in which straw is used for litter is the slowness with which the shavings decompose. In this respect the beneficial result would be even more lasting than that of the straw manure. With regard to the possibility of introducing fungous diseases, I think there is little or no danger of that. The question is largely one of making the soil too open and friable from the use of so much coarse material. I would advise that you make a test of the two different kinds of manure upon your various soils and note the difference for yourself. This would give you more reliable information on the subject than you could get from any other source. O. A. C. H. L. HUTT.

## Executors' Sale.

OF HIGH-CLASS AND CANADIAN-BRED

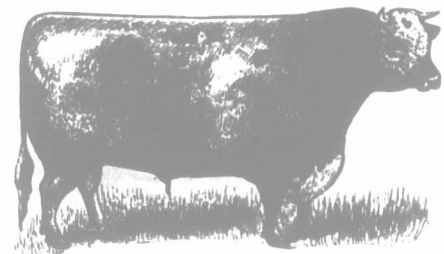
## SHORTHORNS

And Milk Cows and Heifers.

At the SALE PAVILION of the HAMILTON STOCK YARDS  
HAMILTON, ONTARIO, CANADA

Monday, the 6th January, 1908

AT ONE P. M., WITHOUT RESERVE.



THERE WILL BE SOLD THE ENTIRE HERD OF 43 HEAD OF IMPORTED AND CANADIAN-BRED SHORTHORNS, AND 15 HEAD OF MILK COWS AND HEIFERS (GRADES).

The Estate of the Late Wm. Hendrie, Valley Farm, Hamilton

TERMS CASH.

AUCTIONEERS { G. P. BELLOWS.  
CAPT. T. E. ROBSON.

FOR FURTHER PARTICULARS AND CATALOGUES APPLY TO:

T. M. Poulter, 52 King St., E., Hamilton, Canada.

## Shorthorns!

BELMAR PARC.

John Douglas,  
Manager.

Peter White,  
Pembroke, Ont.

Calves for sale by our grand quartette of breeding and show bulls:

Nonpareil Archer, Imp. Proud Gift, Imp.  
Marigold Sailer. Nonpareil Eclipse.

Females. Imported and from imported stock in calf to these bulls.

An unsurpassed lot of yearling heifers.

## SHORTHORNS AND LINCOLN SHEEP.

Two bulls, 11 and 12 months old—a Miss Ramsden and a Bessie, both by the good breeding bull, Proud Gift = 50077 = (imp.), also cows and heifers in calf by him. Inspection solicited. Always have some choice Lincoln sheep for sale at reasonable prices.

J. T. GIBSON, DENFIELD, ONTARIO.

## A. EDWARD MEYER,

BOX 378, GUELPH, ONT.,

BREEDS

### Scotch Shorthorns

exclusively. Herd bulls: Scottish Hero (imp.) = 55042 = (90066), a Shethin Rosemary; Gloster King = 53703 = 28384, A. H. B., a Cruickshank Duchess of Gloster. Young stock for sale. Long-distance phone in house.

## LIVINGSTON'S OIL CAKE MEAL.

OLD PROCESS

Nothing is better for fattening steers quickly and putting them on the market in prime condition than Oil Cake Meal. Thousands of Canadian and English stockmen use Livingston's, and would have no other. It is equally good for milk cows. They give more and better milk when fed Livingston's Oil Cake Meal. Also used for horses, sheep and hogs. Write for information regarding prices, etc., etc., to

**DOMINION LINSEED OIL CO., LIMITED**  
Montreal, Que. Baden, Ont.

## SHORTHORNS Maple Grove Shorthorns

One roan Shorthorn bull highly bred—will sell at a great bargain. One pure white, two months old, cheap for quick sale. Cows and heifers all ages. Also a number of Chester White pigs that I will sell cheap if sold at once, as I have not the room to winter them.

D. ALLAN BLACK, Kingston, Ont.



Herd headed by the grand show bull, Starry Morning. Present offering: Imported and home-bred cows and heifers, also a few young bulls. Terms and prices to suit the times. **C. D. WAGAR,** Enterprise Stn. and P. O. Addington Co.

## Pure Scotch Shorthorns!

Our herd is headed by Imp. Prime Favorite, grand champion bull at the Canadian National Exhibition, at Toronto, and at the New York State Fair, at Syracuse, for 1907, assisted by Imp. Scottish Pride. If you want a choice young bull do not fail to ask for one of our bull catalogues. A number of females in calf, or with calf at foot, also for sale. Correspondence solicited. Visitors always welcome. Long-distance phone. **W. G. PETTIT & SONS,** Freeman P. O., Ont., Burlington Jct. Sta.

# LISTEN!

We are offering **Special Bargains** in **Shorthorns** just now. The **Reason** is that we have a **Large Stock** and **Feed is Scarce**. Most of you know the **Kind of Cattle** we have, so that it is useless repeating the usual formula. In order to **Reduce Our Stock**, so that we may be able to pull through the winter, we **Will Sell at Prices** which will **Well Repay the Purchaser** who has feed to keep them until spring. We have pretty nearly anything **You** want. If you can not come to see, write and tell us as nearly as possible what it is, and we will frankly tell you whether or not we can supply.

**John Clancy, Manager.**  
**H. Cargill & Son, Cargill, Ont.**

## Lost Strayed or Stolen—One Cow

That is about what happens each year for the man who owns five cows and does not use a Tubular cream separator. He loses in cream more than the price of a good cow. The more cows he owns the greater the loss. This is a fact on which Agricultural Colleges, Dairy Experts and the best Dairy men all agree, and so do you if you use a Tubular. If not, it's high time you



did. You can't afford to lose the price of one or more cows each year—there's no reason why you should. Get a Tubular and get more and better cream out of the milk save time and labor and have warm sweet skimmed milk for the calves. Don't buy some cheap rattle-trap thing called a separator; that won't do any good. You need a real skimmer that does perfect work, skims clean, thick or thin, hot or cold; runs easy; simple in construction; easily understood. That's the Tubular and there is but one Tubular, the Sharples Tubular. Don't you want our little book "Business Dairy men," and our Catalog A. IS both free? A postal will bring them.

**The Sharples Separator Co.**  
West Chester, Pa.  
Toronto, Can. Chicago, Ill.

## THE SPICE OF LIFE.

The Wife.—Fancy, John, they are getting out a woman's dictionary. I wonder if it's any different from the others.  
The Husband.—Probably has more words in it.

"Coming home on the Minnetonka," says a traveller, "we took up a collection for the widows and orphans of sailors, and Mark Twain prefaced this collection with a talk on meanness. He urged us to be generous in our offerings—not to be like a certain mean old man from Hannibal."

"The meanest man I ever knew," he said, "lived in Hannibal. He sold his son-in-law the half of a very fine cow, and then refused to share the milk with the young fellow, on the ground that he had only sold him the front half. The son-in-law was also compelled to provide all the cow's fodder and to carry water to her twice a day. Finally, the cow butted the old man through a barbed-wire fence and he sued his son-in-law for fifty dollars damages."

They had just met; conversation was somewhat fitful. Finally he decided to guide it into literary channels, where he was more at home, and, turning to his companion, asked:

"Are you fond of literature?"  
"Passionately," she replied. "I love books dearly."  
"Then you must admire Sir Walter Scott," he exclaimed with sudden animation. "Is not his 'Lady of the Lake' exquisite in its flowing grace and poetic imagery? Is it not—"

"It is perfectly lovely," she assented, clasping her hands in ecstasy. "I suppose I have read it a dozen times."  
"And Scott's 'Marmion,'" he continued, "with its rugged simplicity and marvellous description—one can almost smell the heather on the heath while perusing its splendid pages."

"It is perfectly grand," she murmured. "And Scott's 'Peveril of the Peak' and his noble 'Bride of Lammermoor'—where in the English language will you find anything more heroic than his grand old Scottish characters and his graphic, forceful pictures of feudal times and customs? You like them, I am sure."  
"I just dote upon them," she replied.  
"And Scott's 'Emulsion,'" he continued, hastily, for a faint suspicion was beginning to dawn upon him.  
"I think," she interrupted, "that it's the best thing he ever wrote."

## SHORT SERMONS BOILED DOWN.

Heaven is either now or never. Many a trial is a test before promotion. Love fills even family jars with perfume. The lift of your life is the proof of your love. The best social refinement is to be refined of self. Unnecessary help is always a sad hindrance.

You cannot give a quart of love out of a half-pint heart. The only way to leave the bad is to cleave to the good.

There are people who never appreciate the rose until they apprehend the thorn. Many saints are poor because their piety is not vigorous enough to stand prosperity.

Heaven may be the home of praise; but it will do no harm to let a few cheers loose here.

Some men think that they are doing a great deal toward remedying this world's wrongs by reciting them.

Create a little heaven now, and you will not need to worry about your credentials for more of it by and bye.

## Queenston Heights SHORTHORNS

All Scotch. The thick-fleshed, early-maturing sort. Special prices on young stock, either sex. Ask for catalogue with sample pedigrees.

**Hudson Usher, Queenston, Ont.**  
Farm three miles north of Niagara Falls.

**SCOTCH SHORTHORNS!**  
We now offer four heifer calves 10 and 11 months old. All reds. Bred from imp sire and dams. Will be sold right. **G. RANKIN & SONS.** Wyebridge P. O., Wyevale Sta.

M  
A  
P  
L  
E

Winners at the leading shows have been sired by bulls bred here. We can sell you a good bull to head your herd of SHORTHORNS, or for use on your good grade cows. The bull catalogue explains the breeding. Write for it.

**John Dryden & Son, Brooklin, Ont.**  
Stations: Brooklin, G. T. R.; Myrtle, C. P. R.  
Long-distance telephone.

S  
H  
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E.

## Clover Lea Stock Farm SCOTCH SHORTHORNS

Superior breeding and individual excellence. For sale: Bulls and heifers—reds and roans, some from imp sire and dam. Visitors met at Ripley station, G. T. R.

**R. H. REID, PINE RIVER, ONTARIO.**

## Greengill Herd of High-class SHORTHORNS

We offer for sale choice young bulls from 6 to 12 months old, sired by imp. Lord Roseberry, also cows and heifers, with calf at foot or bred, either imp. or Canadian-bred.

**R. MITCHELL & SONS,**  
Nelson P. O., Ont., Burlington Jct. Sta.

**IMPORTED SHORTHORN BULL,** Royal Kitchener—5094—, five years; quiet; active; sure. Will sell or exchange. Also young stock sired by him, and out of imp. and home-bred cows, for sale. **Ira W. Warrattor, Burlington P. O., Erin, C.P.R.; Georgetown, G.T.R.**



## Stoneycroft Ayrshires.

SEVENTY-FIVE (75) HEAD.

Imported and imported-in-dam, both sexes and all ages. Winners and champions in Scotland and Canada among them. A high-class lot. Anything for sale. Also imported Clydesdales and Imp. Yorkshires.

**Harold Morgan, Ste. Anne de Bellevue, Que.**  
Bell Phone connection.

**SPRINGBROOK AYRSHIRES**  
Produced 7,000 lbs. of milk each, testing 3.9% butter-fat, in 1905. Two choice young bulls dropped in August, 1906, and several calves of 1907 for sale. **W. F. STEPHEN, Box 103, Huntingdon, Que.**

**Glenhurst Ayrshires** Oldest-established herd in Ontario. Imp. and Canadian-bred. Average B. F. test for the whole herd, 42; milk yield, 40 to 50 lbs. a day. For sale: females of all ages, and several young bulls; all by imp. sire and some out of imp. dams. **James Benning, Williamstown P. O., Lancaster Sta.**

**Ayrshire Bulls** One last September and a few March and April calves by the champion Douglasdale (imp.). **W. W. BALLANTYNE, Neidpath Farm, Stratford, Ont.** Long-distance phone.

**Wardend Ayrshires** We have only four spring bull calves on hand for sale. Will sell them at reasonable prices. Sired by White Prince of Mele No 21825, bred by A. Hume, Menie. **F. W. TAYLOR, Wellman's Corners, Hoard's Sta., G. T. R.**

## STONEHOUSE AYRSHIRES

On hand for sale: A number of imp. cows and heifers, winners of high honors in Scotland & Canada; 4 young bulls bred from champions and winners themselves. Extra choice offering.

**HECTOR GORDON, Howick P. O. & Sta., Quebec.**

**KELSO S. F. AYRSHIRES** My winners at Ottawa this year were: Aged cow in milk, 1st and chs.; dry cow, 1st; Canadian-bred cow, 4th; Canadian-bred 3-year-old, 3rd. For sale, anything in herd, both sexes. Extra choice stuff. **D. A. McFARLANE, Kelso, Que., Atholstone Sta., G. T. R.**

**AYRSHIRES** Young bulls from producing dams and same sire, from 7 months up to 2 years. Have good ones and will speak for themselves. **H. D. HERT, Hinkley Hill Stock Farm, Clappison, Ont. Dundas Station and Telegraph.**



## Burnside Ayrshires.

IMPORTED AND CANADIAN-BRED

Winners at the leading shows of Scotland, Canada, and U. S. Importation of 74 head have just landed home. All bulls sold. 80 fine 2-year-old heifers due to freshen in Sept. A few advanced Registry cows to freshen in Aug. and Sept. Anything I have is for sale at reasonable prices.

**R. R. NESS, HOWICK, QUE., P. O. AND STATION.**

## HIGH GROVE A. J. C. C. JERSEYS

Arthur H. Tufts Tweed, Ont. (Successor to Robt. Tufts & Son.) On account of scarcity of winter feed herd must be reduced. Males and females, all ages, for sale cheap, quality considered.

## Pine Ridge Jerseys

For sale very cheap some choice young bulls, bred in the purple, of ideal type; also a few heifers and better calves, and some Gotswold shearing rams and ram lambs. **Wm. Willis & Son, Newmarket P. O. & Sta.**

## BRAMPTON JERSEYS

**CANADA'S PREMIER HERD.**—Strengthened regularly by importations from United States, England and the Island of Jersey. We have animals of all ages and both sexes for sale, and the largest herd in Canada to choose from. Write for prices and particulars. Long-distance phone at farm.

**B. H. BULL & SON, BRAMPTON, ONT.**

Best Results are Obtained from Advertising in The Farmer's Advocate

## Salem Herd of Shorthorns

We offer: Ten high-class bull calves. Ten high-class heifer calves. As well bred as they can be.

**J. A. Watt, Salem P. O.**  
Elora, G. T. and C. P. R.

## 1854 Maple Lodge Stock Farm 1907

Some choice Shorthorn heifers and young bulls for sale. Our Leicester are exceptionally good this year. Rams and ram lambs and ewes for sale.

**A. W. Smith, Maple Lodge, Ontario**

## T. DOUGLAS & SONS

**STRATHROY, ONT.,**  
Breeder of Short horns and Clydesdales. 15 bulls, 60 cows and heifers, 1 imp. stallion, imp. and home-bred allies. Write us what you want or come and see our stock. Farm 1 mile north of town.

## PLEASANT VALLEY SHORTHORNS

For sale: 3 young bulls by Old Lancaster Imp. from imp. dams, including Lancaster Victor, first prize sr bull calf at Dom at Sherbrooke, second at C. N. E. Toronto. Correspondence solicited. Inspection invited.

**Geo. Amos & Son, Moffat Stn. & P. O.**  
C. P. R. Farm 11 miles east of City of Guelph.

## Valley Home Shorthorns AND BERKSHIRES.

Our herd numbers sixty-five head. We are prepared to give bargains to suit all who wish to buy from one animal up to a carload of females, and 12 bulls from 9 to 18 months old. Also 55 Berkshires of prolific strains.

**S. J. PEARSON, SON & CO., Meadowvale, Ont.**  
Stations: Meadowvale, C. P. R.; Brampton, G. T. R.

**SUFFERING WOMEN**

who find life a burden, can have health and strength restored by the use of

**Milburn's Heart and Nerve Pills.**

The present generation of women and girls have more than their share of misery. With some it is nervousness and palpitation, with others weak, dizzy and fainting spells, while with others there is a general collapse of the system. Milburn's Heart and Nerve Pills tone up the nerves, strengthen the heart and make it beat strong and regular, create new red blood corpuscles, and impart that sense of buoyancy to the spirits that is the result of renewed mental and physical vigor.

Mrs. D. O. Donoghue, Orillia, Ont., writes: "For over a year I was troubled with nervousness and heart trouble. I decided to give Milburn's Heart and Nerve Pills a trial, and after using five boxes I found I was completely cured. I always recommend them to my friends."

Price 50 cents per box or three boxes for \$1.25, all dealers or The T. Milburn Co., Limited Toronto, Ont.

**Grove Hill Holstein Herd** Offers high-class stock at reasonable prices. Only a few youngsters left. Pairs not akin. F. R. MALLORY, Frankford, Ontario. G. T. R. and C. O. Railway connections.

**"THE MAPLES" HOLSTEIN HERD**

is made up of Record of Merit cows and heifers with large records, and headed by Lord Wayne Meathilde Calamity. Bull calves from one to five months old for sale.

**Walburn Rivers, Falden's, Ont.**

**Beaver Creek Herd of Holsteins**

FOR SALE: A few cows and five yearling heifers, and some heifer calves. All bred from good milkers.

**Albert Mittlefehdt, Elcho, Ontario.**

**Glenwood Stock Farm—Holsteins and Yorkshires.** Holsteins all sold out. Have a few young Yorkshires sows, about 3 months old, for sale cheap. True to type and first-class. Bred from imported stock. THOS. B. GARLAW & SON, Warkworth P.O. Campbellford Stn.

**Ridgedale Farm Holsteins—**1 yearling bull, 6 bull calves, from one to four mos., by Prince Pauline De Kol 6th, and from rich, heavy-milking dam. Come and see them or write: E. W. WALKER, Utica P. O., Ont. Fort Perry, G. T. R., or Myrtle, O.P.R., Ontario Co.

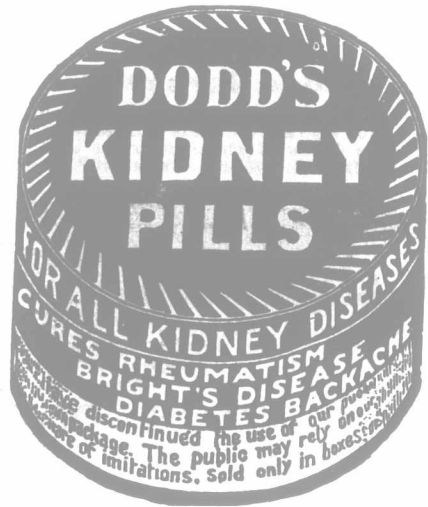
From time immemorial there had been a law in Applegate, county Warwick, England, to the effect that the mayor had the best of everything in town, and, for instance, one should say he had the best coat in the place he must add the words: "Except the mayor."

One day a stranger came to Applegate and had dinner there at the inn. After paying his bill, he said to the landlord: "I've had the best dinner in the country."

The Landlord.—"Except the mayor."

The Stranger.—"Except nothing!"

As a result the tourist was called before the Magistrate and fined £10 for his breaking of the laws of the place. When the man had paid his fine, he looked around him and said, slowly: "I'm the biggest fool in town, except the mayor."



**BOOK REVIEW.**

"INSECTS INJURIOUS TO VEGETABLES."

This book has been written by F. H. Chittenden, S. C. D., United States Department of Agriculture, an expert in the subject of which he treats. He is known as one of the world's best authorities on insects that injure vegetables. The book consists of 300 pages, bound in cloth, and is profusely illustrated. By possessing it, one may know how to combat insect pests by simple and inexpensive remedies, also how to prevent their recurrence when possible. This is a book which recommends itself especially to farmers and gardeners, and it should be in the hands of every teacher who conducts a rural-school garden. Insect pests in the garden are becoming more serious every season, and this book appears at an opportune time. It is published by the Orange-Judd Company, New York, but may be obtained at this office (Farmer's Advocate). The price is \$1.50.

"PRACTICAL DAIRY BACTERIOLOGY."

This is another of Dr. W. H. Conn's (Wesleyan University) terse, practical volumes, on a very practical subject. There is no need, at this period of the world's enlightenment, to dwell on the importance that attaches itself to bacteria, especially the bacteria that affect the dairy. This book has been especially written to meet the needs of all practical dairymen as well. It is strictly up-to-date, and contains the most recently determined facts and the newest methods. An invaluable book for the class-room, the dairy and the farm. It will prove a distinct help in the great battle for pure milk. We note that Dr. Conn dedicates the volume thus: "To my wife in appreciation of the constant assistance received from her in this and other scientific works." Fully illustrated, with 340 pages, and cloth binding, for \$1.25. Published by the Orange-Judd Co., New York, but may be obtained at this (Farmer's Advocate) office.

**GOSSIP.**

THE IDEAL AGRICULTURAL EDUCATION.

An agricultural college education, in an ideal sense, should embrace a perfect combination of the theoretical and practical. Theory and practice must go hand in hand in agriculture as in everything else. It is the failure to comprehend clearly this essential principle that has been the stumbling-block to the true success with too many agricultural institutions; that has made them rather institutions for switching men away from the farm than for affecting improvement in the community they were created to serve. Educational training of the right sort gives a man increased power to meet the stern work of life, and enhances the good that can be got and given by the individual as his contribution to the well-being of his contemporaries. It is not this sort of an educational training that teaches a man to spurn as mere drudgery the work that is done by the hand. It is the kind that teaches him to respect and rejoice in it as much as in any other form of toil. The kind that brings him into closer harmony with his environment, that so grounds him educationally that he can hold his own as a citizen in the work and public affairs of the country with any other class.—[Farmer's Advocate and Home Journal.

A city lad spent a part of last summer on a farm owned by his uncle. It was the boy's first visit to the country, and everything on the farm was delightfully unfamiliar to him.

One afternoon the youngster, who had been prowling about the chicken-house, seized the product of one cackling hen, and marched exultantly into the house with his prize.

"Let me have it, son," said the farmer's wife, "and I'll cook it for your luncheon."

"You must think I'm a greenhorn, auntie!" exclaimed the boy. "I guess the hen cooked it all right. It's warm."

**HOLSTEINS**

We must sell at least 25 cows and heifers at once in order to make room for the increase of our large herd. This is a chance of a lifetime to buy good cattle at bargain prices. The best way: arrange to come and look the herd over. If you cannot, we will do our best for you by correspondence. Also a few young bulls. 100 head to select from. Imported Pontiac Harnes, son of Hengerveld De Kol, world's greatest sire, head of herd. All leading breeds represented. H. E. GEORGE, Crampton, Ont. Putnam station, near Ingersoll.



**Lyndale Holsteins**

Bull calves for sale out of cows with records of from 18 to 30 lbs., and sired by a grandson of Pieterje Hengerveld's Count De Kol.

**BROWN BROS., LYN, ONTARIO.**

**HILTON STOCK FARM—Holsteins, Ontaroids and Tamworths—Present offering:** Some young cows; a nice lot of young pigs; few boars six months old, and sows in pig. R. O. MORROW & SON, Hilton P. O. Brighton Tel. and Stn.

**Imperial Holsteins**

Bull calves for sale. W. H. SIMMONS, New Durham P. O., Ont.

**Annandale Great Dairy Herd**

ONLY BULLS, 4 to 10 months old, for sale at present. Bred from great producing ancestors. Bred right. Fed right.

**Holsteins and Ayrshires**

**LOOK HERE**

Have on hand bull calves from choice dams, and sired by son of greatest cow in Canada, Bouteje Q. Pieterje De Kol; 643 lbs. 7 days; 96 lbs. 1 day. His sire's dam and granddam have records averaging over 40 lbs. butter week. Also choice bulls fit for service. Prices right. FRED ABBOTT Fairview Stock Farm. Harriestville, Ont.

**MAPLE GLEN HOLSTEINS**

Herd of 35 head with A. R. O. breeding, backed up by buster tests of over 16 lbs. as a two-year-old to over 26 lbs. as a cow. A good herd to select from. Two spring bull calves on hand. A. R. O. test of one is over 96 lbs. for dam and g. dam. Come and inspect the herd. Any animal will be offered for sale. G. A. GILROY, GLEN BUELL, ONT.

**RECORD OF MERIT HOLSTEINS**

Herd 110 strong. Over 40 head now in the Record of Merit. Two of the richest-bred bulls in Canada as head of the herd. For sale: 18 bulls, from 3 months to 1 year of age, all out of Record of Merit cows and sired by the stock bulls. P. D. EDE, Oxford Centre P.O. Woodstock Station.

**RIVERSIDE HOLSTEINS**

For sale: Eight young bulls from 3 to 8 months old, out of Record of Merit cows, sired by Johanna Rue 4th's Lad and Sir Pieterje Poosh DeBoer, whose dam and sire's dam average in official test 35.87 lbs. butter in 7 days, and 87.6 lbs. milk 1 day.

J. W. RICHARDSON, Caledonia, Ont.

**FAIRVIEW HERD**

is the place to buy your next bull. I can furnish you with a bull sired by our great herd bull, PONTIAC KORNDYKE, who has 19 daughters in the last year's report that made official records from 18 pounds at less than two years old to over 311 pounds at four years, and the whole number averaged over 4 1/2% fat. No other bull in the world has ever made such a showing in one year. I have just tested another of his daughters that made 36.40 pounds butter in seven days with second calf. I have over 50 cows and heifers in calf to him. Come and look my herd over before making your selections elsewhere. E. H. DELMAR, Heuvelton, St. Law. Co., N. Y., near Prescott.

**Maple Hill Holstein-Friesians**

Bull calves from No. 1 dams, sired by bulls with great official backing. Write for prices.

G. W. Clemons, St. George, Ont.

**RAW FURS!**

Consignments Solicited. Write for Prices. We are the Best Market in Canada or United States. E. T. Carter & Co., 83-85 Front St., E. TORONTO, ONT.



**Sheep and Cattle Labels.** Drop me a card for sample and circular, it costs nothing, and will interest you. F. G. JAMES, Bowmanville, Ont.

**40 IMPORTED SHROPSHIRE RAMS AND EWES**—First choice of England's best flocks. Ram lamb from the champion ram of Canada, 1905. LLOYD-JONES BROS., Burford, Ont.

**Oxford Down Sheep, Shorthorn Cattle Yorkshire Hogs.**

Present offering: Lambs of either sex. For prices, etc. write to John Cousins & Sons Buena Vista Farm, o Harriston, Ont.

**Farnham Farm Oxford Downs**

We are now offering a number of select yearling rams and ram lambs, sired by imported ram, for flock headers; also yearling ewes and ewe lambs. Price reasonable.

**Henry Arkell & Son, Arkell, Ontario.** Arkell, C. P. R.; Guelph, G. T. R.

**Leicesters** A few choice ram lambs and ewes of various ages. Also Duroc Jersey Swine. MAC CAMPBELL & SONS, Harwich, Ontario.

**71 Years WITHOUT CHANGE MEANS**

that in 1836 we made an importation of sheep, that Shorthorns followed very soon, that we have been importing and breeding them ever since, and that this year I have made an importation of Shorthorns, Shropshires, Clydesdales and Welsh Ponies as good as could be bought. They, with high-class home-bred ones, are for sale, write me. ROBERT MILLER, STOUFFVILLE, ONTARIO.

**Shropshires and Cotswolds**

I am now offering 35 shearing rams and 50 shearing ewes, also an extra good lot of ram and ewe lambs from imported Minton ewes and Buttar ram.

**JOHN MILLER, Brougham P.O. Claremont Stn., C.P.R.**

**SPRINGBANK OXFORDS.**

SPECIAL OFFERING: 20 ram lambs; 3 shearing rams by an Imp Hobbs Royal Winner. The above are choice, and will be sold worth the money. WM. BARNET, Fergus, G.T.R. & C.P.R. Living Springs P.O.

**Southdowns**

FOR SALE: 2 imported prizewinning rams, and 60 home-bred and imported ewes. COLLIES.—Puppies by champion sire, and out of prizewinning dam.

**Robt. McEwen, Byron, Ont.**

**FAIRVIEW SHROPSHIRE.**

Now offering: Ewes bred to our champion rams at St. Louis World's Fair and the International. Also a limited number of ewe lambs, sired by above and other choice rams. Show shearlings in prospect among ewe lambs J. & D. J. CAMPBELL, FAIRVIEW FARM, WOODVILLE, ONT.

### Profit in Lambs

A recent experiment in feeding lambs proved that a small investment made for Dr. Hess Stock Food returned the feeder a profit of 235%. This was because the Hess-fed lambs were able to digest a greater proportion of the daily ration than other lots not similarly treated. Dr. Hess Stock Food is a tonic which makes perfect digestion in any domestic animal. It contains iron for the blood and nitrates to cleanse the system of poisonous matter. It is the prescription of Dr. Hess (M. D., D. V. S.), himself an authority on foods and feeding.

### DR HESS STOCK FOOD

shortens the time required to fit an animal for market, increases the flow of milk in dairy cows and keeps farm teams in prime condition. SOLD ON A WRITTEN GUARANTEE.

100 lbs. \$7.00  
25 lb. pail \$2.00  
Smaller quantities at a slight advance. Duty Paid.

Where Dr. Hess Stock Food differs in particular is in the dose—it's small and fed but twice a day, which proves it has the most digestive strength to the pound. Our Government recognizes Dr. Hess Stock Food as a medicinal compound, and this paper is back of the guarantee. If your dealer cannot supply you, we will.

DR. HESS & CLARK,  
Ashland, Ohio, U. S. A.  
Also Manufacturers of Dr. Hess Poultry Pan-a-c-e-a and Instant Louise Killer.



**NEWCASTLE TAMWORTHS.** Oldest established herd in Canada. For sale 12 young sows sired by Colwell's Choice and Newcastle Warrior, both Toronto champions, and bred to Imp. Cholderton Golden Secret; also younger ones, both sexes, by him, and out of dams by above Cha. sires. Several boars fit for service. Will sell right for quick sales. **A. A. COLWELL, NEWCASTLE, ONT.**

**EAST BANK HERD.**—Large English Yorkshire and Berkshire Swine, Shorthorn Cattle, Barred Rock Poultry.—To make room I will sell suckers of choice breeding and quality at \$5 each—registered. Also snaps in sows bred and ready to breed, and boars fit for service. Prizewinners, the get of prizewinners and capable of producing prizewinners. Shorthorn cows of good quality; also two choice calves. Everything as represented. Write, call or phone **IRA L. HOWLETT, Keldon P. O., Shelburne Sta., C. P. R.**

**Maplehurst Herd of Tamworth Swine, Bronze Turkeys, Toulouse Geese, Pekin Ducks, S.-C. W. Leghorns.**

For sale: A large herd of Tamworths, of excellent breeding and ideal bacon type. This herd won sweepstakes at Toronto and London, 1905-6. Among our winnings at World's Fair, St. Louis, 1904, both premier championships, sweepstakes aged and junior herd, and two grand championships. Inspection and correspondence solicited. For further particulars apply to **D. DOUGLAS & SONS, Mitchell, Ont.**

### CHESTER WHITE HOGS

The largest herd of bacon-type Chester White hogs in Canada. Strictly high-class. Have won highest awards. Young stock of both sexes always on hand. Satisfaction guaranteed.

**ROBERT CLARKE, 41 Cooper Street, Ottawa, Ont.**

### Cedar Lodge Yorkshires

100 head brood sows (imp.) and the product of imp. stock, weighing from 600 to 800 lbs. each. Stock hogs by imp. sires and dams, very large and full of quality. Young stock of both sexes constantly on hand for sale. Pairs not akin. Satisfaction guaranteed.

**O. COLLINS, Bowesville P.O., Ont. Manotick Sta., C.P.R.**

A traveller in the dining-car of a Georgia railroad had ordered fried eggs for breakfast. "Can't give yo' fried eggs, boss," the negro waiter informed him, "lessen yo' want to wait till we stops." "Why, how is that?" "Well, de cook he says de road's so rough dat every time he tries to fry eggs dey scambles."

### GOSSIP.

There is no better way to make a boy stick to the farm than to give him a few sheep, and teach him how to care for them, and allow him the proceeds from his little flock. You will be out very little, and you will be surprised how soon he will make on the small investment compared with some of his father's larger investments.

It has been found that 36 lbs. of sheep manure is equal, as a fertilizer, to 100 lbs. of ordinary farm-yard manure, being richer in nitrogenous substances than that of the cow or horse, ranking next in ammonia and richer in the phosphates than guano, or the dropping of fowls. In the face of such conclusive and undisputable evidence, why will farmers neglect to keep a few sheep?

A circular issued by Messrs. Wm. Cooper & Nephews, of the "Cooper Dip" works, Berkhamsted, Eng., shows a remarkable record of successful prize-winning with cattle and sheep at principal British shows in 1907, totaling 138 prizes at 21 shows, including the Royal, the Highland, Bath & West, Royal Counties, Oxfordshire, etc., 69 of these being first prizes, 6 championships, 5 reserve championships, 34 seconds, 18 thirds and 5 specials.

### AN OLD GOOSE.

Toronto Saturday Night of last week reports the case of a Canadian goose living at the age of forty-two years. She is owned by Miss Chew, of Weston, Ont.; was purchased by Mr. Wm. Chew in 1866, the year of the Fenian Raid, from Thomas Quin; was then one year old, continued laying eggs until nine years ago, is still a healthy bird, and takes a grandmotherly interest in the social life of the flock. Stories are often told of geese that have reached a great age; but, at Weston, it is believed that this is the oldest goose in Ontario.

### THE HEAD OF THE DAIRY SIRE.

In studying dairy sires, we should be constantly on the lookout for indications which will reveal desirable characteristics. In the head are centered all the nerves of the body, and now the question is, is there anything about the external construction to reveal the quality and the strength of the nervous system. The eye, which is closely associated with the brain, reflects, to a large extent, the nervous energy of the animal. We like to see an eye full and bright, active, but not of a nervous expression; a mild eye rather than one having a wild appearance. An eye of this kind reveals the right sort of nerve energy which should be possessed by the dairy sire.

The sunken and half-closed eye indicates a nervous system, which is unresponsive and lacking in quality. We would not select a dairy sire which reflected through his eye this sort of a nervous temperament. Nervous temperament does not mean an animal that is nervous, but rather nerve-full. A nervous animal is one that is lacking in nerve quality.

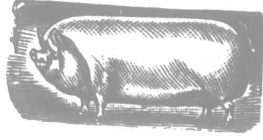
The distance between the eyes should be wide; that is, the animal should have a wide forehead. This denotes intelligence, and, in turn, a strong nerve center. It is also desirable to have good length from the base of the horn to the eye. The combination of these different things indicates whether the sire has the right kind of a nervous system or not.

The large and open nostril is indicative of large and well-developed lungs. It shows that the openings to the lungs are large enough to permit an abundance of air to pass to the lungs to purify the blood.

The wide muzzle and mouth are also desirable. Since the mouth is the cavity through which the food must pass to the stomach, its size is more or less indicative of the capacity of digestive organs. A large and powerful digestive tract is a prime qualification in all good dairy animals.

In general, the head should be fine rather than coarse, but revealing strength. An animal, as a rule, with a coarse and heavy head has a body that is also coarse, and not possessing good dairy conformation. The coarse and heavy horn is also indicative of the same characteristics.

### YORKSHIRES of Choicest Type and Breeding.



I have on hand 75 brood sows of Princess Fame, Cinderella, Clara, Minnie, Lady Frost and Queen Bess strains. My stock boars are true to type and richest breeding. For sale are a large number of sows bred and ready to breed, boars fit for service, and younger ones of both sexes. Pairs and trios not akin. **J. W. BOYLE, P. O. Box 563, Woodstock, Ont.**

### Large White Yorkshires!



Am offering at the present time a choice lot of boars ready for service, from imported stock; also young pigs of both sexes, not akin. Prices right, and quality of breeding unequalled. Write or call on

**H. J. DAVIS, WOODSTOCK, ONT.**



### MONKLAND Yorkshires

Imported & Canadian-bred

We keep 35 brood sows, and have constantly on hand between 100 and 200 to choose from. Can supply pairs and trios not akin. Quality and type unsurpassed. Prices right.

**JAS. WILSON & SONS, FERGUS, ONT.**

G. T. E. and C. P. E. Long-Distance 'Phone



**Maple Leaf Berkshires.**—Large English breed. Now offering Doctor sows, bred to British Duke (imp.). Also young boars and sows for sale, 10 and 12 weeks old. **JOSHUA LAWRENCE, OXFORD CENTRE P. O. WOODSTOCK STATION.**

### FAIRVIEW BERKSHIRES

are second to none. Have now for sale some sows bred, and boars fit for service, also younger ones from two to four months old, bred from and sired by finest type. Also Leicester shearing rams, ram and ewe lambs of finest type. **John S. Cowan, Donagall P. O. Atwood and Milverton stations.**

**100 BERKSHIRES 100** Catalogues Ready Dec. 1st.

Dispersion Sale of the Elmhurst Herd on Wednesday, January 8, 1908, at 12 o'clock. See large ad. in the Christmas number.

### Glenburn Herd of Yorkshires.

Winner of gold medal three years in succession. 6 young boars from 6 to 9 months; also 75 young sows, from 6 to 12 weeks old.

**David Barr, Jr., Box 3, Renfrew, Ont.**

Write for one. Sale under cover.

**H. M. VANDERLIP,** Importer and Breeder, Gainsville, Brant Co., Ont., Can.

**Yorkshires and Tamworths.**—Either breed any age, both sexes; sows bred and ready to breed. Yorkshires bred from imp. sire and dam. Tamworths from Toronto winners. Pairs not akin. As good as the breeds produce. **CHAS. CURRIE, Mohav Sta., C.P.R., Morrison P.O.**

**Elmfield Yorkshires.**—60 young pigs of both sexes, from 4 weeks to 4 months. Also some young sows, bred in August to imp. boar. Prices to suit the times. **G. B. HUNA, Ayr, Ont.**

**Meadowbrook Yorkshires.**—Young stock of both sexes. A number of sows old enough to breed, all sired by Imp. Dalmen Topman. Everything guaranteed as represented. **J. H. SNELL, Hagersville P.O. & Station.**

**For Sale.**—Ohio Improved Chester Whites, the largest strain, oldest established registered herd in Canada; young sows in farrow; choice young pigs, six weeks to six months old; pairs not akin; express charges prepaid; post notes and safe delivery guaranteed. Address **H. D. GEORGE, Putnam, Ont.**

**DUNROBIN STOCK FARM** Clydeedale, YORKSHIRES, Shorthorns, grandly-bred Yorkshire sows. Twenty five sows to farrow in the next few weeks. Unrelated pairs a speciality. Write for prices and particulars. **DONALD GUNN & SON, Beaverton, Ontario.** Inspection invited. G. T. E., C. N. O. E. stations 1 1/2 miles from farm. Customers met on notification.

**FAIRVIEW BERKSHIRES** Bred from imported and Canadian-bred sires and dams, and bred on prizewinning lines. My brood sows are large, choice animals. Young stock of both sexes. Some sows bred to imp. boars. **HENRY MASON, SCARBORO P. O. Street cars pass the door.**

**Willowdale Berkshires** are unsurpassed for quality and breeding. My stock is bred from the best imported and Canadian-bred dams, and imported sires of the richest breeding to be found in England. Young stock all ages for sale reasonable. Young sows bred and ready to breed. Young boars 3 and 4 months old. Satisfaction guaranteed. Long-distance telephone in residence. **J. J. WILSON, Importer and Breeder, Milton P. O. and Station, G. T. E. and C. P. R.**

**MAPLE GROVE YORKSHIRES** Imported and Canadian-bred boars and sows of the best possible breeding, with lots of size and quality. We are winning at the leading Canadian shows. A fine lot of both sexes and all ages. Everything guaranteed as represented. Prices reasonable. **H. S. MEDDIARD, Fingal P. O., Shedden Sta.**

**Yorkshires.**—Boars ready for service; sows ready to breed, and bred; young pigs just weaned and ready to wean. Cotswold and Shropshire rams, yearlings and lambs, registered. **GEO. M. SMITH, Haysville, Ont.**

**SUNNYMOUNT BERKSHIRES** Boars fit for service. Sows bred and safely in pig. Sows fit to be bred. Young pigs just weaned. **JOHN McLEOD, Milton P. O. and Sta., C.P.R. & G.T.R.**

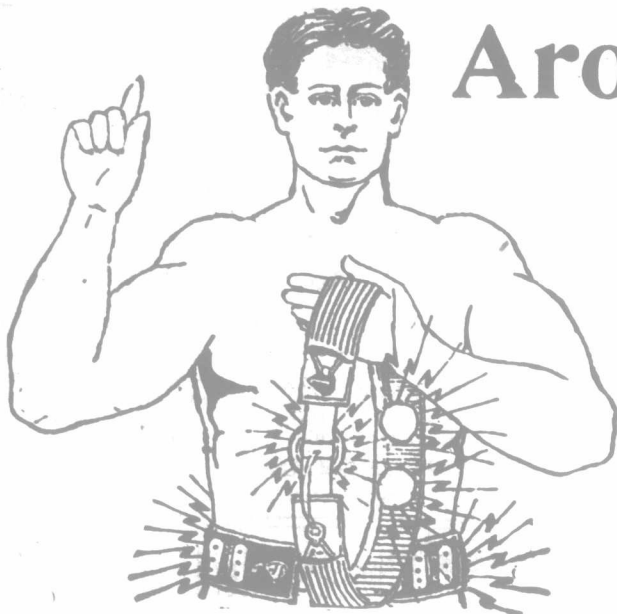
**OAKDALE BERKSHIRES** Largest Berkshire herd in Ontario. Stock boars and several brood sows imported. For sale: Sows bred and ready to breed, boars ready for service, and younger ones, all ages, richly bred on prizewinning lines and true to type. Everything guaranteed as represented. Long distance 'phone. **L. E. MORGAN, Milliken P.O., Co. of York.**

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If you are a man whose youthful vitality has been wasted by indiscretions, excesses or overwork, I want to assure you that there is a positive remedy for your trouble. If your condition is that of exhaustion or feebleness, the very element which you have wasted, viz., human electricity, can be put back into your body. When you get it back your weakness will disappear, and you will become strong in nerve, brain, muscle, and every organ, and filled with joy that you are once more a perfect specimen of manhood. **DR. McLAUGHLIN'S ELECTRIC BELT** will fill your system with the power you have lost. It does this in a gentle, glowing, soothing way while you sleep. You get up in the morning refreshed, all aches and pains disappear and you feel strong enough to attempt and accomplish what any other man can or may. It makes you feel like a new man, because it restores and develops the vigor originally given to men by nature.

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Dear Sir,—I can safely say that I feel much better after using your Belt. My back is stronger; not so much trouble with my organs. I have been very careful with my food, and now I am able to take more exercise. I remain, W. H. HARWOOD, No. 204 Oxford Street, London, Ont.

Dear Sir,—I have been wearing your Belt for thirty days, and feel that it has done me a lot of good. The losses have stopped almost altogether, and my nerves are much stronger than they were. Yours very sincerely, GORDON DUNN, Paris Station, Ont.

Dear Sir,—You will excuse me for not writing before, but I was in the lumber woods and did not return until this month. Yes, sir, my back is all right. It is better and stronger now than it has been for thirty years. It is a permanent cure. My head don't bother me; nerves are strong; I am better all over. You can use my name to certify that your Belt is all you claim for it. Yours truly, GEO. STANLEY, Perth, Victoria Co., N. B.

Dear Sir,—I have great pleasure in writing to you to say that, after a fair trial of your Belt, it has accomplished wonders in so short a time. The indigestion is gone, and I can eat a good hearty meal now (what I have not done for a long time), and the pain in my back is about gone. In fact, I feel like a new man, and will say that I am well satisfied with my bargain. Yours faithfully, JOHN BEATTIE, Mina, Ont.

The reason so many men neglect to use my Belt is that they fear it will fail, like other things they have tried. Now, the security that I offer to the doubtful man is that he need not pay for my Belt until it does for him what I say it will do, if he will in turn give me reasonable security that he will pay me when cured. Put aside these testimonials. Don't make any difference whether you know that Dr. McLaughlin's Electric Belt cured them or not. Give me reasonable security. I will arrange the Belt and send it to you, and you can

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Give me a man who is thin, puny and unnourished in appearance, and I will pour this electric life into his body every night for three months, with proper exercise to draw it into the muscles and tissues, and I will add twenty-five pounds to his weight, remove every evidence of his weakness, and restore his strength. Look at the men who have worn my Belt, and you will see men of force, men of power and confidence, men who respect themselves and are respected by their fellow men.

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This Suspensory is made for the special ailments of men, and assures a cure of a Waste of Strength, Early Decay and Debility. Its current is invigorating and wonderful in power. It develops all weak organs and checks unnatural drains. No case of Failing Vigor, Varicocele or Debility can resist this powerful Electric Suspensory.

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#### Influence of Stock and Scion Upon Varieties.

In the whole range of horticulture there is no subject which is by its nature more completely given over to polemic discussion than the relationship of stock and scion, and their effect upon one another. Prof. H. A. Surface, who was requested to speak upon this subject at the 1907 convention of the Ontario Fruit-growers' Association, frankly promised that he could tell all he knew about it in two minutes.

The discussion was led off by Prof. Macoun, of Ottawa, who stated that as far back as 1635 it was debated in England. At the American Pomological convention at Jamestown, President Goodman read the following extract from the English Husbandman, printed in 1635:

"If you graft apples, pears or any fruit upon a fig-tree stock, they will bear fruit without blooming. If you take an apple graft and a pear graft of like bigness, and having cloven them, join them as one body in grafting, the fruit they bring forth will be half apple and half pear. If you graft any fruit tree, or other tree, on the holly or upon the cypress, they will be green and have their leaves the whole year, albeit the winter be never so bitter. If you graft either peach or plum or any stone fruit upon the willow stock, the fruit which comes of them will be without stones."

Curious letters come to the Experimental Farm from persons with all sorts of queer notions on this subject.

With regard to the principles affecting the relationship, Prof. Macoun reminded his auditors that when stock and scion are united by grafting, they are not united as an organized whole; the union is merely a mechanical one. The fibres and vessels of the scion do not unite physiologically with the fibres and vessels of the stock.

There is need to study the natural affinities of various varieties. The Board of Control of the Ontario Fruit Experiment Stations has commenced experiments at Leamington to see whether something can be done to prevent the besetting trouble in that district of root-killing of peach trees, by budding peaches on plum roots. As this identical practice was recommended years ago in England, Prof. Macoun was rather hopeful of results. In the Old Country experiments, they found the peach would not live as long on plum stocks; but, nevertheless, it lasted long enough to bear profitable crops of fruit. It is often surprising what diverse plants will make good unions. Juneberry, for instance, has been successfully top-grafted on mountain ash, and many other such samples were cited. Some most interesting experiments have been carried on in France with herbaceous plants, grafting the tomato on the eggplant, and making numerous other such extraordinary unions.

As a rule, the effect of the stock on the fruit is slight. The speaker considered we should look for the chief effects in the seedlings, rather than in the fruits.

Prof. Surface was inclined to think that the relationship between stock and scion as to effect was less than supposed by some writers and speakers. As for the fact that the Spy would bear sooner when grafted on some varieties than on others, this might possibly be due to the restriction or constriction at the point of union, which promoted fruiting on the same principle as root pruning, driving nails into the trunk, or other means of checking growth. He would not be surprised if investigation established that the scion influenced the stock more than the stock did the scion, as the scion formed the top, and it was in the top that the solutions drawn up by the roots were elaborated into sap. As to the philosophy of it all, there were many unanswered questions. The question as to why one tree would produce fruit of one kind, and another tree fruit of another kind, was like the question as to why, with a horse and a goose grazing in the same pasture, one would grow feathers, while in the case of the other the same nourishment went to make hair.

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