

**PAGES  
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# The Farmer's Advocate

## and Home Magazine

"Persevere and Succeed."

Established 1866.

Vol. XLIII.

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LONDON, ONTARIO, JANUARY 2, 1908.

No. 797.

### EDITORIAL

#### CONTINUE PIONEER WORK WITH THE DRAG.

If ever the introduction of a new idea was vindicated by results, the split-log drag has been. It is a means of strengthening our road-improvement practice in what has been its weakest and most neglected phase, viz., maintenance. It is all right to use the grader and other expensive machinery to put our roads up into shape, but unless both the earth and stone roads are regularly looked after and repaired on the stitch-in-time principle, eternity would pass without bringing us good roads. Metalled roads require a caretaker on every fifteen or twenty miles to travel up and down looking after them, raking off loose stones, filling depressions, and so on. Earth roads require an application of the same principle. It will not do to let the road become cut up, mired and flattened by every thaw and rain, expecting to make it all good by annual grading. Such a practice wastes, by erosion, the good surface loam, and each year the grader has to dig down a little deeper into the red or blue subsoil clay in the ditches, and this, piled loosely on the center of the road, not only makes driving bad for that season, but defeats the very object of crowning by forming a loose, mucky surface, through which the water soaks into the roadbed, to form an engine of destruction under the effect of winter frost. Furthermore, as clay washes and cuts up worse than loam, the stickier the clay we have to use, the faster the destructive erosion proceeds. The way to have good roads is not to dig the crown of the road out of the ditches every year, but to prevent it from getting into the ditches, by using, early in spring, and after every heavy rain throughout the summer and autumn, when the surface is still moist, but not wet, a simple, cheap drag or leveller that will keep the road smooth, obliterate the ruts and hoofprints, and tend to draw up towards the center the settling mud, which wheels, hoofs, gravity and erosion ever tend to work towards the sod shoulder, and eventually into the ditch, or into some stream or hollow beyond. Even during winter thaws, it is probable that the drag may be used to good advantage in keeping the surface oval, hard and smooth. One of the competitors in our split-log-drag brigade put his mile of road into excellent shape for winter by dragging it one evening just before a freeze.

Yet, simple as is the drag, marked as are its benefits, and strong the testimony concerning its use, a great many hesitate, and, strangest of all, the people who have had some experience with the old single-stick, iron-shod leveller, with the pole front, have been the slowest to take up with the split-log drag. They think they have something better. As a matter of fact, those who have tried and observed both pronounce the drag, properly constructed and used, as decidedly more efficient. It fills the ruts better, is easier on horses, is more adaptable, and can be used to advantage at an earlier stage in the drying-up process, its use being, therefore, far less liable to be neglected. Of our 63 competitors, only one reported unsatisfactory results, and he evidently used it when the roads were sticky, whereas it should be used when they are MOIST, BUT NOT WET.

As illustrating the conservative attitude of mind adopted by many towards simple things, we cannot do better than quote a conversation between the writer and a bright young farmer in Quebec. "I think," he said, "The Farmer's Ad-

vocate' gave too much space to the split-log drag last spring. It's such a simple thing; any farmer could make one. In this district we have a leveller with a tongue and a shoe of iron on the bottom." "Yes," we replied, "the drag is simple. Did you ever make one?" "No." "Any of your neighbors ever make one?" "No." "Oh, then, simple as it is, none of you ever thought of it after all. Evidently, instead of devoting too much space to the drag, we didn't give enough, for results prove that it is a decided improvement over the old single-piece leveller, though the latter instrument has done an immense amount of good, and is not to be discounted. But we want the best." The split-log drag is the best means yet discovered for keeping earth roads in condition, and we propose to keep up the agitation until it is regularly employed by township municipalities throughout Ontario. There is need yet for more pioneer work. Make a light cedar drag, and drag the road from your gate to your neighbor's, towards town. When its benefits have been more widely demonstrated, township councils will take it up, and adopt plans to secure systematic dragging.

#### CO-OPERATION IN MARKETING HONEY.

Quoting from an editorial in our Nov. 21st issue, drawing attention to the marked benefits of co-operative organization in the packing and marketing of Ontario fruit, J. L. Byer, in the Canadian Bee Journal, raises the question as to what benefits might accrue from co-operative organization of apiarists. "While the two industries differ very much, both are confronted with somewhat similar difficulties in marketing their products. The honest and careful apple-grower has had to contend against the badly-packed and poorly-assorted product of the irresponsible or dishonest grower, just as the good-honey producer is up against the purveyor of green goods (un-ripe honey). In this part of the deal, the honey producer is, aside from co-operation, in a worse position than the fruit-grower, as Government supervision has, in the case of the latter, stepped in and helped to regulate matters to a great extent. The writer, while in sympathy with the aims and objects of co-operation, has doubts as to whether the system will, just at present, sufficiently interest the rank and file of the honey producers to the extent that it could be made a success."

Mr. Byer concludes his comments by reiterating and emphasizing our point that the co-operative fruit-shipping associations were first organized as the possible solution of well-nigh hopeless conditions. "While," he adds, "it may seem contrary to good business ethics, yet, in all cases where co-operation has been adopted, just such conditions have been the why and wherefore. While I may be greatly mistaken, yet I venture to make the assertion that, as regards co-operation in the bee-keeping industry, history will repeat itself."

This subject of co-operation was discussed at the annual convention of the Ontario Beekeepers' Association, and it will in future undoubtedly be very much to the fore. The present winter season would be opportune for an exhaustive discussion through "The Farmer's Advocate," as to the aims, scope, method and feasibility of co-operation in the marketing of honey. Correspondence is invited.

"Education is a better safeguard of liberty than a standing army. If we retrench the wages of the schoolmaster, we must raise those of the recruiting sergeant."—[Edward Everett.

#### KEEP THE WAR SPIRIT OUT OF THE PUBLIC SCHOOL.

An Ottawa correspondent of the Toronto News recently recounted, in a somewhat commendatory spirit, a plan which is being tried to introduce military drill in the public schools of the Maritime Provinces, beginning with Nova Scotia. The avowed objects of this move are to improve the physical stamina of the people, and add to the military strength of the nation. Deeply interested in whatever affects the educational future of this country, "The Farmer's Advocate" desires to call attention to the far-reaching significance of this proposition, and of the suggestions which are made for giving it effect. A survey of the situation in different Provinces indicates that educational policies are at present passing through a transition stage, and it behooves every man and woman concerned for the future of the country to acquaint himself and herself as thoroughly as possible, before we are committed to the initial steps, with the tendency of proposals like the one under review. Those who are promoting the Nova Scotia experiment will no doubt want to see it extended to the other Provinces of Canada.

As outlined by the correspondent of The News, the Nova Scotia arrangement takes the form of an agreement between the Dominion Militia authorities and the Provincial Department of Education, whereby drill will be included in the school curricula, and the Militia Department will provide the instructors, who will be competent, to enable teachers, in turn, to qualify themselves to impart such instruction. In the second place, the inducement is held out of an annual bonus of from \$50 to \$100 to teachers who will (a) instruct the pupils, and (b) join the Militia. Foreseeing difficulties likely to arise at this point, provision is made for the two classes of certificates ("A" and "B"), the former for men, and meaning that they are capable of granting military instruction; the latter for women, who are presumed to be able to rise to the standard of being able to impart physical instruction, and drill and teach the youth how to sit, and stand erect, and move in order. But the Militia Department grants them no bonuses, which are for the men in possession of the grade "A" certificates, which they obtain by taking courses at military centers. As a consideration favorable to the carrying out of the scheme, it is thought the bonus will be some inducement to the return of men to the teaching profession, who, in Ontario and elsewhere, have drifted out because of low salaries.

In support of the propaganda, the case of Japan is cited, where children from six to ten are given physical and squad drill; from ten to twelve, company drill; and from thirteen to eighteen, the care and cleaning of arms, rifle exercises, and so on, as a preparation for efficiency in war. But Canada is not lying alongside a besotted despotism like Russia, and these kindred Anglo-Saxon nations should proceed upon the peace and arbitration theory, and not upon the theory of the unspeakable horrors and waste of a fratricidal war. In North America, the surest way to bring on war is to prepare for it by raising the military spirit; the surest way to avoid war is to turn the people's thoughts and aims towards the arts and triumphs of peace. The pretence is made that the objects of military drill in the public school can be obtained without subtracting from the energy and working time of the people—an absurdity upon its very face.

To this military propaganda among the youth of our land, we must enter our protest, for two reasons, one that the war spirit is wrong, the other that it will divert the educational energies,

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# THE FARMER'S ADVOCATE

## AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

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time and means of this country away from agricultural, industrial and other pursuits to which it should now be turned. It places us at the parting of the ways. A proposition like that to which we refer, thrown into the foreground, is a sorry exhibition of the Gospel of Peace, the advent of which the people have just been celebrating! It means the idealizing of force, arms, the law of the jungle, and the beginnings of a militarism under the frightful burdens of which the European peoples are groaning for deliverance, and which already has made too great inroads into the life and resources of this Western continent. We mistake the spirit of the farmers or educationists of Canada if they are to be deluded with the sop of military grants for the training of male teachers in the arts of bloodshed, or diverted from the true objects of education.

The contention that it is designed to improve the physique of the people, is a pretence that will not bear examination. Ordinary physical drill and fire-escape drill, hygienic exercises, manual training, and school-gardening, will better accomplish the results desired. Keep clear of every vestige of military flavor. The physical degeneracy of the British people, as evidenced by the thousands of rejections for unfitness of recruits for the army in English cities and towns, has been deplored; but, as competent an authority as Surgeon-General Evat, of the British Army, in a notable address last year, put his finger right upon the root of the trouble in the vices and demoralizing habits of the youth, and the unsanitary conditions incident to the congested and ill-nourished city populations, which military drill and culture in the use of arms would not cure, but from which we in Canada are as yet, in large measure, happily free. To maintain and improve rural conditions in Canada, so that a larger population will find a competence upon the land, the foundations must be laid in the public schools along the lines of the new education which we have been strenuously advocating in these pages,

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and towards which the spirit and methods of militarism stand in direct opposition. Our school systems need reformation, but it is in the direction of the arts of peace, not in the arts of war.

### CONSIDERATION FOR THE RURAL TELEPHONE OPERATOR.

The introduction of the rural telephone has brought to farmers' doors advantages with which our readers in many sections are thoroughly familiar. It has developed, under their own direction, a form of public service independent of corporation control, has reduced the bills for wear and tear over bad roads, has facilitated the transaction of many items of farm business, and expedited the arrival of the doctor in many cases of emergency. But it may develop a stay-at-home tendency which is not good for the people. The old-fashioned visiting day is for more than one reason better than a habit of self-contained isolation. And right at this point we have a complaint from the chief operator of a leading rural system in Ontario, who declares, after considerable experience, that nearly one-half the calls over the lines are unnecessary, consisting of small talk and "gossip," inconsequential chatter by young people, all of which again and again interferes with the course of legitimate and often urgent calls. This abuse of the lines, with merely frivolous conversations, our complainant points out, is particularly troublesome on Sundays, when, in all fairness, the operators should be allowed greater relief from "calls." Much of this unnecessary ringing up of "central" starts when the instrument in the house is a novelty, but this should soon wear away. A great deal of it may be due to sheer thoughtlessness, but displays a sort of heartless and selfish disregard for the closely-confined operator that people, in making their New Year's resolves for 1908, should decide to cut out. In its place, the rural telephone is a useful servant, but it should not be abused.

### TIME FOR GUELPH TO WAKE UP.

That the Ontario Provincial Winter Fair should remain at the Royal City, is the all but unanimous opinion among farmers and stockmen. Arguments there are for its transference, the chief ones being inferior and inadequate hotel accommodation, and the city council's reluctance to incur expenditure.

Mr. R. E. Gunn made out quite an argument last week for attempting to build up at Toronto Junction, in connection with the live-stock market there, a replica of the Chicago International. This location would at least have the advantage of being central. After all is said and done, however, the fact remains that at Guelph the fat-stock show proved more successful than anywhere else in the former era of its peripatetic existence. And the citizens have always striven to do well by the Fair and Fair visitors in all respects except civic financial aid. Guelph is a Scotch city, and looks overclose at the bawbees.

The start has been made at Guelph for a splendid all-round winter fair; a nucleus has been formed, and considerable initial expenditure undertaken. Then, there is the most important argument that the Ontario Agricultural College is there situate, and the College is not only an advantage in drawing attendance to the Fair, but benefits in many ways by having the Fair so convenient. The Fair is a valuable privilege to the students, as well as the professors, while it will be universally admitted that the more farmers that can be drawn to Guelph, to become incidentally familiar with the College, the better for the institution, and for agriculture at large.

But if the fair is to remain, considerable expenditure is required for enlargement. Who is to put this up, the Government or the city, or both? Some of the citizens of Guelph seem to want the Provincial Government to do it all, but the Provincial Government has no license to do anything of the kind, and, rather than see it held up in that way, we should much prefer to forego such advantages of location as Guelph offers, and re-establish the Winter Fair elsewhere. At the public meeting in the City Hall, during the Fair, Hon. Col. Matheson, Provincial Treasurer, put the matter up to the city in a fair light. "Make

your proposition, and we'll help you. Don't ask us to do everything. The Government has demands on its funds everywhere. If we built fair buildings for you, would not other associations have a right to demand similar things? Government aid ought to be AID."

Guelph has no inalienable right to the Winter Fair, and no right to demand that the Government supply all the funds for her fair, any more than Toronto would have a right to insist on public money to defray all expenses of the Canadian National. A fair of such scope is an excellent advertisement to a city, and helps to draw trade. The exhibitions at Toronto, London, Ottawa, Winnipeg, Halifax, and other points, are regarded as good investments for the cities where held, and locally supported on that assumption. Guelph should regard the question in this light.

## HORSES.

### LAMENESS IN HORSES.

#### BONE SPAVIN.

Bone spavin is a very common cause of lameness and unsoundness. In order to diagnose a bone spavin when lameness is not present, it is necessary that a person be a good judge of the different conformations of hock, for a roughness that may be a spavin in one horse may be merely a peculiarity of congenital conformation in another. A bone spavin may be defined as an exostosis (a bony growth) on the hock, usually appearing on the inner and lower portions of the anterior surface of the joint, but may be on any portion.

CAUSES.—Like ringbone, splint and other bone diseases, bone spavin is usually, if not always, caused by concussion. In this way inflammation is set up in the cancellated tissue of some of the bones of the joint. This extends and involves the compact tissue, an exudate is thrown out, the articular cartilage is destroyed, the exudate ossifies and unites two or more bones of the joint together. It is often claimed that spavin is the result of a kick or other injury, and while it is possible such may be the case, it is very improbable. There is usually a congenital or hereditary predisposition, and where spavin is present, if the progenitors of the horse for several generations can be traced, it will generally be found that some of them suffered from spavin. This predisposition may exist simply in the conformation of the hock, weak hocks being more liable than deep, broad and angular ones. At the same time there is no conformation of hock that can be said to be immune.

SYMPTOMS.—The typical symptoms of bone spavin are characteristic, and diagnosis comparatively easy. After standing for a greater or less time, the horse, when asked to move—for instance, when asked to stand over in the stall in the morning after being in the stable all night—he will tread simply with the toe of the affected limb, and move quite lame. If backed out of the stall, he will step short and lame, and go on the toe for a variable distance; in some cases for a few steps only, in others for a few rods, or even further, and then go practically, if not quite, sound, and will continue to go sound until allowed to rest for a few minutes or longer, after which he will start off lame again. There is practically no heat or tenderness in the part, but there is usually an enlargement, which can be noticed. In cases of suspected spavin, the observer should observe both hocks closely. If an enlargement of greater or less size can be noticed on the hock of the lame leg (usually on the inner and lower part of the front of the joint), and there is an absence of a like enlargement on the other hock, and the characteristic lameness noted be present, there is no difficulty in diagnosing spavin. Unfortunately, however, we do not always observe these definite signs. The lameness does not always disappear upon exercise, but in the majority of cases it decreases. Neither is there always the well-marked enlargement. In other cases there is a roughness resembling spavin on each hock, which may be congenital conformation, and quite within the region of soundness. In some cases, lameness is present before any enlargement is noticeable; and in some cases, especially when the true hock joint is involved, there is permanent lameness, and no enlargement appears. This is called occult spavin, or blind spavin, and the lameness is incurable, and its cause hard to diagnose. It is not uncommon for a well-marked spavin of large size to be present without causing lameness at any stage. When spavin lameness is suspected, but cannot be decidedly diagnosed, it is good practice to get an assistant to hold the horse on level ground or a floor, while the examiner lifts the leg and forcibly flexes the hock for some time, say a minute, and, as soon as he releases the limb, have the assistant walk the horse straight ahead. This will, in most cases, cause him to go quite lame, with the characteristic lameness of spavin for a few steps; but even this test is not always satisfactory, and in cases where the typical symptoms are not well marked, the examiner must judge by the general symptoms shown, and the absence of apparent causes of lameness in other parts of the limb. It will be noticed that while there is little difficulty in diagnosing a typical case of bone spavin, there are many cases in which diagnosis is very difficult and requires a person of ex-

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 ous conformations of hock, and the different kinds of  
 lameness caused by the disease.

**TREATMENT.**—As with other bone diseases, treat-  
 ment should be directed towards hastening on the  
 process of ankylosis, thereby causing a subsidence of  
 the inflammation and lameness. In all cases there is a  
 union of two or more bones into one. There are really  
 four articulations in the joint, the uppermost being  
 called the true hock joint, where extensive motion ex-  
 ists. When this articulation is involved, lameness will  
 be permanent. The articulation below this, while some-  
 what extensive, is simply gliding, the articulation below  
 this is gliding and not extensive; while the lower one is al-  
 so gliding, but quite slight. Either or both of the lower  
 two may be destroyed by ankylosis, and make no notice-  
 able alteration in action, but ankylosis of the third from  
 below will cause a stiffness. Fortunately, it is usually  
 the lower articulations that are involved. As stated,  
 treatment should be directed towards terminating the  
 process of ankylosis, and this can be best done by  
 counter irritation in the form of blisters or the firing  
 iron, followed by blisters. Unscrupulous or ignorant  
 vendors of medicines claim to be able to remove spavin  
 and leave the joint in a normal condition, but when  
 we understand that the whole bone is involved, and  
 the articular cartilage destroyed, we can readily per-  
 ceive the fallacy of such claims. In quite young ani-  
 mals, repeated blistering will sometimes effect a cure  
 (when the lameness disappears we claim a cure), but  
 in the majority of cases it is necessary to fire and  
 blister. As with ringbone, the lameness does not al-  
 ways cease as soon as the action of the operation  
 ceases, but may continue for some months. If lame-  
 ness has not disappeared in ten to twelve months after  
 the operation, it is wise to fire again. We find some  
 cases that cannot be cured, and the prospects of a cure  
 cannot be determined by the size or situation of the en-  
 largement. We simply have to operate, and wait de-  
 velopments. **WHIP.**

## LIVE STOCK.

### A SHORTHORN YEAR.

The winning of the grand championship honors  
 by a Shorthorn steer at each of the three greatest  
 fat-stock shows in the world, namely, the Smith-  
 field, of England, the Chicago International, and  
 the Ontario Winter Fair, constitutes the present  
 clearly a Shorthorn year. It has long been felt  
 by breeders that, considering the preponderance  
 of numbers of this breed, they were not taking the  
 leading position in the competitions open to all  
 that might reasonably have been expected, and it  
 has often been pointed out in these columns that  
 one reason for this was that so few bull calves of  
 the breed were converted into steers, practically  
 the whole male increase of the herds being kept  
 entire for breeding purposes. This has been a  
 mistaken course for more than one reason. It low-  
 ers the standard of quality of the breed as a class  
 to put inferior bulls on the market, and it lowers  
 the standard of prices by flooding the market with  
 more bulls than can be sold for breeding purposes  
 at prices sufficient to pay a profit on their produc-  
 tion. On the other hand, it degrades the class  
 of commercial cattle put upon the market for ex-  
 port beeves, or for home consumption. Where a  
 calf takes all of a cow's milk for eight or nine  
 months, as is commonly the case in the handling  
 of this breed, if the cow be a fairly good milker,  
 her product in that line should be worth as much  
 or more than the average bull calf sells for at a  
 year old; and if he is kept longer, his value, as a  
 rule, does not increase, while the expense of keep-  
 ing grows with his age. The reasonable inference is  
 that, were fewer bulls kept, the range of prices  
 would go higher. It is true that the future of a  
 calf cannot always be foretold, and that an un-  
 promising one sometimes turns out a superior ani-  
 mal or breeder, but such is not the rule, and there  
 are many instances in which one that is off color,  
 or of indifferent lineage, and not likely to sell at  
 a paying price as a bull, would prove much more  
 profitable as a steer. And, by good management,  
 a steer calf may be raised by hand fit to make a  
 winner in the fat-stock shows as a yearling or a  
 two-year-old, and to sell for a fancy price. This  
 has been proven more than once at the Guelph  
 show, and doubtless elsewhere. In such a case,  
 the cow which produced him, if a good milker, has  
 proved a very profitable animal. There never  
 was a better opportunity than the present for  
 Shorthorn breeders to boom their favorite breed  
 at the fat-stock shows, by trimming more of the  
 bull calves, while prices for breeding stock are  
 temporarily ruling low and bulls are a drug in  
 the market; nothing will more quickly tend to in-  
 crease the demand and enhance values. There is  
 every probability that more tempting cash prizes  
 will in future be given for steers in all the beef  
 breeds, and for grades and cross-breeds as well,  
 and the prospect is that the raising of first-class  
 steers will be a very profitable business, and that  
 it will be well worth while to prepare to share in  
 the good things in prospect in that line of live  
 stock.

### ECONOMICAL FEEDING OF SHEEP.

Address by Robt. McEwen, before the Ontario Winter  
 Fair, December, 1907.

I am asked to introduce to you the subject of  
 "Economical Feeding of Sheep," a matter of  
 considerable importance, still not one that looms  
 up as prominently as it does in the horizon of the  
 feeders of cattle and horses. The very high  
 values to which fodder and all grains have risen  
 compel us to study the question very closely, and  
 while sheep are, comparatively, very small con-  
 sumers, yet it is none the less essential that they  
 should show a profit on what they do consume.  
 The stampede of cattlemen to get out from under  
 the business this year has alarmed some branches  
 of trade, which have gone out of their way to  
 circulate their opinion that farmers are not wise  
 to curtail their feeding operations by selling off  
 their cattle. But whilst we hear so much of lean  
 and immature cattle being marketed, there are  
 no indications of the sheepmen following suit,  
 their business evidently being sufficiently encour-  
 aging to stay with it. It has been pointed out  
 to me that my subject should be treated from a  
 feeder's rather than from a breeder's standpoint;  
 but, in this Province of Ontario, only lambs are  
 fattened for slaughter in any quantity, and, there-  
 fore, what is of more general interest is the  
 economical feeding of the breeding flock, whether  
 of grade or of pure breeding.

Profitable sheep breeding and feeding depend  
 upon the selection of a breed or cross that is  
 adapted to the environment, and the providing of  
 a suitable variety of feeds. In Britain we find  
 distinctive breeds of horses, and, more especially,  
 breeds of cattle and sheep, that have identified  
 themselves with and often are almost wholly con-

given must be determined by the breed—that is,  
 the size of the sheep. A ration for one sheep  
 weighing 250 pounds would be sufficient for two  
 sheep of the same age weighing 125 pounds each.  
 A sheep will eat a little over one pound of hay,  
 one pound of grain and five pounds of roots per  
 day for every hundred pounds of live weight.

Amongst other essentials to economical feeding,  
 are freedom from ticks, ample light and sunshine  
 in quarters that are dry and well ventilated, free  
 access to salt, and pure water.

### SOME POSSIBILITIES IN FEEDING PIGS.

Editor "The Farmer's Advocate":

Not being in a position to sell my grain when  
 it was bringing the top price, I was beginning  
 to get a touch of the "blues" on account of the  
 drop, when I came across Prof. Day's article in  
 "The Farmer's Advocate" of December 5th,  
 which led me to look up some of my records in  
 the same line. If you will kindly allow me  
 space, I will give you the details in connection  
 with the feeding of eleven pigs during the last  
 winter and spring, which had been, so far as the  
 price per bushel realized for my grain is con-  
 cerned, practically overlooked until now.

The following are the most important facts  
 to be noticed: The pigs were farrowed on Sept.  
 10th, 1906, by a Yorkshire sow bred to a Tam-  
 worth boar. They might be called an average  
 lot for the purpose of an experiment, as there  
 was a difference of 66 pounds between the heaviest  
 one at seven months and the lightest one at  
 eight months of age. Although the last winter  
 was a mild one, yet this was partly offset by the  
 pigs being kept in a cold pen. They were not  
 forced until the last  
 few weeks, their winter  
 feed being the different  
 grains, mixed with  
 about the same quan-  
 tity of pulped mangels  
 and sugar beets, a few  
 meals ahead of feeding,  
 and in proportions to  
 make an approximately  
 balanced ration, ac-  
 cording to the nutri-  
 tive ratios of the dif-  
 ferent foods, as given  
 by the O. A. C. Bul-  
 letin, No. 104, the  
 ratio being widened as  
 the pigs increased in  
 age. The amount of  
 skim milk and butter-  
 milk fed is only ap-  
 proximately estimat-  
 ed at 2,700 pounds,  
 but is practically cor-  
 rect at that figure.  
 The other amounts  
 were: Cull apples, 4  
 bushels; small pota-  
 toes, 2 bushels; roots,  
 86 bushels; shorts,  
 280 pounds; oats, 844  
 pounds; barley, 4,580  
 pounds; peas, 366  
 pounds; unsalable  
 beans, etc., 145 pounds;  
 total grain, including  
 shorts, 6,780 pounds.

The best lot of five,  
 on April 2nd, weighed,  
 respectively, 229½ lbs.,  
 206½, 206, 205, 174½, a

total of 1,021½ lbs.; and on April 9th, one week  
 later, 248 lbs., 226, 228, 201, a total of  
 1,119 lbs., being a gain of 97½ lbs. for the lot,  
 and 26½ pounds for the smallest sow. One re-  
 ason for the latter gaining so much more than the  
 others—her gain being nearly 4 pounds a day—is  
 the fact of their being crowded somewhat heavily  
 during the last week, to such an extent that they  
 did not always finish eating before leaving the  
 trough. This gave the "baby" her opportunity,  
 and she improved it.

The amount of grain fed during the week was  
 283 pounds of barley and 32 pounds of peas,  
 mixed in the form of a chop—a total of 315  
 pounds, or 3.23 pounds for each pound of pork  
 made. The buyer weighed the lot at 1,100  
 pounds, and paid \$6.65 per hundred, which  
 brought \$73.15.

The second lot of six, on May 13th, weighed,  
 respectively, 247, 226½, 220½, 219½, 193½, 177  
 lbs., a total of 1,284 lbs., and the buyer's weight  
 of 1,260 lbs., at \$6.40 per hundred, brought  
 \$80.60. One point of interest which is made  
 prominent by giving the respective weights of  
 each, is the fact that, although two or three me-  
 diums in each lot were fairly uniform in weight,  
 yet, on the whole, they were a very uneven lot,  
 and would probably not feed to as great an ad-  
 vantage as would be the case in a more even lot.  
 It may also be noticed that the heaviest of the  
 first lot, during the last week, made a much poor-  
 er gain than any of the others, and only a little  
 more than half of that made by the lightest one.



Bardon Marion.

Shire filly, brown, foaled 1904. First and champion, Royal Show, 1907. Sire  
 Lockinge Forest King. Owner, W. T. Everard, Bardon Hall, Leicester.

lined to certain counties or groups of counties  
 similarly situated as to climate, soil, quantity  
 and quality of pasturage. As a matter of fact,  
 this is something that does not apply only to  
 domestic animals; it is equally true as regards  
 the human race and plant life as well. Exotics  
 and the Codlie must have the heat, while the  
 Eskimo revels in furs and an oily diet. The  
 Highland cattle are no more to be found on the  
 fens of Lincolnshire than is the Shire horse on the  
 Shetland Islands. The black-faced mountain  
 sheep of Scotland belong to heather-growing hills,  
 and the delicate flavor of their mutton at once  
 depreciates on change to wholly grass pasture. In  
 our own Province, we find light horses and the  
 smaller and more active breeds of dairy cattle  
 preferred in the districts where scant pasture pre-  
 vails, and, where the growth is abundant, our  
 beef breeds develop robust form, wealth of flesh  
 and mossy coats. We may therefore conclude  
 that it is of the utmost importance, in order to  
 most economically produce mutton, that a breed  
 should be selected that is adapted to the soil up-  
 on which it must graze. In regard to supple-  
 mentary green feeds, nothing appears to give bet-  
 ter returns than rape and cabbage. During win-  
 ter, for roughage, lucerne (alfalfa), red clover,  
 and bright pea-straw, are best, with the addition  
 of a moderate quantity of roots.

Except for fattening purposes, very little grain  
 is required, and, when it is fed, a mixture of  
 equal quantities, by bulk, of bran, oats and peas  
 gives good results. The quantity of these to be

The total weight, then, of the whole lot, as sold, was 2,364 pounds, the amount received being \$153.75, an average of a trifle over \$6.50 per hundred. If we reckon the roots as worth 10c. per bushel = \$8.60; potatoes at 20c. = 40c.; apples at 10c. = 40c.; milk at 20c. = \$5.40; and deduct \$2.97 for cost of chopping the grain, and allow \$16.50 for first cost of pigs, there will then be a balance of \$119.48 for the grain fed, or a little over \$85.24 per ton.

The price per bushel received for the different grains through feeding was as follows: For oats, 59.91 cents; for barley, 84.58 cents; for peas and beans, \$1.05; for corn, 98.67 cents, besides a profit of \$2.18 on the 280 pounds of shorts, which I bought at \$1.00 per hundred. Of course, as Prof. Day intimates, this includes what would be screenings, etc., when the grain is marketed in the usual way. The 315 pounds fed to the first lot during the last week brought \$41.16 per ton, or 98.79 cents per bushel for barley, and \$1.23 per bushel for peas.

My limited experience in feeding beans to pigs teaches me that only a small proportion can be used with other grains, else the pigs may refuse the feed altogether.

Brantford Co., Ont.

AMATEUR.

#### OUR SCOTTISH LETTER.

It is almost time I was renewing my acquaintance with the readers of "The Farmer's Advocate." I had not forgotten them, but, like John Bunyan's dreamer, through the multiplicity of business, I have not travelled that way for some time. We are having rather a lively time here in respect of criticism of awards in Clydesdale classes at shows in the Northwest during the past autumn. It was hardly to be expected that an out-and-out Shire horse breeder and judge like Mr. Gibson, of Ruddington, would make awards giving satisfaction to Clydesdale patrons. Mr. Gibson knows what pleases a Shire horse breeder, and he was quite right to give the awards which satisfied himself. At the same time, it may be taken as a truism that, while a Clydesdale judge's awards in Shire horses will give satisfaction, a Shire horse judge's awards on Clydesdales can never satisfy anyone. The Shire horse breeder can scarcely find a Clydesdale anywhere that will please him. He wants what the Clydesdale has not got, what he calls "big joints" and "big bones." The Clydesdale has been deliberately, and for fully half a century, bred to have clean, sharply-defined, broad joints, and broad, flat, thin, razor-like bones. The Clydesdale breeder has aimed at quality of bone, and, therefore, he has eliminated the hair, which indicates coarseness of bone. The Shire-horse judge wants bone and hair, and he therefore gets round bones and greasy joints. It is inevitable that he should, when judging Clydesdales, select the kind of animal which a Clydesdale patron considers least desirable. The late Thomas Shaw, of The Island, Winnarleigh, who owned some of the best Shire horses ever seen in England, once said to me: "We will never have good Shires in our English show-yards until we get a decade of Scots judges." No one need be surprised that Mr. Gibson's awards on Clydesdales are not in favor. It would have astonished us to find it otherwise. Mr. Gibson knows his business thoroughly, but judging Clydesdales is not his business.

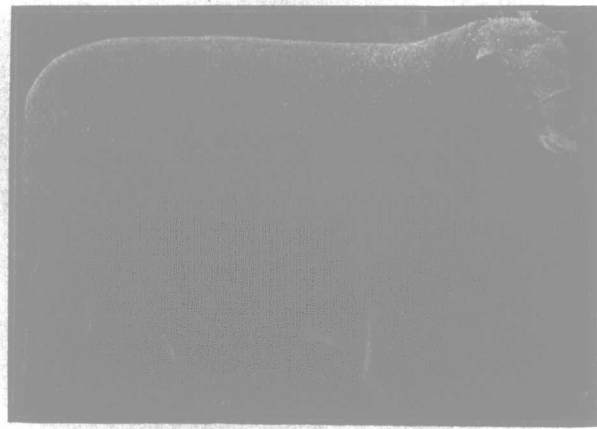
The Clydesdale Horse Society again means to favor the Canadian fairs with grants of Gold Medals in 1908. Two champion Gold Medals will be awarded at the following fairs or exhibitions: Quebec, Winnipeg, Brandon, Calgary, Regina, and Victoria, B. C. These are the same fairs as were favored in 1907, with the exception of Victoria, B. C., which next year (1908) will take the place of New Westminster. An important addition has been made to the regulations. Of course, all competing animals, male or female, must be registered either in the Clydesdale Studbook of Great Britain and Ireland, or in the Canadian Clydesdale Studbook. But, in addition, no animal will be allowed to compete for either of these medals a second time, to which one has already been awarded in 1908. The purpose of this regulation is to prevent any exhibitor pulling out a "crack" horse or mare at all or several of the fairs, and carrying off the Gold Medal every time. The Home Society does not believe in "pot-hunting," as we call it here; it desires that there be fresh competition at every one of the fairs at which these medals are offered.

#### THE FAT-STOCK SHOWS.

Fat-stock shows have been the order of the day for the past fortnight. The round-up came at Smithfield Club this week, when supreme honors in the cattle section went to the Shorthorn, in the sheep section to the Southdown, and in the pig section to the Berkshire. In the carcass competitions, the champion award for cattle went to a young (under two years old) A.-A. steer, in the sheep section to a Cheviot, and in the pig section to a Berkshire. Both the cattle and sheep champion carcasses were shown and bred by Mr. J. Douglas Fletcher, of Rosehaugh, Ross-shire. The champion live animal of the show was also

bred in Ross-shire. This is a Shorthorn steer, Gentleman John, owned by Mr. Peter Dunn, Sigglesthorne, Hull, but bred by Mr. John Ross, Millcraig, Alness, Ross-shire. He was junior champion of the show a year ago, and, while better champions have been seen at Smithfield, he was easily enough the best one in the show of this year. Lord Rosebery got the King's Challenge Plate for the best animal bred by the exhibitor, with an A.-A. heifer named Eloquent of Dalmeny. She was reserve champion of the show, being only beaten by Gentleman John. Reserve to her stood Mr. Herbert Leon's Shorthorn heifer, Silver Streak, a good sort, but rather deficient in second thighs. In fact, she is very A.-A.-like in the thighs.

The judging of the Smithfield championship this year was the occasion of great excitement. The championship judges, who were Messrs. Clement Stephenson, Newcastle-on-Tyne, and Teesdale Hutchinson, The Manor Farm, Catterick, Yorks., differed absolutely from the judges in the breed classes of Shorthorns, who were Messrs. Henry Dudding, Riby Grove, Lincoln, and George Terry, Aylesbury. These gentlemen only placed Gentleman John second in his class, and the award for the best steer in the show had been made by the championship judges to his successful competitor in the breed section before they knew of the steer's existence. It is the custom at the Smithfield Club Show for the judges of the champion classes to have placed before them the champions of both sexes in the breed sections. Having found the best animal of both sexes among these first-prize winners, then the second-prize animal in the class in which the winner has been found is brought out, in order to be pitted against the second-best animal among the first-prize winners, for reserve to the champion. The second-best animal among the first-prize-winning steers was the champion Galloway, Danesfield Challenger, a magnificent specimen of the breed. Gentleman John was drawn out to compete with Danesfield Challenger for reserve honors. Immediately the judges (Stephenson and Hutchinson) saw him, they got a scare. They examined him closely, and were obviously thoroughly convinced



Southdown Shearling Ram.

First and reserve champion, Royal Show, 1907. Shown by Mr. J. Colman.

that he was the best male animal in the show. But they had already awarded the Cup for the best steer to the bullock which had been preferred before him by the breed judges, and the stewards apparently refused to take back a rosette which had been given out. The championship judges then appeared to place no steer reserve, and went on with their work among the heifers. Having finished that in favor of Rosebery's Eloquent of Dalmeny, they came back to settle the supreme championship of the show. This takes the form of a 100-gs. plate, given by the Hall Company. The four animals in competition were the three Shorthorns, Gentleman John, Silver Streak, and Sir Oswald Mosley's steer, to which the steer cup had been awarded before the judges had seen Gentleman John. The stewards appeared to be determined to send Gentleman John away, but the judges were resolute. Their business was to find the best animal in the show. They were convinced that, of all they had seen, Gentleman John was the best, and they refused to alter their position. If Gentleman John were sent away to his stall, they would send for him, as they had seen him, and knew such an animal was in the show, and before them at the moment. The judges prevailed, and, amidst deafening cheers, the supreme honors went to the animal which the breed judges had relegated to second place in his class. There has seldom been a more emphatic condemnation of an award by one set of judges at the hands of another, and in fifteen years we have not seen a more popular champion award at Smithfield.

There was little that was novel at this show in the way of crosses. The best cattle in the show were the small breeds, or crosses of small breeds. The best specimens—ideal butchers' beasts—were the crosses shown by Mr. R. W. Hudson, Danesfield, Marlow, Bucks.

These were mostly the produce of an A.-A. bull and Dexter cows. In these days of demand for small joints, this is the class of meat that sells. Big bullocks are not wanted, and even heavy, big Highlanders are difficult to sell. Several bonnie specimens were exhibited from Devon and Cornwall, got by a Devon bull, out of A.-A. cows. This cross makes capital butchers' beasts, and may be improved upon. As for the cross-bred classes, the prevailing cross is the Aberdeen-Angus and the Shorthorn. The champion of the section, Waddesdon Starlight, is by a Shorthorn sire, out of an A.-A. cow. At 23 months 3 weeks, 3 days old, he weighed 1,621 pounds. Blue-greys, or the product of the Shorthorn-Galloway cross, were not so numerous as they have been at Smithfield. Quite a number of three-parts-bred A.-A. animals were shown. These make very nice bullocks, of handy weights, and, as a rule, they cut up well. The heaviest pen of sheep were Lincoln wethers, three of which weighed 1,126 pounds at 582 days. We scarcely think anyone would be much appertized by this mutton. The three Southdowns to which champion honors were awarded weighed 430 pounds at 10 months old. They were perfect beauties; in fact, models of mutton. Suffolk-Cheviots made very good mutton in the carcass classes. They seem to have plenty of lean meat, and that is all the rage these days.

"SCOTLAND YET."

#### TUBERCULOSIS IN SWINE.

We are not an alarmist, but there appears to be a pretty general consensus of opinion that hogs may and do contract tuberculosis from infected milk or dairy by-products. In Denmark it has been found necessary to require that all dairy by-products shall be pasteurized at the creamery before returning to the farm. By adopting this plan, the spread of the "white plague" has been materially checked in man and the lower animals of the Danish Kingdom. In Canada, nothing has been done, so far as we are aware, to prevent the spread of disease from infected milk or cream at creameries and cheeseries. We may well ask ourselves if the time has not come when strong measures should be taken on this question. It has been proved that the pasteurization of whey increases its feeding value, and also tends to prevent the spread of "yeasty," "bitter," and other flavors, which cause trouble in the making of cheese. Fortunately, the degree of heat which will kill most of the yeast flavors will also destroy the tuberculosis germ, which, as Prof. Edwards said at the recent creamery meeting held at the dairy of the O. A. College, is one of the easiest germs to kill. Why should we neglect this most important work when the benefits are so marked in improving the quality of milk and whey, besides reducing danger from infection to a small item? Mr. Frank Hems, Chief Dairy Instructor for Western Ontario, estimates that the cost will not be more than 50 cents per ton of cheese to pasteurize the whey at 160 to 165 degrees. The cost is a mere bagatelle, compared with the advantages.

The Iowa Station, in Bulletin No. 92, popular edition, makes some rather startling statements, which are probably more or less true for Canada. Among many, we select a few at random:

With the probable exception of hog cholera, there is no disease more dreaded among swine-growers than tuberculosis. The disease is of frequent occurrence, and, according to statistics, the number of animals so affected is annually on the increase, particularly in dairy sections.

The carcass of an infected animal is utterly unfit for human food.

Direct hereditary transmission among swine rarely if ever occurs, according to European investigators, who are unanimous in the theory that the disease is caused by infection of dairy products containing the tubercle bacilli. Instances are common where droves of hogs which at some time in their lives had been fed whole milk, skim milk or buttermilk, when slaughtered, showed a large proportion of the number to be infected with tuberculosis. This is proved by the fact that tuberculosis prevails mostly where the dairy industry is the most extensive, namely, Northern Germany and Denmark.

It would be foolish of us to shut our eyes to the danger from infected milk. There is a tendency to pooh-pooh the danger, but it is a real one, nevertheless. Farmers and dairymen should uphold all reasonable measures taken to maintain the health and purity of our stock. There was considerable opposition on the part of Iowa farmers and creamerymen to the law requiring pasteurization of all dairy by-products in the State, but we understand this is passing away, as farmers and others interested begin to realize that the measure is one of importance to them. It is unfortunate that in Canada measures of this nature are more or less mixed with party politics, and it would seem as if all matters relating to the health of the body politic must sooner or later be under the control of an independent commission. Until such time, all parties interested would be acting wisely to uphold all measures

which have for their object the maintenance of the health of man and beast in Canada. It is a very important matter. We know of none which is equal to it. We believe that the sound sense and good judgment of Canadians everywhere will support the enforcement of laws which have for their object the restricting of the spread of disease by all means known to science. It will doubtless be the duty of the State to reimburse, to some extent, at least, losses due to the slaughter of infected animals.

The bulletin states that the objects sought in the experiments conducted were:

1. To test the effect of feeding to pigs milk known to contain virulent bacilli of bovine tuberculosis.
  2. To test the effect of feeding pasteurized milk to pigs.
  3. To determine whether there is any difference in the susceptibility of pigs fed tuberculous milk when on pasture and in small, dry yards.
- For the experiments, forty pigs were divided into four lots of ten each, and each was fed corn meal and shorts, in addition to special treatment, as follows:
- Lot 1 was kept on timothy pasture, and fed pasteurized skim milk.
- Lot 2 was kept on timothy pasture and fed skim milk containing bacilli of bovine tuberculosis.
- Lot 3 was kept in a small, dry yard and fed pasteurized skim milk.
- Lot 4 was kept in a small, dry yard and fed skim milk containing bacilli of bovine tuberculosis.

**Conclusions:**

1. That pigs fed milk containing virulent bacilli of bovine tuberculosis are very likely to become quickly and seriously infected with the disease.
2. That properly pasteurized creamery skim milk is a safe food for pigs.
3. That pigs in small, dry yards are not more susceptible than pigs in pasture.
4. That every precaution should be taken to know definitely that all milk and other animal products fed to pigs are free from tuberculosis.

H. H. D.

**THE FARM.**

**CORRECT ANGLE OF WINDMILL FANS DEMONSTRATED BY EXPERIMENT.**

Editor "The Farmer's Advocate":

Replying to Mr. Jeffrey's question, in your esteemed issue of December 19th, permit us to say, as manufacturers of the Canadian Airmotor, that the question is a simple one. In a windmill fan, whether the wooden style, known as the "Halladay," or the modern steel mill, the fan is secured to the rims at a certain well-defined angle, usually about 25 degrees. Sufficient experimenting has been done during the last thirty or forty years to clearly demonstrate the correct angle necessary to procure the maximum power. Therefore, the question of the proper angle that a sail or fan should present to the wind was determined long before the present steel mills were perfected. In the wooden mills, the slats or fans naturally were flat, without concave. But, with the advent of steel mills, it was found that a slight concave in the fan added materially to the power of the mill. This concave is just sufficient to somewhat catch the wind, and yet not sufficient to retard it, for the power is obtained by allowing the wind to pass through the fans. The fact that an 8-foot steel wheel will do the work that formerly necessitated a 10-foot wooden Halladay mill, demonstrates that the gain was made, not only in substituting lighter and stronger material, but also in giving the fans a slight concave form.

In Mr. Jeffrey's boat theory, it is obvious that it is the duty of the sail to catch the wind and hold it, in order that it might do its duty. In the case of the windmill, it is only necessary to catch the pressure for a moment, then allowing the wind to pass through the fans, the power then having been extracted in the movement of the fans.

THE ONTARIO WIND ENGINE AND PUMP CO.

**A SANE AND COMPLETE STATEMENT OF THE CASE.**

Have just received your special Christmas Number of "The Farmer's Advocate," and wish to congratulate you upon its excellence, both in subject matter and general fine finish. The illustrations are as good as the best.

I have read with much interest your article, entitled, "The New Education for Rural Schools," and would like to know who wrote it. It is one of the sanest and most complete statements of the case that I have seen. I wish you abundant success in the campaign for the improvement of our rural schools, and prosperity for the New Year in all your work. Thanking you for this very excellent copy of the Christmas Number.

J. W. GIBSON.  
Frontenac Co., Ont.

**EXPERIMENT WITH FERTILIZERS ON ROOT CROPS.**

Editor "The Farmer's Advocate":

I have never had much faith in the application of commercial fertilizers to farm crops. In the spring of 1907, however, at the request of a representative of the Potash Syndicate, I agreed to try an experiment for comparison. The results, as given below, are very pleasing. For both mangels and turnips, three one-quarter-acre plots were taken and given the same treatment as to cultivation, seeding, thinning, etc., but different in the application of fertilizer. The soil was light clay loam; land which had been under rotation for six years, and had been treated to a light dressing of farm manure the previous year. A timothy-and-clover sod was plowed under in the fall and grubbed in the spring to a depth of about six inches, then harrowed thoroughly with disk and spring-tooth harrows, after broadcasting the necessary fertilizers.

The seed was sown in drills, thirty inches apart, for turnips, at rate of 2 lbs. per acre; and mangels at rate of 9 lbs. per acre. The mangels were sown May 24th; turnips, June 4th and 5th. Cultivation began June 15th, and continued every ten days until August 28th. Mangels were thinned to about eight inches, and turnips to about ten inches. Mangels were pulled from 20th to 25th of October, and turnips from 5th to 15th November. Below is the summary of yields, etc.:

**MANGELS.**

Per Acre.	Increased Yield	
	Per Acre.	Per Acre.
Plot 1—No fertilizer.....	861	
Plot 2—Muriate potash, 160 lbs. Acid phosphate, 400 lbs. Muriate of soda, 180 lbs.....	1272	611
Plot 3—Acid phosphate, 400 lbs. Nitrate soda, 180 lbs.....	924	263



Two-year-old Hereford Steer.

Breed champion; winner of two cups and reserve for grand championship, Birmingham Fat-stock Show, 1907. Weight, at 940 days, 1,955 lbs.; average daily gain from birth, 2.08 lbs.

To get the profit obtained by using fertilizer, the mangels may be reckoned at 12c. per bushel. The cost of the fertilizers are as follows: Muriate of potash, 24c. per lb.; nitrate of soda, 3c. per lb., and acid phosphate, 1c. per lb. Then we have:

Value of Increase Per Acre.	Cost of Fertilizer Per Acre.		Profit Per Acre.
	Per Acre.	Per Acre.	
Complete test—Acid phosphate, muriate of potash and nitrate of soda... 611 x 12=\$73.32	\$13.40	\$60.02	
Acid phosphate and nitrate of soda... 263 x 12=\$31.56	\$9.40	\$22.16	

In the above, as below, the quantities are all reckoned per acre. In the above, the plot treated with complete fertilizer may have been slightly better situated in regard to drainage and quality of soil than the other two plots, but not sufficient to make a difference of more than 75 bushels per acre, probably not that.

**TURNIPS.**

Per Acre.	Increased Yield	
	Per Acre.	Per Acre.
Plot 1—No fertilizer.....	808	
Plot 2—Nitrate of soda, 160 lbs. Muriate of potash, 120 lbs. Acid phosphate, 500 lbs.....	1362	554
Plot 3—Acid phosphate, 500 lbs. Nitrate of soda, 160 lbs.....	1117	309

**PROFITS.**

Turnips, 9c. per bushel.

Value of Increase Per Acre.	Cost of Fertilizer Per Acre.		Profit Per Acre.
	Per Acre.	Per Acre.	
Plot 2—Complete fertilizer—Acid phosphate, muriate of potash, nitrate of soda... 554 x 9=\$49.86	\$12.80	\$37.06	
Plot 3—Acid phosphate, nitrate of soda..... 309 x 9=\$27.81	\$9.80	\$18.01	

R. J. MESSENGER.

**SEED SELECTION FROM A FARMER'S STAND-POINT.**

From an address by J. M. McCallum, before the Ontario Winter Fair, December, 1907.

Strictly speaking, farmers have always paid more or less attention to the procuring of their seed grain. Some have considered that, by cleaning a portion of their own general crop two or three times with their fanning mill, they have done all that is necessary. Others save a portion of their seed from the best field; others save the seed from the best part of the best field, while still others depend upon change of seed from some other farmer as their supply for the next crop. Now, all of these methods were all right in their day, and certainly must have resulted in improvement; but, in order to keep abreast of the progress in other branches of practical agriculture, we must resort to some advanced system of improving our seed supply. The best and most satisfactory method we know of to-day is by the

special seed-plot, in conjunction with careful and timely hand selection of the best heads from the strongest plants, which means a constant improvement from year to year.

The seed-plot system, as a source of seed, is very simple in detail. The beginner, having selected his variety, procures a sufficient quantity of seed to sow at least a quarter of an acre of ground, which ground should be in a good state of cultivation, and as free as possible from weeds. In sowing the seed in this plot, it is well not to sow too thickly, in order to secure good full development of the plants. Some growers follow the plan of sowing from only every second spout of the seed drill. This plan has to

recommend it the fact that it allows more chance for the selection of heads at harvest time, and allows for fuller development of plants in the rows. Next comes the selection of plants, which is done at harvest time, while the crop is still standing, and let me here say that this is really the most important stage of the whole work. The grower must first have an ideal in his mind; he must decide what type of plant to perpetuate, and carry on the work of selection accordingly. Keeping this ideal in view, he should select from the strong, vigorous, healthy plants, such heads as are superior to the surrounding heads, without having been grown in more favored condition. This starting-point once secured, all progress lies in continued selection. The number of heads selected should be sufficient to furnish enough seed to sow the quarter-acre seed-plot next year. If time and help permit, it is well to have an extra quantity of seed, to avoid losing well-bred seed in case of one year's failure of crop. The remainder of the crop on the plot will furnish improved seed for the general crop on the farm. The objects of this system are twofold: Firstly, to develop and maintain a high-class strain of seed, adapted to the conditions existing on the grower's farm; and, secondly, to keep up a supply of pure seed for the grower's own use.

One objection which might be raised to following this system is the amount of time taken up in the work of hand-selection in these times of expensive farm labor. When we consider the permanence of results, and the increase in the

average yield and quality of our grain crops, and the consequent increase in monetary value, this objection sinks into insignificance. Half a day's work for two men will be sufficient to secure all the hand-selected heads necessary for furnishing the seed for next year.

#### ADVANTAGES.

Insures a trustworthy basis for supply of pure seed.  
Increases average yield per acre—best heads selected—like yields like.

Reduces the work of grain-growing to a science.

The simplicity of the system commends it to every farmer.

Increase in financial returns adds to the prosperity of the farming community.

The commercial aspect of the question: Farmers and seedsmen will pay good prices for guaranteed seeds.

#### A FAMILY FAVORITE.

I have been your supporter since 1872, excepting one year or so. Have all the numbers in that time but two or three. I am very much pleased with the paper. It is a family favorite. For the encouragement of "Hope," editor of "Quiet Hour," would say we like it very much. Many things it says are beautiful. Wishing you the compliments of the season, and good success in the coming year.  
W. PHILLIPS.

## The Good Roads Session at Guelph.

### "GOOD ROADS RIGHT NOW."

Some of the simplest things are the greatest, and some of the greatest are the hardest to understand because of their simplicity. A man whose name will go down through all the ages was famous for two of the simplest things imaginable. Columbus set an egg on end, and discovered America. In the one case, all he had to do was to crack the end a little; in the other, to sail straight ahead. With a few succinct observations along this line, D. Ward King, of Missouri, opened his breezy address on "Good Roads Right Now," in the lecture-room of the Ontario Winter Fair. "Here's the problem with the roads," he continued. "I understand you have about 25 per cent. of hard-surfaced roads in Ontario. The road problem, therefore, is largely one of treating the native soil. Seven dollars a year will keep a mile of ordinary road in the finest condition, if the people will have the sense to use simple methods so as to keep the water off the roads. On my way through to Guelph, I caught a glimpse of the Sarnia road, a magnificent highway, which probably could not be constructed for less than \$10,000 a mile, but it appeared to be dished in the middle. It would be cheaper to work that road so as to take the 'hips' off than to leave them there."

#### REQUISITES OF A GOOD ROAD.

What are the requisites of a good road? It must be oval, hard and smooth. To maintain it in this condition, the cheapest, simplest and most easily-applied method is the best, and the simplest method is the Missouri split-log drag. It does things no other implement does, and does things more cheaply than could be accomplished by other means. Any man with an axe and auger can make a drag that will benefit the road 100 per cent. Mr. King read letters from men in different parts of his own country telling how some of the worst pieces of road in their neighborhoods had been transformed into the very best simply by dragging. One man, with a drag that cost him eleven cents to construct, said he had made a piece of road which he afterwards used for a speedway. The speaker himself had, by dragging his own road, from his front gate to his neighbor's gate, towards town, made a wonderful improvement. He told of standing one morning watching his neighbors' teams, with loads of hogs, plodding along through the mire, steaming wet, until they came to the road he had been dragging since 1896, and then go off on a trot. The only difference in the road was due to the split-log drag.

#### IT FILLS THE RUTS.

How is such improvement possible? What does the drag do to bring it about? First, it smoothes the road, levelling down the high places and obliterating the wheel tracks. In Missouri, and, he presumed, in Canada as well, they drive down the same rut till the axle rubs, and then they strike a new one. The depth of the rut is regulated by the length of the spokes. On a dragged road, you can't travel in the same track if you want to. Sometimes rolling the roads is resorted to, but a load of grain on an inch-and-a-quarter tire exerts a greater pressure per square inch than any steam roller.

#### WHEELS ACT AS SLICERS.

The trouble is the wheels do not act as rollers, but rather as slicers. To illustrate how they work, the speaker told how a lightning-rod agent went to work to put the rods eight feet into the ground. He got a spade, a rod, and a bucket of water; dug a small hole, filled it with water, and then jammed the rod down a few inches, then more water and more ramming, till in a short time it was down 8 feet. That's the way wheels work the roads. They slice them up. The drag prevents this. How well it prevents it is an astonishment even to its users.

#### THE THEORY OF DRAGGING: WHY THE HOG WALLOW HOLDS WATER.

In 1896 he decided to go out and improve his road, thinking his neighbors might follow his example. In twenty-four hours after a two-weeks spell of rainy weather, he made a race track out of that road. But people, when told of the results, wouldn't believe it, so he had to dig up a theory to explain them. The illustration which appealed most to the Winter-fair audience was

the hog wallow. You have all noticed, he said, how, in the hog wallow, after a rain, when the high places have all dried up, water will stand for days in the hollows. But go into the garden and empty a tubful of water on the loose earth, and it will disappear almost as fast as you pour it out. The hog wallow is composed of puddled earth—the hogs have puddled it, made a sort of cement—while in the garden the soil is loose and pervious to water. A dragged road will become like the hog wallow, in that it will be nearly impervious to water, and, being also oval and hard, it will shed the rain, instead of holding it to soak down into the roadbed.

#### WHEN TO DRAG.

Q. At what stage should the road be dragged, and how often?

A. Drag when the road is moist, but not sticky.

#### THE DRAG AS A GRADING IMPLEMENT.

It is a mistake to suppose that the drag will not grade a road. He had driven over roads where stumps had been buried by repeated use of the drag. Stones in the road will be either drawn to the center or covered up.

#### TREATING A SOD-SHOULDERED ROAD.

Q. How would you proceed to treat a road

some common ways of misusing the grading machine. In Missouri, he said, they are accustomed to hitch six or eight teams on the big grader, and, after a lot of parley and waste of time, they proceed to draw in a lot of loose mire, stones and rubbish, then a furrow of blue-grass sod, and then some nice black earth; and when they are through, they have a better place to plant onions than to drive. Then, after the next rain you drive down through this "loblolly," the rain gulleys it up, and after that people take to the other side of the ditches.

Q. How about a gravelled road?

A. In dragging a gravelled road, it would probably be necessary to put iron on both faces of the drag.

#### A BENEFIT EVEN TO SANDY ROADS.

Q. Will the drag benefit sandy roads?

A. Until two years ago I answered that question according to the books, and said no; but from what I have been recently told, it is clear that the drag will be of benefit even to a sandy road.

#### MUD HELD IN COLD-STORAGE.

Q. How would you treat a seepy place in the spring?

A. Let us go back to November and see what causes that horrible mess when the frost comes out in the spring.

There is the road, all cut up with ruts and hoofprints, each holding about a quart of water; that soaks down into the subsoil and converts it into mud. The frost comes and freezes it up, making it hard for a time, but the mud is still there. The frost gets the blame for spoiling the roads, but it is not the frost, but the combination of water and frost. Frost won't hurt a pump unless there is water standing in it. The roads will be all right in the spring if we don't put a lot of mud into cold-storage in the fall. If the roads are kept dragged, they won't be saturated with water in the fall, and consequently will be much better in spring.

Q. Will the drag do away with metalling?

A. No, but judicious dragging will add to the

duration of a gravelled road.

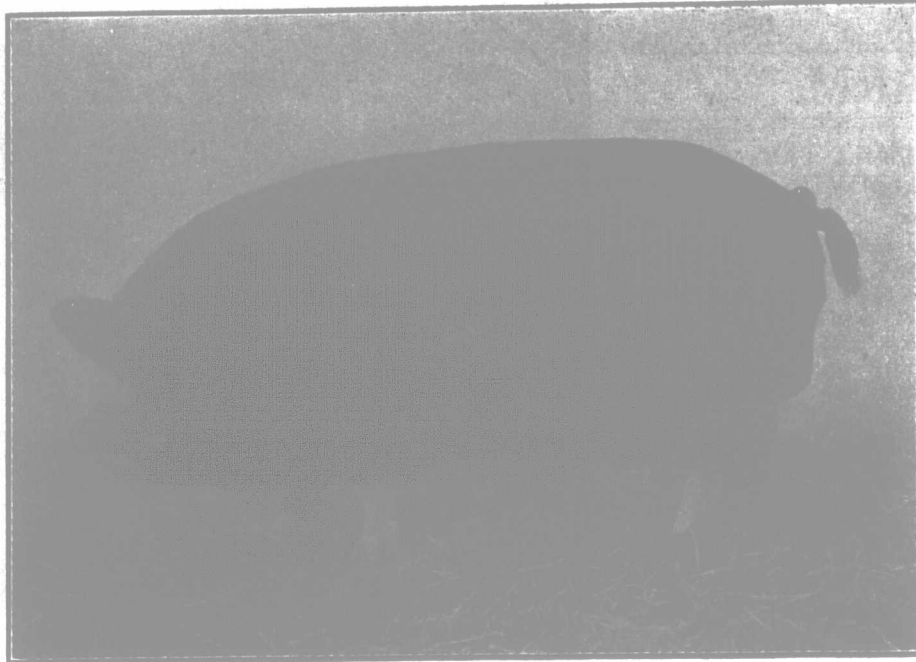
In conclusion, Mr. King announced that he had made arrangements with the Provincial authorities to send his bulletin to everyone who was prepared to make and use a drag. A show of hands revealed ninety requests for the bulletin.

#### OBSERVATIONS ON THE WORK OF THE SPLIT-LOG DRAG.

It was a happy arrangement of the programme of the Good Roads session, at the Ontario Winter Fair, which slated Mr. A. W. Campbell, Deputy-Minister of Public Works and Provincial Highways Commissioner, to follow Mr. King with an address on "Observations on the Use of the Split-log Drag." Though less pyrotechnical than Mr. King, Mr. Campbell is not less enthusiastic on the question of road improvement, and his speech was a model of Scotch-Canadian precision and conciseness. He began by remarking that many of the points the previous speaker had emphasized were of great importance to us in Ontario.

#### PRINCIPLES OF WORLD-WIDE APPLICATION.

There are certain principles of world-wide application that must be adhered to if we are to make good roads in the best possible way. He was pleased to hear Mr. King's enthusiastic description of the work of the drag, and hoped it would get the people to work. If, with a few



Highmoor Mikado 10435.

At head of herd of G. T. Inman, England. Winner of 22 firsts and seven championships.

that was flat in the center and bordered by high sod shoulders?

A. Drag it. First go over the sod with a disk when sopping wet, then go away and leave it. When it gets dry, go over it with the drag, and draw that loosened earth in a little at a time. The sod will be reduced to a fine condition, like gravel, the grass won't grow much, and you will be applying to the road layers of puddled clay. To widen the road, first drag it four, five or six times, till a crown has been produced, giving drainage. After the next rain, plow a shallow furrow along each side; drag that in and spread it over the road, thus widening it two feet. Repeat till the road has been made the desired width.

#### RED CEDAR DRAG THE BEST.

Q. What size of drag should be used?

A. It depends on the size of the team. For a pair of 1,200-pound horses it should be not over 7 feet. The best drags are of red cedar posts or poles. Set the halves of the log flat sides to the front, and not over 30 inches apart. It is well to shorten the right end of the front piece, so as to prevent it catching on the side of the ditch or furrow before the rear half comes to it.

#### AN ONION BED WHERE THE DRIVEWAY SHOULD BE.

Mr. King then volunteered a little satire on

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hours' time and a few cents' expense, a drag can be made that will so greatly improve the roads, there will be no excuse for failing to utilize it. The split-log drag will not make asphalt pavements, ideal stone roads, or gravel roads of the most substantial character, but it has a duty to perform that cannot be discounted, if we are to equip ourselves to make roads in the best possible manner, maintain them as they should be maintained, and utilize money and labor to the best advantage.

**WHAT WE HAVE SPENT ON ROADS.**

Probably no State in the Union has expended more money and labor on roads than has Ontario. In the last ten years, ten million days' labor and nearly \$11,000,000 in cash have been spent, much of it innocently, if not in an ignorant and shiftless way, and consequently it has produced some discouraging results. It may be that much of this disappointment has been owing to imperfect equipment. It isn't necessary to raise more money or spend more time to make ideal roads. The expenditure of the past ten years, properly applied, should suffice to macadamize every rod of road.

**THE FUNDAMENTAL PRINCIPLE IS DRAINAGE.**

However, we have been making progress. One hundred and fifty-three townships have done away with statute labor, a system which, though it accomplished an enormous amount of good in the pioneer stage, was unable to finish the work of roadmaking. Proper results in roadmaking require shrewd ability in direction and adherence to fundamental principles. And, after all, the whole problem is a question of drainage, by which we secure a firm foundation to carry the load. To insure drainage, the road must be crowned, and the crown kept scraped or smooth. Where the roads are heavily travelled, they must have metal surface to resist the action of traffic. Make the bottom; see that it is tile-drained, if necessary; then make the ditches, and then have a uniform drop to the ditch.

**TILE-DRAINING.**

The question of treating "spouty" hills had been raised during the previous address. With regard to these places, Mr. Campbell remarked that, no matter how much gravel is piled on them, the whole mass will simply quiver, moving up and down under traffic, especially in the spring, and finally breaking all up. In treating such, it is necessary either to have a very high crown, or, better still, to tile-drain. Run a row of ordinary farm tile down each side of the road, dig the trench narrow, lay the tile carefully, and fill in with gravel, broken stone or sand, which will then stand as a filter bed. Having been thus drained, a coat of gravel on the crown will secure that piece for all time to come as a good road.

**WIDTH OF ROADS.**

Leading roads should be 24 feet wide between ditches; for others, 20 feet is sufficient, while back concessions and division lines need not be more than 18 feet. The crown should be an inch to the foot from center to side; that is, a road 24 feet wide should have a drop of one foot each way.

**AIMING AT PERMANENT RESULTS.**

In Ontario we are aiming at durable roads. Nearly 3,000 miles are now being improved as county roads, from which main township roads lead off. Back of these, again, are the concessions and side lines, many of which will, for a long time to come, remain earth-surfaced. Here is the place for the split-log drag. Having ditched these roads, and crowned them by whatever means may be deemed best, we come to the most important stage, which is maintenance. For putting up the road in the first place, Mr Campbell likes the grading machine. It is a good implement in capable hands, and has been of immense service in roadmaking. It is a fact, however, that many miles of road have been injured or destroyed by its misuse. Its use must be studied intelligently. Many townships would be better off if they never had a grader within their limits. In many municipalities its operation is a howling farce. For all that, it is a very serviceable machine if intelligently used.

**THE PLACE OF THE SPLIT-LOG DRAG.**

After the crown has been constructed by the grader, the split-log drag, or whatever means you choose, then keep the ruts out. The object and effort should be to use the split-log drag, and use it as often as may be needed for this purpose. Decide that it is necessary in spring after the frost has gone out, as soon as it is dry enough; then again a little later, rain or not. Then, throughout the summer and fall, use it after every rain.

During the past summer, through the enterprise of "The Farmer's Advocate," which, ever since he has known it, has been devoting a great deal of space and intelligent attention to the question of roadmaking and maintenance, he has had an excellent opportunity of studying the work of the split-log drag in the split-log-drag compe-

tion, which, by permission of the Minister, Hon. Dr. Reaume, he had undertaken to judge. The 63 competitors who entered in the contest were only a small proportion of those who have been sufficiently interested to make and use the drag. The contestants displayed a marvellous interest in the work of the drag, and the idea of the prize was entirely subordinated to the desire to improve the roads. In most cases the drag was used on earth roads, and in the majority of instances the road had been at some time previous shaped with the grader. In other instances the drag was made to do the crowning, and its feasibility for this purpose was amply demonstrated, although it requires the expenditure of considerable energy to crown a flat road with the drag. The sixty-three men were nearly all convinced that the drag is one of the most serviceable implements that could be employed by a municipality.

**MAY BE USED TO ADVANTAGE ON GRAVELLED ROADS.**

Not only is it useful on earth roads, but it is good to shape a freshly-gravelled road. On an old gravelled road, it would probably be found best to reverse the drag, using it to scrape the mud and dirt off the gravelled portion, thus completing the convexity without covering the metal with dirt. By using the grader in its proper place as an implement of construction, and then having the drag used when required on every beat, he believed that in ten years a transformation will be made in the condition of the roads.

**UNITED STATES CROPS IN 1907.**

The final estimates of the Crop-reporting Board of the Bureau of Statistics of the Department of Agriculture (in which certain necessary corrections have been made in the earlier preliminary estimates), based on the reports of the correspondents and agents of the Bureau, supplemented by information derived from other sources, indicate the acreage, production, and value, in 1907, of the farm crops of the United States named in the following table to have been as stated therein:

CROPS.	Acreage. Acres.	Production. Bushels.	Value Per Bushel. Cents.	Farm Value, December 1, 1907.
Corn	99,881,000	2,592,320,000	51.7	\$1,340,446,000
Winter wheat	28,132,000	409,442,000	88.2	361,217,000
Spring wheat	17,079,000	224,645,000	86.0	193,220,000
Oats	31,837,000	754,443,000	44.3	334,568,000
Barley	6,448,000	153,317,000	66.6	102,058,000
Rye	1,926,000	31,566,000	73.1	23,068,000
Buckwheat	800,000	14,290,000	69.8	9,975,000
Flaxseed	2,865,000	25,851,000	95.6	24,713,000
Rice	627,300	18,798,000	85.8	16,081,000
Potatoes	3,124,000	297,942,000	61.7	183,860,000
Hay	44,028,000	*63,677,000	\$11.08*	*743,507,000
Tobacco	891,000	+698,126,000	+10.9*	76,234,000

The average weight, per bushel, is shown by reports received by the Bureau to be 56.9 pounds for spring wheat, 58.9 pounds for winter wheat, and 29.4 pounds for oats.

**PROUD OF IT.**

The Christmas number of your paper has just reached us, and we are proud such a high-class magazine is published in our country. We find this number is quite up to your usual high standard, and, wishing you continued success, we remain,  
WM. RENNIE CO., LTD.  
Toronto, Ont.

I would not like to be without your paper. I get a lot of valuable information in it, as I think every one that reads it does. We think more of "The Farmer's Advocate" than all the rest of the papers we get put together.  
Simcoe Co., Ont. CHAS. F. BILTON.

**THE DAIRY.**

**ARE THE COW-TESTING ASSOCIATIONS WORTH WHILE?**

**OPINIONS FROM SOME OF THE MEMBERS.**

At the dairy session of the Ontario Winter Fair this year a feature was made of the testimony of practical farmers who have had experience with the cow-testing associations organized in various parts of Canada by the Dairy Branch of the Dominion Department of Agriculture.

**FIVE COW-TESTING ASSOCIATIONS IN PETERBOROUGH.**

The first speaker was E. Hawthorne, of Warsaw, Ont., who stated that there are five cow-testing associations in Peterborough County. As is now pretty well known, the conditions imposed by the Dairy Branch are that there must be at least twenty members in each association, who will agree to weigh and sample each cow's milk morning and evening of three days a month. From the data thus obtained, the Government expert calculates the monthly yield of milk and butter-fat of each cow in every herd, and the results, in tabulated form, are supplied to each member. The figures reveal some striking differences in the yields of individual cows in the same herds. Valuing the butter-fat at 26 cents a pound, there was found to be a difference of \$25 or \$26 per annum between the yields of different cows. The work of cow-testing is a good thing, and it is right that the Government should take the lead. He cited the benefit of the travelling dairy, which was a Government enterprise. It is true the work of cow-testing redounds to the advantage of the individual, but we often have to coax people to do what is good for them. It has required a vast deal of persuasion to get people to build silos, and—he said it with all reverence—they even have to be coaxed to save their own souls.

**TIME TRIFLING—BENEFITS LARGE.**

A. Dunn, of Ingersoll, secretary of his local cow-testing association, was sure that the great majority of dairymen had an exaggerated idea of the amount of time required to weigh the milk, and failed to realize the benefits. The time is a mere trifle. From actual timing, he was able to report that, in one large herd, it required an average of 20 seconds per cow to weigh and sample the milk, and in another it took 21 seconds. Still another said he could weigh and sample the milk of three cows in a minute. But, to put it at one minute per milking (which would be very slow and dilatory work), it would take one hour, all told, to weigh and sample the milk three days a month throughout a ten-month milking period. Surely that is very little time to take to find out the standing of the cows.

As to the benefits, supposing you had money to let out on notes of hand, would you feel satisfied if on one hundred dollars you drew one or two per cent. interest, whereas on another hundred you received ten per cent? Would you not insist on a reasonable return from each hundred-dollar note? So with the cows; are we to be content to have some that make a profit and others that do not? Are we not justified in looking for a profit from each cow?

There are some people who claim that weighing is unnecessary. They think they can guess the weight nearly enough. He was prepared to tell them, on the authority of every member of his association, that it is impossible to compare the yields of cows at all accurately without weighing and testing the milk, and then adding up the records at the end of the year. He told of two cows in his own herd which milked about equally well when fresh, and appeared about equally good but when it came to totalling up, they found that one of them gave 5,652 pounds of milk in 11 months, the other 11,155 pounds of milk in 12 months. Again, he had one cow which he thought would have to go, as she did not appear likely to come up to his standard of 6,000 lbs. of milk, but he was surprised to find that she gave over 7,000 pounds. Had he not kept a record of this cow, he would have made the mistake of selling her for about \$20, as large numbers of the poorer class of cows are sold annually from this district, "to go to some locality where the people are better off," and able to keep poor cows. Innumerable instances could be cited to show that the man who depends on guesswork in culling his cows, is almost sure to fool himself. It pays to weigh the milk, and it pays to test. One man, who had been weighing his cows' milk for years, and by means of it had raised his average milk yield from three or four up to eight thousand pounds a year, brought it to the association last year in order to have it tested for butter-fat. The time it takes to weigh milk is trifling, and the longer you are at it, the less consideration you will attach to it. The dairyman above mentioned, after first starting to weigh, dropped the practice, but resumed it the next season, and has done it consecutively ever since. The question was raised whether weighing and



sampling three days a month will not give practically as good a comparison of the cows as weighing every day, and the reply was that it would give practically as accurate results. There is this one point, however, which the editors of "The Farmer's Advocate" would impress: The man who weighs only three days a month will not have as good a guide for his daily feeding operations, nor will he have that constant stimulus before his herdsman and milkers that is essential to maximum results. For these reasons, it pays handsomely to weigh every milking, though weighing three days a month is far better than not weighing at all.

#### THE MEN WHO ARE TESTING SEND THE MOST MILK TO THE FACTORIES.

W. H. McNish, of Lyn, Ont., was the third speaker. He emphasized the need for more enthusiasm in dairy work. We do not make half the progress we might. We should get our families interested in this testing work. He had noticed, in his district, that the men who are testing their cows are the ones who have sent the most milk to the cheese factories and have the best herds to-day. No man can successfully maintain a high-class herd without milk records. There is money in testing—money for the individual, and money for the nation. There are also commercial possibilities, even for men with grade herds. The progeny of high-class tested cows will sell at a premium. He told of one heifer from a cross-bred cow which he sold for four times what his neighbors were getting for similar heifers, just on the strength of her dam's milk record.

#### THE SANITARY HANDLING OF MILK AND MILK PRODUCTS.

From an address by Prof. H. H. Dean before the Ontario Winter Fair, December, 1907.

Someone has said, "Every good farmer has two farms, the real and the ideal. The ideal is always a little better than the real, because when the real catches up with the past ideal, there is created a new and better ideal. As soon as a man has attained in reality the best ideal he can create, he comes to a standstill, and when a man gets to that point he begins to go backward. Keep pushing up your ideals, and strive for them." Too many dairymen have reached their ideal, hence make no improvement; in fact, the tendency is backward. To produce a higher ideal in the minds of producers and consumers of dairy products, is the object of this address.

Ideals are produced chiefly in two ways: first, by stimulating the person to improve through precept and example, or, in other words, by means of education; and, secondly, by means of force, or what is commonly known as "the law," which compels a better ideal, though this is often more apparent than real. Ideals obtained by means of education are possibly more valuable than those attained by means of force, but the latter is a method that makes better time, and is the only effective way of changing the real into the ideal in some cases. We may safely say that the "Please-be-clean" campaign has been largely a failure, and it would seem as if something sterner is necessary in order to obtain ideal or clean milk or cream for use in the home and for use in the cheese factory and creamery.

The Commissioners of the District of Columbia, U. S. A., have recommended that there be recognized by law three grades of milk for sale, namely, Certified, Inspected, and Pasteurized. It is quite probable that the United States Congress will pass a federal law in the near future, requiring all milk sold for direct consumption to be graded into these three classes. According to the ruling of this commission, "Certified Milk" is milk produced at dairies which are inspected regularly; have the products frequently analyzed; cows free from tuberculosis and all other communicable diseases; cows fed on clean food, and kept in clean stables, properly ventilated; persons handling the milk must exercise scrupulous cleanliness, and be free from infectious germs; milk must be drawn from the cow in a cleanly manner, be immediately strained, cooled, and placed in sterilized bottles, and be kept at a temperature not exceeding 50 degrees F. until delivered to the customer. The water used throughout the farm and dairy must be chemically and bacteriologically pure. The milk must not be more than 12 hours old when delivered, and should not contain over 10,000 bacteria per cubic centimeter.

"Inspected Milk" is a slightly lower grade than "Certified Milk," the chief difference being in the number of bacteria per c. c. of milk which is allowed. In this class, 100,000 bacteria per c. c. is the maximum.

The third class, known as, "Pasteurized Milk," is from dairies not able to comply with the requirements in the other two classes.

#### HOW TO ATTAIN THE IDEAL.

1. At present, it seems to be no person's business in particular to see that the people of Canada are furnished with pure milk. At the risk of

being called visionary, we beg leave to suggest that Parliament appoint a Milk Commission, somewhat similar to the Railway Commission, whose duty it shall be to see that people and factories are furnished with clean, wholesome milk. The Commission should be composed of men of wide experience in producing and handling milk, and, above all, they need to be men with backbone and good sense. This Commission should be the fountain-head of the milk trade in Canada. It is a question more important than railways or anything else, as the very life and health of the people of Canada depend upon a pure milk supply. About the first thing which man requires when he comes into this world is milk; he uses it largely in some form all the way through life; and about all he needs in the way of food just before he passes out of the world is milk, chiefly cow's milk. The cow may be considered as the "foster-mother of the human race." What should we do without her?

2. A corps of instructors and inspectors to carry out the will of the Commission would be needed in every Province. These inspectors should be properly paid. The U. S. Commission recommend a salary of \$1,600 to \$2,000, and travelling expenses, which is none too much for the right kind of man, with the necessary technical knowledge and skill.

3. A central milk laboratory, for chemical and bacteriological analyses is necessary, and also branch laboratories for similar work in every dairy district. Standards for chemical and bacteriological tests should be set for the guidance of laboratory workers. Experiments in conjunction with the dairy departments of the various agricultural colleges and experiment stations should be made. A German professor recommends compelling German railways to provide refrigerator cars, attached to express trains, for transporting milk. The freezing of milk, and transporting it in a frozen condition is also recommended. Is this practicable? It can be demonstrated only by experiment.



Calves at Pasture.

4. In the distribution of milk and cream in towns and cities, the use of a paper bottle would undoubtedly lessen expense for bottles, labor for washing, and lessen the danger from contagious disease, as they are used but once. Quart bottles may be purchased at one-half cent each, and should prove a great help in the milk and cream business. Glass bottles, cans, dippers, etc., ought to be sterilized daily.

5. All our exhibitions, including the Winter Fair, should give prizes for best milk and cream, best stables, and most-cleanly-kept cows. Every important fair in Canada ought to have a model stable in actual use on the grounds, in order to give practical demonstrations in the sanitary handling of cows and milk. Milk and cream contests have been tried, and proven to be helpful in improving the quality of the milk and cream delivered to American cities. Prizes for dairy farms kept in a sanitary way would also be helpful.

6. Literature should be freely distributed, showing the importance of a pure water supply on the farm, need of healthy cows, and clean, light, well-ventilated stables; need of care in milking, straining, and cooling milk to 60 degrees F. for the factory, and 50 degrees for city trade. Having done all this, then those who will not improve should be firmly dealt with, and be compelled to produce clean dairy products or go out of the business.

7. The Second International Pure-milk Congress, which met at Brussels in September, 1907, recommended universal pasteurization of milk as the best immediate means of improving the milk supply for home use. There is little doubt that this system is one of the very best for improving the ordinary milk and cream sold for household use. It is a question which every buyer of milk needs to consider carefully. Every

town and city should consider whether or not the milk sold should be pasteurized. Where private means are not forthcoming, the municipality should furnish the necessary pasteurizing plant. Pure milk is just as important as or more important than pure water.

If it is not practicable that all cows shall be free from tuberculosis, as shown by the tuberculin test, consumers of milk have a right to protection from possible tubercular contamination, by the State requiring all milk, other than that from tubercular-free cows, to be pasteurized. Further, a man who has healthy stock has a right to require that the State shall protect him from possible contamination from neighbors' unhealthy stock, by the consuming of infected dairy by-products from creameries and cheeseries. This can be done by requiring that those by-products shall be pasteurized at the factory. Prof. Van Behring has discovered a lymph which he calls Bovavaccine, that is said to make animals immune from tuberculosis.

8. Wherever practicable, proper contracts should be made between the milk producer and the purchaser or consumer.

We have omitted saying anything about the importance of sanitary ice-cream, butter, cheese, etc. The same principles should apply and should be followed in these as in the case of milk. If we can secure sanitary milk, all else will follow. The greatest problem is the milk problem.

In the report of the Registrar-General for the Province of Ontario, 1904 (latest available), we are given, on page 9, the number of deaths in the Province, at various ages, for the years 1897 to 1904. The yearly average deaths for all ages, for the eight years, is 28,688. Of this number, 6,228, or over 21 per cent., died under one year. From one to four years of age, the total average deaths were 1,937. In 1904, the total deaths for the Province, of all ages, was 31,290, of which 6,902, or over 22 per cent., died under the age of one year. Of these 6,902 deaths under one year, 192 deaths were from communicable diseases, and 852 were from diseases of the digestive system, which means, in most cases, deaths caused by impure milk.

In cities, out of a total death rate, of all ages, in 1904, of 8,742, 2,268, or over 25 per cent., died under one year, and, of these, 364 were from diseases of the digestive tract.

These figures are sufficient to show the very large death rate in this Province among children under one year, and especially in cities, where over one-quarter of the deaths are among helpless infants.

The Deputy Registrar-General and Sec. of the Provincial Board of Health, Dr. C. A. Hodgetts, in a recent communication, says: "A large amount of work must be done by this Board, as also by all interested in securing a pure-milk supply, before very material advantages will accrue to the infantile population of our cities and towns, in the way of providing for them pure, fresh milk. Our Governments are making strenuous efforts to induce immigration to this country, but are they doing as much as they might to save the native-born population, who are much more valuable? We hear of earnest appeals for aid in establishing and maintaining consumptive hospitals, but would it not be wiser and cheaper to prevent the spread of tuberculosis by giving careful heed to the milk and meat supply of our people? In this case, it is doubly true that "an ounce of prevention is worth a pound of cure."

#### EFFECT OF TREATING MILK WITH CARBON-DIOXIDE GAS UNDER PRESSURE.

Bulletin 292, from the New York Experiment Station, Geneva, treats of the above topic in a very interesting manner. The bulletin is nicely illustrated, showing styles of bottles used for holding carbonated milk, apparatus for carbonating milk, method of drawing carbonated milk, etc.

The authors say: "Milk, carbonated under a pressure of 70 pounds comes from the bottle as a foamy mass, more or less like kumiss two to three days old. It has a slightly acid, pleasant flavor, and tastes more salty than ordinary milk. In the case of carbonated pasteurized milk there is a slightly cooked flavor. All who have had occasion to test the quality of carbonated milk as a beverage agree in regarding it as a pleasant

drink. From the experience we have had, it would seem that carbonated milk might easily be made a fairly popular beverage."

The writers think that carbonated milk might be useful on steamships, where it would keep sweet for several weeks. It may also be found useful in hospitals, and in feeding children where ordinary cow's milk does not digest well.

In the preparation of carbonated milk, the milk must be drawn in as cleanly a manner as possible, be promptly cooled to 45 degrees, and be carbonated in a few hours. In case of not being able to carbonate the milk soon after it is drawn, it should be pasteurized before carbonating. All vessels must be sterilized before use.

Some of the conclusions are:

The carbon dioxide gas, forced into the milk under pressure, prevented the development of lactic-acid organisms, or, in other words, prevented the milk souring. In the case of pasteurized milk carbonated, the samples kept for five months, with little increase of acidity. Fresh whole milk, carbonated, kept in one experiment for about the same length of time. This milk was kept at temperatures varying from 35 to 70 degrees F.

H. H. D.

## POULTRY.

### THE PRINCIPLES OF ARTIFICIAL INCUBATION.

In the whole field of agricultural science there is no more perplexing problem than that of artificial incubation, its closest rival in interest being the problem of artificial milk extraction. While the principles of incubation appear to be simple, and a large number of incubators have been invented that have given phenomenal results in the hatching of chickens, and, while the incubator and brooder have come to be regarded as economic necessities where poultry is kept on any scale, and especially where early-hatched chicks are desired for market poultry, on the other hand there is no denying that the average percentage of chicks hatched from eggs set under hens is considerably higher than the average percentage from eggs incubated. Moreover, on almost, if not quite, every large poultry farm that has been running for any considerable length of time, a peculiarly fatal disease called white diarrhea appears among the incubator-hatched chicks, and on some plants kills them off by the bushel. It is not contagious, as proven by the fact that hen-hatched chicks, placed in the same brooder with incubator-hatched chicks, have remained immune, although a quarter, half or three-quarters of the latter were attacked and killed. The characteristic symptom of the disease is non-absorption of the yolk; the precise cause or causes nobody knows, although it has been demonstrated that thrifty, vigorous stock are less liable to lay eggs which will hatch out chickens predisposed to the disease. But there must be specific causes in the artificial incubation itself, and Prof. W. R. Graham, of the Ontario Agricultural College, Guelph, has been working for half a dozen years or more, with little or no assistance from other stations, in order to find out these causes. For the first three years or so he thought the trouble was in the brooding, but, having since proven it was in the incubation, he has used thousands and thousands of eggs, and numerous makes of incubators, experimenting on this line. In 1906 he secured the co-operation of Prof. W. H. Day, of the Department of Physics; Prof. Harcourt, of the Department of Chemistry; and Prof. Edwards, of the Bacteriological Department—all of the O. A. C. Prof. Day has given special attention to the physical principles of incubation, and his address last winter before the Poultry Institute at Guelph, though complex, and necessarily somewhat technical, was of considerable interest to students of the subject. During the summer of 1907, the investigation has been continued, with the accidental discovery of some apparent facts that promise practical results. At the Winter Fair, last

month, he gave an address, outlining the method and results of his work, a summary of which address, especially prepared for "The Farmer's Advocate," appears beneath. While rather abstruse to the amateur poultryman, whom we caution not to jump to conclusions, we give space to it for the especial benefit of our more fully-informed poultry readers who are anxious to know the latest word of science:

"The incubator is in the trial stage to-day. Sometimes it is a success, sometimes a failure. I know intelligent farmers, with considerable knowledge of poultry, who have tried it and discarded it. Experience of years has shown that, on the whole, it has thus far fallen short of the hen in results. To try to find a reason or reasons for this, the Poultry Department of the Ontario Agricultural College began, in 1906, a study of the principles of incubation, inviting the Departments of Physics, Chemistry and Bacteriology to co-operate. Believing that artificial incubation, if it is to be successful, must reproduce the essential features of the natural process, our first efforts were directed toward ascertaining exactly how a hen hatches eggs. A proper temperature has long been recognized as one essential feature. But are there not others? Prof. Dryden, of Utah, has already called attention to the fact that in the nest of the sitting hen there were several times as much carbon dioxide as in ordinary air. This we verified. Is the carbon dioxide essential? Then we asked, what about moisture; is the air in the nest dry or moist; is its humidity high or low? By a special hygrometer designed for the purpose, we discovered that the humidity in earth nests, where the hen hatches best, is about three times as high as in an incubator run without a moisture pan. Is the high humidity necessary to good hatching? We also discovered that there is more ventilation in the nest than in the incubator. Is this ventilation essential?"

"In 1907 we have tested some of these points. Some incubators were run dry, others with large moisture pans of one kind or another in the bottom, others with a large tray of buttermilk inoculated with bacteria which produce carbon dioxide, others with buttermilk not inoculated, still others had chemically-manufactured carbon dioxide introduced, and one had all the lamp fumes of another machine passed through its egg-chamber. The same individual hens' eggs were used in each test. All dry hatches produced white diarrhoea, but it occurred in only 50 per cent. of the machines moistened with water only, in 25 per cent. of those treated with buttermilk, in none where moisture and Zenoleum or moisture and carbon dioxide were both used, there being only two hatches of the last treatment, and in none where lamp fumes were used. Out of every 100 eggs set, the dry machines gave us 16 chickens four weeks old. The machines with plenty of moisture (water only) gave us 33 chickens the same age; i. e., more than twice as many as the dry. Moist machines, with chemically supplied carbon dioxide, gave us 37, inoculated buttermilk 37, pure buttermilk 37. At this point a bit of luck entered into the problem. One hatch, some of the machines were disinfected with Zenoleum, and these all gave better results than those not disinfected. Zenoleum disinfection was used freely afterward, giving from 44 to 46 chickens four weeks old. Creoline and Jay's Fluid give similar results, according to tests made by later experimenters who heard of the Zenoleum result. Hens on earth nests gave us 52 to 53 chickens the same age out of every hundred eggs set.

"Hence, we must conclude that a great deal of moisture in machines is essential. The carbon dioxide is beneficial, but not essential. Disinfection appears to be essential. Hence, to the principle of proper temperature we must add proper moisture and proper disinfection. Our work on ventilation is not completed. Other experimenters have shown that the eggs should be turned frequently and aired, but possibly the latter will be unnecessary when the ventilation is perfected.

"Moisture and disinfection may be applied by

any practical poultryman. A large tray, full size of bottom of machine (if that does not interfere with the working of the machine), filled with sand which is moistened with water as needed, will supply the moisture. Disinfection is secured by washing all the inner parts of the machine thoroughly with a ten-per-cent. solution of the disinfectant before the eggs are set. The percentage results will vary with different environments, stock, etc., but as these treatments have proved of great benefit, first to us, and secondly to several others who have taken the cue from us, we see no reason why they should not be of universal application."

### WINTER EGG PRODUCTION.

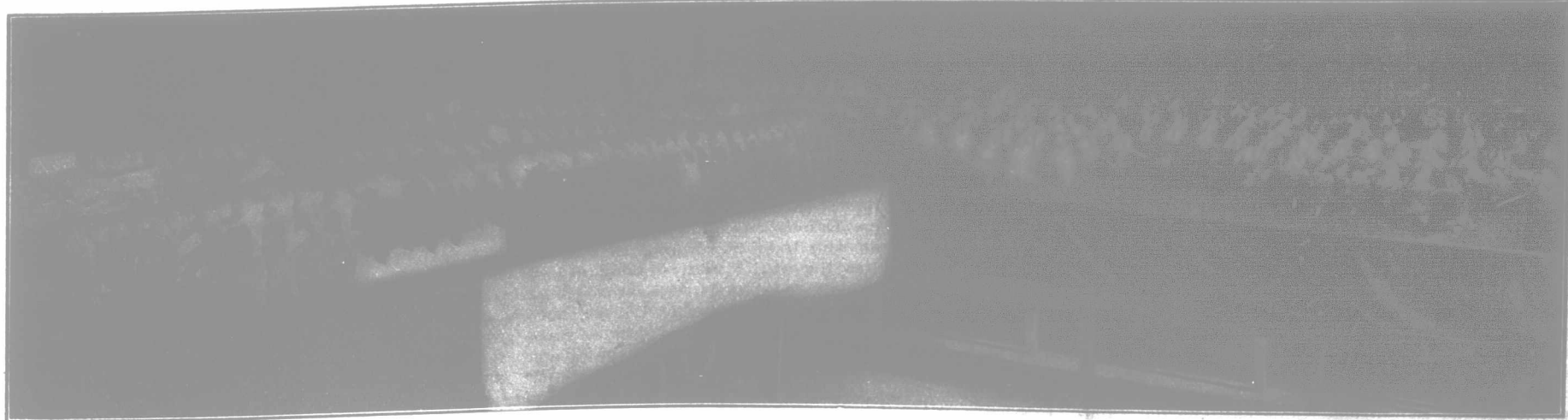
The above old and much-worn, but yet seasonable and perennially interesting subject was discussed last month at the Ontario Winter Fair by L. H. Baldwin, of Deer Park, Toronto, Ont. His first point was housing. Build your poultry house early in the season, and have the roof on in July. He had yet to see a henhouse built in the fall of the year in which there was not a dampness, arising, presumably, from the ground. In the autumn, when first bringing the fowl into winter quarters, keep the windows open and give plenty of fresh air, in order to ward off influenza. Thus accustomed to airy quarters, they will be provided by nature with a good protecting coat of feathers, the same as in the case of a horse or cow not too closely stabled in the fall.

Regarding care and feeding, he urged the selection of a liberal number of layers, so as to admit of the subsequent culling out of birds which show lack of development, constitutional weakness or other defects. Aim to get well-developed birds with vigorous constitutions.

Having secured good birds and housed them well, the next essential is feed. While liberal feeding of layers is necessary, yet, when moving into winter quarters, or especially if changing their quarters, the fowls will sometimes go off their feed, and, to guard against this, it is well to feed rather sparingly at that stage. The ration should afterwards be increased, and, as laying time approaches, give meat. Give also green feed, such as mangels, cabbages, beets, etc. He likes mangels best. He used to feed cabbages, but thinks they sometimes upset the bowels, causing diarrhoea. As for sugar beets, the hens didn't like them so well as the mangels [the reason being that they are harder to pick—Ed.]. Supplement the green food with clover chaff, from which they may pick the leaves. He uses a good deal of meat and cut bone, and likes the mash as a medium for giving meat food. His system of feeding is as follows: A feed of grain first thing in the morning, then a mash about 10 o'clock (containing a good deal of meat, as a rule); in the middle of the day a handful of grain is thrown in the litter to keep them busy, and at 4.30 a good heavy feed of grain is given.

A question was asked from the audience as to whether Mr. Baldwin had meant to imply, by a certain remark in the earlier part of his address, that there was no difference in the laying qualities of breeds; that a Light Brahma, for instance, was as good a layer as a Leghorn. Mr. Baldwin replied that he had seen a recent statement to the effect that one of the first-published egg records was of a Light Brahma hen that laid 214 eggs in one year. He did not mean to say that all breeds were equally good layers; he had his own personal preference, but the most important factor was not breed, but strain.

"What would you consider a good average yearly egg record for a flock of hens?" "For a large flock, I should say 130 to 140 eggs would be a good average." One man in the back of the audience said he knew a woman who bought from the store the eggs she set, and her flock of about 100 hens averaged her 190 eggs per year. It is to be feared, however, that this was an estimate, rather than the result of actual count. Many a flock and many a hen that appears in May to be doing a 200-egg business, falls far short on the twelve-month totalling up.



The Dressed-poultry Exhibit at the Ontario Winter Fair.

FOUNDED 1866

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all cows shall be... by the tuberculin... right to protec-... contamination, by... er than that from... urized. Further... as a right to re-... ct him from pos-... h-... s' unhealthy... fected dairy by-... cheeseries. This... those by-products... tory. Prof. Van... n which he calls... ke animals im-

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the Deputy Regis-... General and Sec... ealth, Dr. C. A... tion, says: "A... be done by this... a securing a pure-... advantages will... on of our cities... viding for them... ents are making... gration to this... uch as they... ulation, who are... of earnest appeals... taining consump-... t be wiser and... f tuberculosis by... and meat supply... t is doubly tr... s worth a pou-

### WITH CARBON-...-PRESSURE.

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### SECRETARY-TREASURER OF THE TURKEY AND WATER-FOWL CLUB.

Editor "The Farmer's Advocate":

In giving the list of officers for 1908 of the Turkey and Water-fowl Club, page 104, December 19th issue, you have Sec.-Treas., Mr. Thos. Scott, St. Thomas, Ont. It should be Vice-President, Mr. Thos. Scott; Sec.-Treas., W. J. Bell, Angus, Ont. I trust you may make this correction to prevent delay and trouble to Mr. Scott in getting correspondence to me.

As Sec.-Treasurer of this Club, permit me to say that I was greatly pleased at the amount of space you gave to the description of these varieties as exhibited at the Winter Fair.

Turkeys and water-fowl are raised chiefly by farmers, and are generally ignored in the reports of fairs by the poultry papers, or handled in this way: "Turkeys, geese and ducks made a good exhibit."

We have 26 members thus far in our Club for 1908, and any information that your many readers may desire with reference to this Club will be cheerfully furnished.

W. J. BELL,  
Secretary-Treasurer.  
Simcoe Co., Ont.

### GOOD WINTER EGG PRODUCTION.

C. C. McKellar, of Middlesex Co., Ont., sends us a tabulated monthly egg record of his flock of 25 hens, which laid in January 26 dozen and 3 eggs; in February, 22 dozen and 6; March, 28 dozen and 4; April, 38 dozen and 7; May, 24 dozen and 5; June, 25 dozen and 11; July, 24 dozen and 8; August, 17 dozen and 10; September, 17 dozen and 5; October, 7 dozen and 2; November, 5 dozen and 5; December, 1 dozen. The twelve-months' production of 243 dozen and 1, although good, is not remarkable, figuring out to an average per hen of between 116 and 117 eggs, but the production during the winter months is most creditable indeed. It would add greatly to the value of the item, however, had Mr. McKellar described his system of care and feeding. We always like to hear what our readers have done, but the HOW is of more practical value. The breeding, housing, feed and management should all be given.

## APIARY.

### MICHIGAN STATE BEEKEEPERS MEET.

Michigan, one of the leading States in the Union for beekeeping, held its recent annual convention at Saginaw. The attendance, owing to the series of comparatively poor seasons, was only fair, being in the neighborhood of seventy-five. The Canadians present were: Messrs. F. J. Miller, Treasurer Ontario Beekeepers' Association, London, and R. F. Holtermann, Brantford. The convention opened at the City Hall, Wednesday, December 18th, the President, W. Z. Hutchinson in the chair. The first address was by Mr. Holtermann, the subject being "Co-operative Experiments in Beekeeping." The inception and growth of the Ontario Agricultural and Experimental Union was explained, and the educational value of co-operative experiments brought out. Upon resolution by the Hon. R. L. Taylor, Lapeer, Mich., it was decided that the members of the Association would co-operate in testing the effect upon a more even finish of outside and inside rows of sections of comb honey by putting a double bee space next the super walls, and putting a wedge-shaped piece of board, the length of the side of the hive, the wedge being  $\frac{1}{4}$  to  $\frac{1}{2}$  inch at the front, running to a point at the back, thus compelling the bees to reach the supers largely by means of the sides of the hive and supers.

The National Beekeepers' Association was invited to meet at Detroit for the next convention. Information has been given out that Detroit will be the place for the next convention. It will likely be held in October, and from seventy-five to one hundred Canadians are expected to attend. F. J. Miller advocated, in the production of extracted honey by beekeepers having out apiaries, that the combs of honey be hauled home to a central honey and extracting house.

Mr. E. E. Coveyou, Petoskey, Mich., stated that he hauled the combs from his out-apiaries home in a carload lot; heated the combs to a high temperature, when the honey would extract more readily, then extracted, using a gasoline engine as power, and a strainer (cone-shaped) in the bottom of the extractor, as invented by Mr. Holtermann. He heated the unstrained honey on the bottom of the honey extractor, so it would strain more readily. An electric alarm-bell notified him when the package he was filling had the required weight, and, also, closed the honey gate.

Mr. L. A. Aspenwall, Jackson, Mich., ex-President of the National Association, gave an instructive address upon his experiments with the non-swarming hive. After crowding the hive so brace and burr combs were numerous, even with such treatment, running for comb honey, he had succeeded in getting only one colony to swarm out of thirty-one. Mr. Aspenwall exhibited a queen-catcher, which he had been using for five years, and he also signified his intention of giving one to each beekeeper attending the Brant District Bee Convention, which he will attend in Brantford, on January 21st to 23rd, next.

W. J. Manning gave one of the happiest addresses of the convention. His subject was "Winter Losses." He stated he should be able to speak upon the subject, for he had lost 50 to 75 per cent. of his bees ever since he began. Last winter he only had one colony to come through, out of 125.

He attributed his losses to aster honey, gathered late in the fall. He advised those who lost their bees to preserve, or, at least, render into wax the combs left in the majority of cases. Formerly, beekeepers allowed the combs to be utterly destroyed by moths. He bought bees every spring, and, in spite of his winter losses, made money out of them.

In the winter of 1903-04, he had 225 colonies of bees, and found them all dead in February. From the old comb, he secured about 2½ lbs. of wax to the colony. A near neighbor, at the same time, lost all his colonies—147. He bought his combs for \$40, and made a good profit.

Mr. E. D. Townsend, Remus, Mich., gave an address on rendering wax. He advised cooling the wax in wooden boxes, covering them to keep in the heat. This prevented cracking of the comb, and, also, allowed impurities to settle to the bottom before the wax hardened.

## GARDEN & ORCHARD.

### THE QUEBEC POMOLOGICAL SOCIETY'S MEETING.

On December 18th and 19th, the Quebec Pomological and Fruit-growing Society held its annual winter convention at Macdonald College, Ste. Anne de Bellevue, Que. In the absence of the President, Aug. Dupuis, Vice-President Robt. Brodie, of Westmount, occupied the chair. The presidential address, forwarded by Mr. Dupuis, expressed warm thanks to Dr. Robertson for having invited the Association to hold its meeting in that institution, and remarked that from one end of the Province to the other were heard expressions of gratitude towards Sir William Macdonald for his munificent gift. The college had been founded, erected, equipped and royally endowed for the following noble purposes:

1. The advancement of education, the carrying on of research work and investigation, all with particular regard to the interests and needs of the population in rural districts.

2. To provide suitable and efficient training for teachers, and specially for those whose work would directly affect the education in schools in rural districts.

J. C. Chapais, of Kamouraska, in a paper on tree surgery, discussed methods of dealing with damaged trees, the straightening of bent or broken-down limbs, etc., so as to get them in the best shape. Prof. W. Stuart, of Burlington College, Vt., read a paper on the growing of an apple orchard. His opinion is that there are not enough young orchards growing up to meet the increasing demand for apples. He spoke of the orchard site with suitable soil and good air drainage. As to varieties, he would depend upon the formation of the orchard site, and the markets in which it was intended to dispose of the fruit. Prof. W. S. Blair, of the Macdonald College, gave a practical talk on pruning, illustrated by demonstrations.

R. W. Shepherd discussed the Fameuse (Snow) apple. He touched on its obscure origin and its long cultivation in this country, and said that for centuries it had proved superior in quality to all other Quebec apples, and the most profitable. But, he asked, were we going to preserve it? Many trees had been killed by severe winters, and very few orchards of Fameuse were now being set out. Too little care had been taken in selecting scions from perfectly healthy trees; hence, the weakness of constitution in most of our Fameuse. Unless orchardists undertook to set out new orchards of Fameuse, the variety must die out. He predicted that in twenty-five years from now the Fameuse would be a scarce apple in this Province, and the prices for good fruit of that variety would advance every year. The constitution of the tree, he suggested, might be improved, or its longevity increased, if it were top-grafted on hardy stocks, like McMahon, or other similar robust stocks, which would overcome, at least, a tendency towards sun-scald and disease of the trunk, or winter-killing.

In the evening of the first day, Principal Robertson, addressing the Society on "Education for Horticulture," expressed the hope that they would long be identified in working together for the building up of this Province in all its rural interests, and particularly in those of producing larger quantities of better fruit, in order that the people might be prosperous, and enjoy life better through knowledge of better life. Any education worthy of the name was the learning of the lessons of consequence, not merely listening to what some man said in the class-room, or in the orchard, or in the school, but in the market. The school had been separated from these lessons regarding rural life, and, therefore, the people who lived in rural parts had not been prepared to live life at its best. Having defined education as meaning the power to improve those around you, he said that the Macdonald College, both as a body of instructors and students, hoped to make progress, and hoped to help this whole part of Canada by adding to the store of knowledge possessed by each member, by adding to the sum total of knowledge what was best, true and beautiful.

Mrs. J. F. Torrance, of Chateauguay, read an in-

teresting paper on "Our Summer Fruits: Their Value in Our Diet," and Prof. John Craig, of Ethaca, N. Y., formerly of the Central Experimental Farm, Ottawa, spoke on "Co-operation in the Marketing of Apples." Among the advantages were that each grade of fruit could be made the best of its class, each grade could be made uniform, the packages could be made uniform and attractive, the confidence of the buyer was established, expenses of transportation were lessened, better prices were secured, and the expense of growing might be very much reduced in purchasing necessary supplies.

"Ten Forms of Winter-killing, and What We Know About Them," was the subject of a practical address by W. T. Macoun, Horticulturist of the Central Experimental Farm, Ottawa. Anyone who had tried to be an orchardist in Quebec Province well knew what winter-killing meant. If an accurate estimate could be made of the fruit trees which had been winter-killed in the Province of Quebec during the past 300 years, the number would reach millions, representing millions of dollars. The terrible destruction from this cause had been a great discouragement among the people, and it was one reason for the slow development of the fruit industry. Much of this loss, he pointed out, could have been avoided if only the hardiest trees had been planted. For a long time it was not known which were the hardiest and most suitable trees for the different districts. Now, however, experiments had been made by the Central Experimental Farm, and there was no reason for anyone not knowing which were the most suitable trees for his district.

The ten forms of winter-killing he mentioned were: Root killing, bark splitting, trunk splitting, sun-scald, trunk or body injury, crotch injury, killing back, black heart, killing of dormant buds, killing of swollen buds, and these he described at length.

Mrs. A. L. Jack, Chateauguay Basin, had forwarded a paper on "A Plea for the Improvement of Rural-school Grounds," in which she advocated school gardens as a means of nature study for the children, and said that such study taught patience and perseverance, and made for good citizenship.

Mr. T. L. Kinney, of South Hero, Vt., speaking on "Home Storage for Apples," pointed out the lack of it at present among fruit-growers, and showed how it would enhance their profits by enabling them to hold their fruit until a suitable price could be obtained, instead of selling it, in many cases at a small figure, to the commission man at the time it was ripe, and letting him reap the profit. He also pointed out how easy it was to construct such storage, and the advantages which would accrue if the fruit-growers in a district combined in this direction.

Dr. Fletcher, Dominion Entomologist, Ottawa, spoke on "Insects Injurious to Fruit and Vegetable Crops," and, in a popular way, conveyed much useful information.

### ELECTION OF OFFICERS:

Patrons, Hon. S. A. Fisher, Ottawa, and Hon. Jules Allard, Quebec; Hon. President, Mr. R. W. Shepherd, Comox; Hon. Vice-President, Mr. Auguste Dupuis, Village des Aulnaies; President, Mr. Robert Brodie, Westmount; Vice-President, Mr. G. Reynaud, Oka.; Secretary, Mr. Peter Reid, Chateauguay Basin. Directors—District No. 1, Mr. G. B. Edwards, Covey Hill; No. 2, Mr. J. M. Fisk, Abbotsford; No. 3, Mr. G. P. Hitchcock, Massawippi; No. 4, Mr. A. D. Verreault, Village des Aulnaies; No. 5, Mr. M. Lemoine, Malbaie; No. 6, Mr. C. P. Newman, Lachine Locks; No. 7, Dr. W. Grignon, Ste. Adele; No. 8, Mr. N. E. Jack, Chateauguay Basin; No. 9, Prof. W. Saxby Blair, Ste. Anne de Bellevue.

In the afternoon of the second day, Mr. C. P. Newman, Lachine Locks, read a paper on "Experiences with the Fruit Crop of 1907," in which he spoke of the girdling of fruit trees by mice, and said that the season was the worst he had experienced. Winter injury to apple trees was mostly confined to Ben Davis, and in his orchard about 60 per cent. of these had been practically destroyed. Apples were not, generally, too thick on the trees, but, except in a few instances, orchards were free from spot.

### SUCCESSFUL FRUIT INSTITUTES.

The Farmers' Institute branch of the Department of Agriculture has taken a marked step in advance in the line of agricultural education. A three-days' meeting has just been held at Grimsby (December 16th, 17th, 18th), with an attendance of over 80 men from Grimsby and the surrounding district. The printed programme was followed as closely as possible, and the discussions by local men took up every minute of the time allotted. Never before in the history of Farmers' Institute work have the fruit-growers taken so active an interest as that manifested at the Grimsby meeting.

On Tuesday afternoon Mr. Putnam, Supt. of Farmers' Institutes, was present, and gave a short talk on the scheme attempted for the first time in Ontario. He in every way encouraged the farmers to form farmers' clubs, and hold monthly or even twice a month meetings, for the discussion of local subjects, and increase the knowledge, and, as a consequence, the wealth of each community. The Department is willing to do all within reason to assist farmers' clubs, and short courses of instruction by furnishing lectures on special subjects. Any local Institute desiring a course similar to the one put on at Grimsby, and followed by the one on December 18th, 19th

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and 20th at Trenton (when practically the same programme was carried out, except that Harold Jones, of Maitland, and W. H. Dempsey took the place of W. H. Bunting), should correspond with Mr. Putnam for particulars.

The following resolution, passed by the Trenton meeting, shows the attitude of those who attended the meetings:

Moved by G. W. Saylor, Hastings Co., and seconded by W. W. Farley, Northumberland Co., that we, the fruit-growers of Trenton and the surrounding vicinity, desire to express our appreciation of the action taken by the Farmers' Institute branch of the Department of Agriculture in putting on this three-days' course of instruction; and that we consider it has been of very great value to those in attendance; and that we trust the said Department may see fit to favor the counties of Prince Edward, Hastings and Northumberland with a series of such meetings.

#### THE NOVA SCOTIA FRUIT-GROWERS.

Berwick, King's Co., has proved one of the best places yet to hold a fruit-growers' meeting. We always look for a full hall on the occasion of the first evening meeting of the conventions, as this is a mass meeting for social and friendly purposes, but the hall at Berwick was well filled at all the meetings on the three days, December 18, 19 and 20, giving an average attendance of some two hundred. The following are the principal points of the opening address of President Donaldson at this forty-third annual meeting:

"The peculiar season of 1907 has emphasized the fact that the fruit-grower must be alert to withstand the disadvantages which each season has in store. This particular season was remarkable for its unusual amount of rainfall, for a cold, backward spring, and for two unseasonable snowstorms—one on May 11th and one October 20th.

#### GOOD CROP—DECLINING PRICES.

"In spite of this, the crop of 1907 has been one of the best the Province has ever seen, both in quantity and quality. The season opened with record prices, but later on they have suffered an unaccountable drop. Is this due to the stringency of the money market, or to a too low estimate of the general crop?"

#### BROWN-TAIL MOTH.

"Horticultural events of the year: The first and most important was the discovery of the brown-tail moth. This was first discovered in April, and just as soon as it was known to be a fact, men were at once sent out to ascertain the extent of infestation. Bounties were offered to destroy the nests, and after the leaves had come out spray pumps were used more universally than ever before, some being supplied by the Government for the worst infected districts. The Department of Agriculture, under Secretary Cumming, is to be congratulated on the promptness and vigor with which they combated this pest.

"The resignation of Prof. Sears, from the Chair of Horticulture at Truro, was considered a Provincial loss.

"Another step toward the establishment of the long-looked-for experimental fruit station was taken last August, when Dr. Saunders, Director of the Experimental Farms, visited several locations for the purpose of selecting a site for the station.

"Early fruit at the Provincial Exhibition made a fairly good show, but on account of the late season winter fruit had not reached the proper stage of maturity to really represent our best commercial fruit.

#### EXHIBITIONS, WHERE AND WHEN?

"In all, Nova Scotia has this year held five exhibitions—one provincial, one district, and three county. Personally, I consider it would be much better to have these merged into one, more upon the educational lines of the Winter Fair at Amherst, and held at a time of year when all the products would be mature and available. The district fruit show at Windsor was one of the finest ever held in the Province, and was also successful financially, declaring a surplus of \$300.

"It is pleasing, too, to report that the display of fruit from our Province at the Royal Horticultural Show in England was the best ever sent from this Province.

"Since co-operation is such an important issue now in Canada, it is worthy of note that during the year the Berwick Co-operative Packing Association has been formed in this town."

#### SULPHATE VS. MURIATE OF POTASH.

Prof. F. C. Sears, formerly of the Agricultural College, Truro, N.S., now of Mass. Ag. Coll., gave an interesting address with charts showing the

results at Mass. College experimental orchard of the use of different kinds of fertilizers. He showed that an orchard in sod, during 18 years' trial, gave better results from the use of sulphate of potash as a source of potassium than the muriate.

#### LOW HEADING OF FRUIT TREES.

Mr. A. McNeill, in an address on "Pruning," spoke in favor of beginning to head the tree 18 inches to 2 ft. from the ground. The difficulty of cultivating after the tree becomes older, on account of the limbs falling to the ground, was to be obviated by yearly pruning and cutting back, the bud to be left to be always on top of the branch, thus giving the outside of the tree the appearance of an inverted umbrella.

If started right, no tool heavier than the hand pruner need be used. Prune from the outside, taking out small branches to let in sun.

In the discussion that followed, the objection was brought up that after fifteen or twenty years the orchard could not be cultivated, because of the limbs getting in the way. In the meeting there were advocates of all systems—from very severe pruning to not pruning at all—one man claiming to get good crops of fruit without pruning.

In answer to a question as to the benefits of summer pruning, Prof. Waugh, of Amherst College, Mass., advocated pruning at this season to induce greater bearing, if the grower had time to do it.

The social mass meeting on the evening of the 18th was a pleasant mixture of provincial optimism and bombast, supplied principally by Lieut.-Governor Fraser. He spoke of the advantages enjoyed by those living in the apple-producing districts of Nova Scotia. They should be a happy, prosperous people. Steady industry in the spot where fate had placed them will make them strong in character, prosperous in worldly goods, and pillars of their country.

#### PROF. SEARS SUGGESTS NEW ENGLAND MARKETS.

Prof. Sears gave a very interesting illustrated address on "Fruit-growing in New England." Good fruit, packed well in boxes, brought good prices there, and he did not see why we could not make the shipment of some of our best varieties to those New England cities profitable in spite of the duty. Fruit-growing in New England had not reached as high a state of development as in Nova Scotia. Pruning, cultivation nor spraying was as universally practiced, and in many cases the trees were allowed to grow in sod, and very little done except picking what apples happened to grow.

#### MR. J. H. HALE PLANTING APPLE ORCHARDS.

In contradistinction to these methods, he gave a number of views, showing the methods of Mr. J. H. Hale, one of the largest fruit-growers in America. He had been a very successful peach grower, and practices the most approved methods in the growing and handling of his crop. Mr. Hale was now, however, planting more apples and fewer peaches.

Prof. Waugh, of Mass. Agricultural College, also gave an interesting illustrated address, showing some of the different methods of marketing in different parts of the world, principally in the Southern States, France and England.

#### MEMBERSHIP FEE INCREASED.

According to notice given at the last annual meeting, Mr. E. E. Archibald, of Wolfville, moved a resolution that the life membership fee be raised from five to ten dollars. This raised a spirited discussion, but was finally carried, the principal argument in favor of the change being that since the life membership fees were now under by-laws to constitute a fund for investment, the higher fee would give a larger proportion of annual fees for the active funds of the association.

#### OFFICERS ELECTED.

The election of officers resulted in placing in the president's chair Mr. R. W. Starr, who may be really called the father of the association. In the whole forty-three years of its existence he has only missed one annual meeting. More than this, he has always been one of the most active and progressive members. The other officers were: Vice-President, G. C. Miller; Secretary, S. C. Parker.

Principal Cumming, in giving the results of the Royal Horticultural Society Show at London, spoke of Nova Scotia being second only to British Columbia; that the show from the latter Province was the best ever seen in England.

In the discussion which followed, the trend of opinion seemed to be that the gold medal went to British Columbia:

1st.—Because the soil was better.

2nd.—Because the climate and sun were more genial, coloring the fruit better and giving greater size.

3rd.—Because the men who packed the fruit were more intelligent, enterprising and experienced.

The general opinion was that we continue the exhibit and assist the Department of Agriculture financially and otherwise toward increasing the quality and beauty of the show in subsequent years. Prof. Sears urged more careful selection, and told that the B. C. growers began the selection on the trees in the summer.

Chief McNeill was asked to send an expert next year to give us instructions in box packing.

#### 10c. BOUNTY FOR NESTS OF BROWN-TAIL MOTH.

At this and other sessions the brown-tail moth came in for a good share of discussion. At the meeting on Thursday evening, Principal Cumming announced that the Government of Nova Scotia would henceforth give a bounty of 10c. for every nest found.

The old question of transportation raised a heated discussion. Abuses and losses resulting from delays in shunting, apples being left by one steamer and being laid over two or three weeks for the next, slow passages by fruit-laden steamers, all added to the interest and excitement. Little was done, however, further than the discussion.

A committee from the Halifax Exhibition Commission attended the session, to get the opinion of the fruit-growers regarding any changes to be made in the fruit prize-list. When it was found that the fair would be held from September 2nd to 10th, the commission were asked to drop the prize-list for fruit altogether, since at that early date there would be little fruit mature enough to make a creditable show.

#### CO-OPERATIVE PACKING AND MARKETING.

The question of co-operative packing and marketing was opened by Messrs. A. McNeill and Frank Bolsor. Mr. McNeill noted several instances where the fruit of individual growers brought much smaller prices than when packed and sold under such an association. The best way to handle apples when packed under such an association brand is to sell f. o. b., since then the apples are under the control of the producer, but if sold under inspection on the other side the former has no redress if a dishonest buyer represents them as being poor.

Such a co-operative association may also save money by making barrels for all the producers, as stock may be purchased at a much lower figure and saving be thus effected.

There are too many middlemen fattening between the producer and consumer. The latter gives a price away beyond what the producer gets, much more than is accounted for by legitimate freights, commissions, etc. Co-operation will eliminate these parasites.

The principal obstacles to successful co-operation are:

1st.—Petty jealousies of individual members and distrust of each other.

2nd.—Opposition of apple operators and middlemen.

3rd.—Packing-houses' hostility.

The speakers Thursday evening were Messrs. P. J. Shaw and F. A. Waugh. The former compared the state of fruit-growing in Western New York with that in our own Province. Much less cultivation is done there; in many cases owners consider that cultivation is injurious to trees. Prof. Waugh gave another illustrated lecture on growing dwarf fruit trees, showing some which were being cut back to 18 inches and two feet.

#### RESOLUTIONS.

The following resolutions were passed at this convention:

1st.—That the N. S. fruit-growers financially and otherwise assist the Local Government in continuing the exhibit from Nova Scotia to the Royal Horticultural Society.

2nd.—That in view of the losses and abuses to fruit-growers from the existing conditions at Halifax, and during the ocean voyage, that these matters be brought before the Minister of Agriculture for consideration and rectification.

3rd.—That the Commission of the Provincial Exhibition at Halifax be asked to drop from their prize-list the section offering prizes for fruit.

4th.—That the members of this association regret that since the visit of Dr. Saunders, in the summer of 1907, no action has been taken toward the establishment of an experimental fruit farm in Nova Scotia.

5th.—That we place on record our appreciation of Chief McNeill's labors for the advancement of the fruit industry in Canada, and his effective administration of the Fruit Marks Act.

R. J. MESSENGER.

#### CHRISTMAS NUMBER WORTH SUBSCRIPTION.

Received the knife you sent me as a premium for securing one new subscriber to your valuable paper. It is a dandy, and repaid me well for my trouble. The Christmas number was fine, it alone being worth the subscription price. Wishing the paper many prosperous years.

Simcoe Co., Ont. ROBT. CRAWFORD.

## THE FARM BULLETIN.

### WHY PROMPT RENEWAL IS IMPORTANT.

Many thousands of subscriptions expired with the end of 1907. Thousands have already renewed, and our circulation receipts to date show an encouraging advance over the corresponding period of previous seasons. There are still, however, a good many subscribers who have yet to send in their renewals, and knowing, from past experience, that nearly all of these wish the paper continued, we are reluctant to strike their names from our list. But we would urge all who have not renewed to do so at once. A dollar and a half is a dollar and a half to you whether paid in January or February, but we have to figure in totals, and a month's interest on 30,000 times \$1.50 is \$225, and a year's interest would be \$2,700. This is an important consideration. The regular price of "The Farmer's Advocate" (\$1.50) is based upon the cash in advance principle, and any departure from it is a direct loss to us, reducing by so much the amount we can afford to pay for illustrations and contributions of a special character. We have done our best during the past year to give every subscriber good value for his money, and we are sure all will appreciate the reason for our urgent request for prompt renewal. Indications point to a record year in the history of "The Farmer's Advocate." Let every subscriber do his part to swell the grand total. Send us your renewal now.

### HEREFORD BREEDERS' ANNUAL MEETING.

The seventeenth annual meeting of the Canadian Hereford Breeders' Association was held at the Wellington Hotel, Guelph, on Wednesday, Dec. 11th; President J. A. McDermaid presiding.

The Secretary-Treasurer's report showed a splendid financial state of affairs, there being a balance on hand of \$543.

Registrar J. W. Nimmo presented his report, which stated that during the past year the demand for all kinds of pure-bred animals has not been quite so brisk, and, of course, there has been a noticeable decrease in the number of Hereford pedigrees recorded; and, as the ancestors were nearly all brought in during the past two years, very few were required to be brought in this year, so we have hardly sufficient pedigrees on hand as yet to print Vol. 5 of the herdbook, and it will no doubt be the end of next year before we are in a position to issue another Hereford Record.

The pedigrees of 869 bulls and cows have been recorded during the year, as well as 251 transfers and duplicate certificates being issued. The actual number of pedigrees, for which were received the regular fees, were 663, or 198 less than last year.

The officers elected were: President, J. A. Govanlock, Forest, Ont.; Vice-President, W. H. Hammill, Beeton; Vice-Presidents for Provinces—Ontario, H. D. Smith, Hamilton; Manitoba, Jas. H. Champman, Beresford; Quebec, L. L. Bennett, Bennett; Alberta, C. Palmer, Lacombe; Saskatchewan, R. Sinton, Regina; Nova Scotia, W. W. Black, Amherst; New Brunswick, H. B. Hall, Gagetown; British Columbia, J. L. McKay, Sinclair; Directors—Jas. Reynolds, Highgate; A. F. O'Neill, Maple Grove; A. Warnica, Painswick; R. W. Stutt, Forest; Mossom Boyd, Bobcaygeon; F. M. Copland, Harriston; A. S. Hunter, Durham; Jno. Wallace, Cartwright; Jas. Tough, Edmonton, Alta.; A. S. Phillip, Brandon; Alf. Stone, Guelph; R. J. Penhall, Nober; Sec.-Treas., R. J. Mackie, Oshawa; Registrar, J. W. Nimmo, Ottawa; Executive and National Record Committee—R. J. Mackie and W. H. Hunter.

On motion, the sum of \$200 was donated for prizes—\$100 to Toronto, \$50 to Winnipeg, \$25 to Calgary, \$25 to Regina.

Each member was made a member of the Dominion Cattle Breeders' Association on payment of 50c. per member by the Hereford Association.

This money was left in the hands of the representatives to the Winter Fair for prize money.

It was decided that \$25 was to be given at the next Provincial Winter Fair to the pure-bred Hereford, or a Hereford grade, sired by a registered Hereford bull, if such animal wins the grand championship.

### ELECTRICITY ON THE FARM.

The Free Press, of London, Ont., in a complimentary editorial reference to our Christmas number, which it regards as excelling any previous holiday number of "The Farmer's Advocate," after commenting upon various special features, concludes as follows:

"Foremost is the well-considered and clearly-expressed exposition of the electrical development in Ontario, by Prof. W. H. Day, of the Ontario Agricultural College, who visited the works at Niagara for this purpose. It is illuminated by pictures of the buildings and machinery used in generating the gigantic power, which is distributed through Western Ontario. The writer concludes an able article by a series of calculations, showing how this electric energy might be utilized on the farm. Though he saw no specific promise of this kind in the schemes under discussion, the feasibility of applying electricity to farm uses is pointed out, as regards those sections served by traction lines.

There are, he says, many operations for which a smaller motor than a five-horse-power one would be suitable, such as turning the cream separator, turning grindstone, churning, pumping water, pulping turnips, etc. By grouping the various articles concerned, one small motor of from one-half to one horse-power could be made to answer, at a possible cost of \$50, saving the time of one man. Along the trolley lines of Wisconsin, Illinois and Indiana, farmers have begun to use electric power for this class of work, as well as for the heavier. The facts adduced by Prof. Day are well worthy of perusal by every farmer from this point of view."

### SHEEP-BREEDERS' ASSOCIATIONS.

The following American sheep-breeders' associations held their annual meeting at Chicago, during the week of the International Live-stock Show, the first week in December, and elected the following officers for the current year:

Cotswold.—President, T. Hardy Shore, Glanworth, Ont.; Secretary, F. W. Harding, Waukesha, Wisconsin.

Lincoln.—President, R. S. Robson, Ilderton, Ont.; Secretary, Bert Smith, Charlotte, Mich.

Oxford.—President, R. J. Stone, Stonington, Ill.; Secretary, W. A. Shaffor, Hamilton, Ohio.

Shropshire.—President, R. Gibson, Delaware, Ont.; Secretary, Mortimer Levering, LaFayette, Ind.

Hampshire.—President, M. C. Ring, Neillsville, Wis.; Secretary, C. A. Tyler, Nottawa, Wis.

Southdown.—President, W. H. Compton, Monroe, Ohio; Secretary, Frank S. Springer, Ill.

Continental Dorset Club.—President, J. R. Nash, Tepton, Ind.; Secretary, Jos. E. Wing, Mechanicsburg, Ohio.

Leicester.—President, James Snell, Clinton, Ont.; Secretary, A. J. Temple, Cameron, Ill. Meeting for last-named association held at Guelph, second week in December.

### THE MORE THEY GET, THE MORE THEY WANT.

Mr. Edward Gurney, of "Haman's Gallows" notoriety, has again plunged into the limelight of unenviable publicity, by a speech at the annual banquet of the Commercial Travellers' Association of Canada, when in reply to a toast of "Our Manufacturers," he advised the commercial travellers to "look at the tariff from a personal point of view," urging that the tariff of Canada should meet that of the United States, and remarking that "if this is to be purely a farmers' country, and not a country of manufacturing and mining, then so be it, but we should know it now." This is the kind of gratitude meted out to the farmers and productive workers of this country, who, for the sake of supreme national reasons, have foregone their own direct interests and borne the burden of fiscal protection in order to build up a diversified industry in Canada. It is not enough that we should tax ourselves twenty, twenty-five, thirty or forty per cent. to assist our struggling manufacturing industries, but we are berated because we do not imitate the fatuous example of the United States. Now, we give Mr. Gurney credit for all sincerity, but his trouble is that of all other favorites and beneficiaries. He comes to regard privilege as right, and in looking narrowly and greedily at his own and his fellow manufacturers' interests he forgets the interests of the farmer and laborer, who are the bulwark of the nation, the foundation of its prosperity, and by far its most important classes. He thinks of the farmers and laborers as he would of the horses or cattle in the country, that is as so many more consumers for himself and his friends to exploit.

No, Canada is not to be purely a farmers' country, but neither is it to be overridden by a few overreaching manufacturers, and the sooner that men of the Gurney stamp find this out the better for themselves and for the interests they profess to serve. Canada's tariff henceforth must be levelled down, not up.

### FAVOR A NATIONAL FARMERS' ASSOCIATION FOR CANADA.

Representatives of agricultural societies of the Province of Saskatchewan, in convention in Regina, December 11th and 12th, urged that in view of the large amount of frozen grain in the Province this year, the Dominion Government should establish a central testing station in the Province, where farmers may have their seed grain tested free of charge.

They also resolved, that in their opinion the conditions of the grain trade in Western Canada demand that the elevators, both terminal and local, should be under direct public control and operation.

That as great financial loss has been experienced year by year by the farmers of this Province, on account of the failure of the railway companies to furnish adequate transportation to meet the public needs, especially in grain, coal and cattle, this convention urge that in view of the enormous public assistance given to railways, the Parliament of Canada take active steps to exercise some more direct public control of railway transportation than has hitherto been the case.

Whereas, farmers are the producers of the necessities of life, and deserve a suitable reward for their labors; and, whereas, they have no control over the prices they receive for their products, or the prices they pay for what they purchase; and, whereas, under present conditions the middlemen and transportation companies obtain an undue share of the wealth produced by the farmer; and, whereas, the agricultural community has

not the influence and power in the public life of the country that its importance demands, and that the best interests of the country require; therefore, be it resolved: That it is essential, in the best interests of the farmers of Canada, that a National Farmers' Association, embracing the whole country, be organized at the earliest possible moment, so as to protect and advance the interests of agriculture on all legitimate lines; and this convention strongly recommends the formation of such organization, and would press upon the attention of all local and provincial agricultural and kindred associations the necessity of at once taking definite steps to accomplish such an object.

### PROGRAMME WESTERN ONTARIO DAIRYMEN'S CONVENTION.

Following is the programme of the Western Ontario Dairymen's Convention, to be held in the Opera House, Woodstock, Ont., Wednesday and Thursday, January 15th and 16th, 1908. It will be noticed that the Wednesday afternoon session is the one set aside especially for farmers:

Wednesday Morning, Jan. 15th.—10.30—President's Address and Director's Report, Jno. McQuaker; Financial Statement, Frank Hens. Wednesday Afternoon, Jan. 15th.—1.30—Address, Winner of Dairy Herd Competition; "Some Notes on Cow-testing Associations for 1907," C. F. Whitley; "Farm Management from the Dairymen's Standpoint," J. H. Gridale; "The Cheap Production of Milk," Hy. Glendinning. Wednesday Evening, Jan. 15th.—7.30—Address of Welcome, Mayor of Woodstock and President of Board of Trade; Provincial Dairy Exhibition, J. N. Paget and H. B. Cowan; Address, "Clean Milk," E. H. Webster; Address, Hon. Nelson Monteith; Address, M. Schell, M. P.; "Some Phases of Dairying Abroad," J. A. Rudick; Address, D. Sutherland, M.L.A.; Appointing of Nominating Committee. The proceedings of this session will be interspersed with music.

Thursday Morning, Jan. 16th.—Cheesemakers' Session.—9.30—Report of Cheese and Butter Judges; Report of Instruction, 1907, Frank Hens; "A Model Situation for Handling Milk, a Clean Factory and How to Keep it Clean," Jas. R. Burgess; "Preparation and Care of Cultures," E. N. Hart; "Practical Cheesemaking," Alex. McKay; "Up-to-date Cheesemakers," G. G. Publow; "Handling our Cheese and Butter at the Port of Montreal," Geo. H. Barr; "Disposal of Factory Sewage," C. A. Hodgetts. Thur. Aft.—Buttermakers' Session.—1.30—"The Producers' Side of the Cream-gathering System," Mack Robertson; "Creamery Systems," Past and Present, Fred Dean; Address, E. H. Webster; "The Cream-gathering Creamery," Prof. H. H. Dean; "A New Test for Determining Casein in Milk," T. Herbert Lund; Address, Geo. A. Putnam. Report of Nominating Committee. Thursday Evening, Jan. 16th.—7.30—Address, Col. Jas. Munro, M. P.; "Milk as a Food," Prof. R. Harcourt; Address, Hon. Sidney Fisher; Presenting Trophies, A. F. McLaren, M. P.; Address, G. C. Creelman; Address, Geo. Smith, M.P. Report of Committees. Closing Addresses. The proceedings of this session will be interspersed with music.

### EASTERN ONTARIO LIVE-STOCK AND POULTRY SHOW, OTTAWA.

The exhibit of poultry at the Eastern Ontario Live-stock and Poultry Show, to be held at Ottawa, January 20th to 24th, will be the largest and best ever held in the eastern part of the Province. The unprecedented number of enquiries for entry forms and prize-lists show the large number of prospective exhibitors who are preparing to take advantage of the liberal prizes offered for poultry in the regular as well as the special list. Special prizes are offered for all breeds, consisting of silver cups, gold and silver medals, and cash. The value of prizes offered in the different classes is:—Asiatics, \$10; Plymouth Rocks, Barred, \$20; White and Buff, \$16; White Wyandottes, \$30; Wyandottes, other than White, \$10; Rhode Island Reds and Javas, \$12; Games, \$5; White Leghorns, \$22; Leghorns, except White, \$8; Spanish and Minorcas, \$12; Buff Orpingtons, \$19; Orpingtons, except Buff, and Dorkings, \$16; French varieties, \$4; Hamburgs and Poles, \$6; Bantams, \$9; Turkeys, Geese and Ducks, \$6. In addition, there are silver cups offered, one for best cock, hen, cockerel and pullet, from among the utility breeds; the other cup for best bird in show—pigeons, bantams, turkeys, geese and ducks not competing. Three silver cups, a gold and two bronze medals and camera are given for pigeons, and a silver cup for best collection of pheasants. The following specialty clubs are offering ribbons to club members: American Buff Wyandotte Club; Canadian Buff Wyandotte Club; National Golden Wyandotte Club; Silver-laced Wyandotte Club of America; National White Wyandotte Club. Competitors for specials are confined to contributors. Contributions of \$1 or upwards may be sent to the Secretary on or before the 6th of January. Prize-lists and entry forms will be sent upon application. Entries close January 6th. A. P. Westervelt, Secretary, Parliament Buildings, Toronto.

The annual short course and the Iowa Corn-growers' annual meeting at the Iowa State College generally draw a crowd, which approximates one thousand strong. This year the Corn-growers' Association distributes something over \$5,000 in premiums and prize money to its members, and the Iowa State College will award over \$2,000 in scholarships among the young men who are in attendance upon this occasion.

MARKETS.

TORONTO.

LIVE STOCK.

Receipts last week of live stock at the City and Junction markets were light; less than 40 carloads all told. Trade was slow, owing to dealers having got supplies for the holiday trade.

At the Junction market on Monday, receipts were light—243 cattle; quality fair; trade brisk; prices 80c. per cwt. higher. Best butchers', \$4.50 to \$5; medium, \$4 to \$4.25; common, \$3.50 to \$4; canners, \$1 to \$1.50; milch cows, \$30 to \$50; calves, \$4 to \$6 per cwt.; lambs, \$5 to \$5.50; hogs, \$5.60 for selects.

Exporters.—Few were on sale. Last week prices ranged from \$4.25 to \$4.60; bulls, \$3.25 to \$4.

Butchers'.—Picked cattle sold at \$4.75 to \$5; good, \$4 to \$4.50; medium, \$3.75 to \$4; common, \$3 to \$3.50; cows, \$2.25 to \$3.50; canners, \$1 to \$1.50.

Feeders and Stockers.—There were none offered, and few wanted.

Milkers and Springers.—About 20 milkers and springers sold at \$30 to \$67 each, three choice cows brought the latter price.

Veal Calves.—Prices ranged from \$3 to \$6 per cwt.

Sheep and Lambs.—Export ewes sold at \$3.75 to \$4 per cwt.; lambs, \$4.50 to \$5.50 per cwt.

Hogs.—Prices unchanged at \$5.60 for selects, fed and watered.

BREADSTUFFS.

Wheat.—No. 2 white winter, buyers, at 94c.; No. 2 red, sellers, 98c.; No. 2, mixed, buyers, at 94c.; sellers asking 97c.; No. 2 Goose, sellers, at 90c.; Manitoba, No. 2 Northern, sellers, \$1.14, at Goderich.

Barley.—No. 2, sellers, 72c., outside; No. 3X, 70c., outside.

Oats.—No. 2 white, buyers, 46c.; No. 2, mixed, 45c.

Rye.—No. 2, 81c. to 82c.

Peas.—No. 2, 80c.

Corn.—No. 3 yellow, 70c., at Toronto.

Buckwheat.—58c.

Bran.—Buyers are offering \$18.25, in bulk, outside.

Shorts.—\$20 to \$21, outside.

Flour.—Ontario, 90 per cent. patents, \$3.65, for exports; Manitoba patents, special brands, \$5.80; second patents, \$5.20; strong bakers', \$5.

COUNTRY PRODUCE.

Butter.—Market steady, at unchanged quotations. Creamery, pound rolls, 30c. to 31c.; creamery, boxes, 28c. to 29c.; dairy, pound rolls, 27c. to 28c.; tubs, 25c. to 26c.

Eggs.—New-laid, 30c. per dozen; cold-storage, 22c.

Cheese.—Market steady. Large, 13c.; twins, 13c.

Poultry.—Turkeys firmer, 14c. to 16c.; geese, 9c. to 10c.; chickens, 10c. to 12c.; ducks, 10c. to 12c. per lb.

Honey.—Market steady. Extracted, 13c., combs, dozen sections, \$2.75 to \$3.

Potatoes.—Car lots, easier, at 75c. to 80c. per bag, on track, at Toronto.

Beans.—\$1.75 to \$1.85 for primes; hand-picked, \$1.80 to \$1.95 per bushel.

Hay.—Baled, in car lots, at Toronto, \$17 to \$17.50.

Straw.—Baled, in car lots, on track, at Toronto, \$9 to \$10.

TORONTO FRUIT.

Apples.—No. 1 Spies, \$4; No. 2 Spies, \$3; Baldwins, \$2.75 to \$3.75.

Onions, per bag, \$1.25.

Winter pears, 50c. per 12-quart basket.

SEEDS.

Market dull. Prices unchanged. Alsike, fancy, \$8 to \$8.25; alsike, No. 1, \$7.50 to \$8; alsike, No. 2, \$6.75 to \$7.25; red clover, No. 1, bushel, \$9.50.

HIDES AND TALLOW.

Prices are quoted as follows by E. T. Carter & Co., 85 East Front St., Toronto: Inspected hides, No. 1 cows and steers, 6c.; inspected hides, No. 2 cows and steers, 5c.; country hides, 4c. to 4c.; calf skins, No. 1, city, 9c. to 10c.; kips, 8c.; horse hides, No. 1, each, \$2.25; horse hair, 27c.; tallow, 5c. to 6c.;

wool, unwashed, 11c. to 13c.; washed, 20c.; rejections, 15c.; lamb skins, 75c. to 85c.

MONTREAL.

Live Stock.—Following the active trade, for Christmas purposes, two weeks ago, the local live-stock market has become very quiet. Choice beeves sold at 5c. to 5c. per lb.; fine, 4c.; good, 4c. to 4c.; medium, 3c. to 4c.; common, 3c. to 3c.; inferior, 2c. to 3c., and canners, 1c. to 1c. per lb. The supply of sheep and lambs was light, and as demand was good, particularly for lambs, prices were firm. Lambs sold at 6c. for best, 5c. to 5c. for good, and down to 5c. for common; export sheep selling at 4c., good butchers' stock being 3c., or a shade more, and common as low as 3c. Calves, as a rule, held steady, best ranging from \$12 to, in some cases, \$15 each, and other qualities ranging down to \$4 each. Supplies of hogs are not sufficient to satisfy the demands of packers and dealers, the result being that the market has been forced up 1c. to 1c. per lb. Sales of best stock are being made at 6 1-3c. to 6c. per lb., weighed off cars.

Horses.—There has been rather a good demand for horses from outside sources of late, and quite a number have been shipped from here to points eastward, such as New Brunswick. Construction operations are going forward along the line of the Transcontinental Railway pretty actively, and this is occasioning some demand for horses. Prices continue steady, as follows: Heavy-draft horses, weighing 1,500 to 1,700 lbs., \$250 to \$300 each; light-draft, weighing 1,400 to 1,500 lbs., \$225 to \$275 each; good blocks, 1,300 to 1,400 lbs., \$200 to \$225 each; express horses, \$150 to \$225; common plugs, \$50 to \$75, and choice carriage and saddle animals, \$300 to \$500 each.

Dressed Hogs and Provisions.—Finest fresh-killed, abattoir-dressed hogs sold around 8c. to 8c.; country-dressed, steady, at 7c. to 8c. per lb. Hams are selling as low as 12c. for best quality, weighing over 25 lbs. each; 13c. per lb. for those weighing 18 to 25 lbs.; 13c. for those of 12 to 18 lbs.; 13c. for 8- to 12-lb. hams. Green bacon, boneless, is quoted at 12c.; flanks, with the bone in, 10c.; long clear, heavy, 10c., and light, 11c., choice smoked being 15c. Lard, also, is cheaper, being 12c. to 12c. for pure, and 9c. to 9c. for compound.

Poultry.—Throughout the Christmas period, the price of poultry was slightly firmer than earlier in December, although still below last year's figures. Turkeys sold at 14c. for best, others ranging down to 12c., and a few inferior even below 10c. Geese were not in very good demand, but will sell better during the coming week. Prices were 9c. to 10c. per lb., ducks being valued about the same price, but being very scarce. Chickens brought as high as 11c., and ranged as low as 9c., the difference in quality being very considerable. The market for fowl was steady, and prices ranged from 6c. to 7c., according to quality. Towards the end of last week the market strengthened, and prices went up a cent, while turkeys became temporarily scarce.

Potatoes.—Best Quebec white stock is costing from 74c. to 76c. per 90 lbs., carloads on track, and these are being resold at about 4c. more, same position; while in broken lots, bagged, they are selling from car at 80c. to 85c. When delivered into store, bagged, prices are 90c. to 95c., in broken lots.

Eggs.—Market unsettled. Broke away badly the end of last week, under the influence of importations of Americans, selling down to 17c.; good cold-storage sold at 18c. to 20c.

Butter.—The market for butter is holding firm, but demand has been exceedingly dull for some time past, and it is not thought that there will be much activity until well into January. The make is dropping off rapidly, and is now very small indeed. Prices show very little change, being about 26c. to 27c. per lb. for current makes, 27c. to 28c. for November makes, and 28c. to 29c. for October.

Cheese.—Of late, there has been quite

a good demand for cheese from the other side, and, as a result, prices here are gradually stiffening. Colored cheese is in strong favor, the result being a spread in price of about 1c. between white and colored. Stocks on the other side of the Atlantic are said to be very light, and certainly those on this side are anything but large. Quotations are 12c. per lb. for October white, and 13c. for September white, 13c. for October colored, and 13c. for September colored.

Grain.—Some dealers report a strong market for Manitoba oats, but, as a general thing, the feeling is that oats are about as high as anyone will pay, and that any distinct move in prices can hardly be upwards. Meantime, No. 2 oats are quoted at 51c., store, in car lots, 49c. for No. 3, 48c. for No. 4, and 46c. for rejected. Trade is mostly in rejected oats, very little of the better grades being sold.

Hay.—Owing to the falling off in demand, prices have experienced a decided decline. No. 1 timothy is quoted at \$18 to \$16.50 per ton, car lots, Montreal; No. 2 at \$15 to \$15.50, and clover and clover mixture at \$13.50 to \$14. Deliveries continue light.

Hides.—From all accounts the market holds steady, and very dull. Dealers are still paying 5c., 6c. and 7c. per lb., for Nos. 3, 2 and 1 hides, respectively, Montreal, and 6c. and 8c., respectively, for Nos. 2 and 1 calf skins, and selling to tanners at an advance of 1c. per lb. Sheep skins are steady at 80c. to 85c. each, and horse hides at \$1.25 for No. 2, and \$1.75 for No. 1, each. Tallow, 1c. to 8c. for rough, and 6c. for refined.

CHICAGO.

Cattle.—Steers, \$5.90 to \$6.25; cows, \$2.50 to \$4.50; heifers, \$2.50 to \$3.25; bulls, \$2.60 to \$4.90; stockers and feeders, \$2.40 to \$4.50.

Hogs.—Choice heavy shipping, \$4.60 to \$4.70; butchers', \$4.55 to \$4.65; light, mixed, \$4.20 to \$4.35; bulk of sales, \$4.55 to \$4.60.

Sheep and Lambs.—Sheep, \$2 to \$4.50; lambs, \$5 to \$6.55; yearlings, \$4 to \$5.50.

BUFFALO.

Cattle.—Prime steers, \$5.25 to \$5.75. Hogs.—Heavy and mixed, \$4.65 to \$4.70; Yorkers, \$4.50 to \$4.65; pigs, \$4.40 to \$4.50; dairies, \$4.50 to \$4.65.

Sheep and Lambs.—Lambs, \$5 to \$7; yearlings, \$5 to \$5.50; ewes, \$4.25 to \$4.50; sheep, mixed, \$2 to \$4.50; Canada lambs, \$6.50 to \$6.65.

BRITISH CATTLE MARKET.

Cables from London quoted American cattle at 12c., Canadian being nominal at 10c. to 11c. per lb. At Liverpool, American steers sold at 11c. to 12c. At Glasgow, choice steers sold at 12c.; second at 11c., and ranchers at 9c. to 9c. per lb.

What an Export Duty on Pulp will Do.

"The time has arrived," says Sir William Van Horne, "when the Canadian people must take action to protect the pulp areas of this country, if we are to reserve them for Canada, and prevent the United States decimating our forests and injuring our water supply."

"When I tell you that Americans own ten thousand square miles of timber limits, nearly all in the Province of Quebec, you will probably realize to some extent the seriousness of the situation. Now, this means that unless something is done, and done quickly, to prevent the wholesale exportation of pulpwood, the United States paper mills will, in time, denude our pulpwood areas. If, however, the Federal or Provincial authorities take action and prohibit the Americans taking away our pulpwood in such tremendous quantities, we will be in a position to force the United States mills to locate on this side of the line. Of course, the American paper manufacturer is anxious to have no export duty on Canadian pulpwood, for it will then be easier for him to secure all he requires, so as to keep his mills running overtime, and with what result, may I ask? Well, to keep the Canadian paper manufacturer out of the United States market. Now, let us cut off the supply of pulpwood, and in six months you will find American capitalists erecting paper mills in Canada."

QUESTIONS AND ANSWERS. Miscellaneous.

MISCELLANEOUS.

- 1. What is the cubic measurement of one bushel?
2. About how many cubic feet is there to a ton of: (a) new hay, (b) old hay, (c) straw, in mow, in winter?
3. What is the best way to treat rubber that it may be used again, or what is it useful for?
4. What is the value of an American (United States) silver dollar?
5. What is in the envelope enclosed, and has it any value? J. A. B.

Ans.—1. Taking 277.274 inches to the gallon, a bushel would occupy 2,218.192 cubic inches.

2. Depends upon the kind of hay, and how cured. Estimates of the weight of hay vary from a cube of 7 feet, or 348 cubic feet, up to a cube of 8 feet, or 512 cubic feet per ton. There is no rule that will hold good in anything like a general way. Better to weigh a section of a mow, or a load or two of new hay. We are not aware of any published data giving the volume of straw per ton. Anyone with reliable information on this point will confer a favor by contributing it to these columns.

3. This information would scarcely be of any worth to an ordinary citizen, though the rubber manufacturers appear to make good use of it.

4. The silver dollar of the United States weighs 412.5 grains, consisting of 371.25 grains silver and 41.25 of alloy. The precise value of the silver, in terms of gold, varies somewhat, according to the relative abundance of the two metals.

5. The sample consists of black mica, a common mineral, specifically known as biotite, which comes from boulders of glacial origin. It is of no commercial value.

BUTTERMILK BITTER.

I have a pure-bred Jersey cow which gives good milk; but, when it is churned, the buttermilk is bitter, although the butter seems all right. She is not in calf. R. S. L.

Ans.—The bitter taste in the buttermilk may be produced by any one of a large number of causes. Certain weeds, such as ragweed, occasionally produce a bitter flavor when eaten by cows in large quantities. Over-ripe clover hay, especially threshed alsike, is also responsible in some cases. Cows far advanced in lactation are inclined to produce bitter milk, especially if deprived of laxative food and a reasonable grain ration, and, in certain diseases of the udder, the composition of the milk may be changed, and bitterness developed. The commonest, and in this case the most likely, cause is due to bacteria, or to yeasts, which gain entrance to the milk subsequent to milking. Some of these organisms are found upon the surface of leaves, whence they may be carried by wind or drafts to the milk, and, finding a suitable food, multiply rapidly, and produce bitter substances. Once introduced into a dairy, they are very hard to get rid of, and, in cheese factories where the whey is returned in the milk cans, they may spread from one farm to another, and infest the dairies of a whole neighborhood. It is partly as a means of controlling these and preventing their spread that the practice of heating whey at cheese factories is advocated. To cleanse the dairy of them is difficult, for in all the crevices of every can in which milk has been kept there will be found sufficient of the yeast to carry on the infection when new milk is put into the vessel. It is, therefore, necessary to thoroughly cleanse, scald and scrape the seams of every milk vessel, and then disinfect with boiling water or steam. Then whitewash the milk-house, cellar and pantry; thoroughly cleanse the cream separator if one is in use; sweep down the walls and ceiling of the stables, and give all the inside a thorough coat of whitewash or a spraying with some disinfectant. Then observe special precautions to insure cleanliness in milking. While these things may look pretty elaborate precautions, they are all good in themselves, and we have, therefore, no hesitation in recommending them. Half-way measures are not likely to be of any use.

public life of the... therefore, be it... the best interests... National Farmers'... country, be organ... as to protect... ure on all legi... ngly recommends... and would press... provincial agricul... ssity of at once... ch an object.

DAIRYMEN'S

Western Ontario... the Opera House... rday, January... d that the Wed... side especially

0.30—President's... cQuaker; Finan... day Afternoon...airy Herd Com... Associations for... ement from the... e; "The Cheap... ng. Wednesday... Welcome, Mayor... of Trade; Pro... et and H. B... Webster; Ad... M. Schell, M... J. A. Rud... Appointing of... gs of this ses...

esemakers' Ses... er Judges; Re... s; "A Model... ctory and How... Preparation and... ical Cheesemak... makers," G. G... at the Port... al of Factory... Buttermakers'... of the Cream... Creamery Sys... Address, E. H... ery," Prof. H... ing Casein in... o. A. Putnam... rday Evening... r, M. P.;... Address, Hon... F. McLaren... ss, Geo. Smith... Addresses. The... erspersed with

AND POULTRY

a Ontario Live... Ottawa, Janu... e never held... unprecedented... prize-lists show... who are prel... prizes offered... the special list... consisting of... d cash. The... classes is:—... d, \$20; White... ; Wyandottes... ds and Javas... Leghorns, ex... as, \$12; Buff... uff, and Dork... rgs and Pose... e and Ducks... ffered, one for... m among the... bird in show... ucks not com... d two bronze... s, and a silver... The following... club members:... an Buff Wyan... Club; Silver... White Wyan... confined to... wards may be... h of January... upon applica... P. Westervelt,

Corn-growers'... lege generally... one thousand... association dis... and prize... State College... s among the... his occasion.



## Life, Literature and Education.

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

### A WORK FOR THE PEOPLE: "A WAR AGAINST UGLINESS EVERYWHERE."

[Let us begin the New Year by determining to take a personal interest in this matter.]

We received, recently, the following letter from one of our readers, and, in reply, may say that "The Farmer's Advocate" will be more than pleased to help on this work of beautifying our country in every way that lies in its power. We shall gladly afford space for letters such as Ruralite suggests. We feel that a widespread interest may be created in this way, and interest is only the forerunner of action.

#### RURALITE'S SUGGESTION.

"I was much interested and benefited by the account in 'The Farmer's Advocate' of November 28th, from the pen of 'Farmer's Advocate Representative,' on 'The Horticultural Society Convention.' I think there is a great good to accomplish for this fair Canada of ours in the beautifying of our Rural Homes, and I think your paper is the best medium. We have to start the ball rolling in the way of greater efforts being made to beautify the farmers' front yards and farms in general. I would suggest that you ask for suggestions on the best trees, shrubs, vines and flowers to plant and grow; writers to send small diagrams of their ideas of laying out a front yard for the best harmony."

Ontario Co., Ont. RURALITE.

### THE OPINIONS OF SOME PROMINENT HORTICULTURISTS ON THE SUBJECT.

The following addresses, which were given at the convention of the Horticultural Association, which met in the City Hall, Toronto, in November, are published at this time with very much pleasure. Read them, and get inspiration from them.

Within two or three weeks, the seed catalogues will be beginning to make their appearance,—a new inspiration. If you have never had one sent you before, see that you get one this year. Write for it, and in good time, so that you may have time to think things over, and decide what flowers and shrubs and vegetables are best for you. Make up your mind to create a bit of beauty about your own home, or along the roadways of your own township this year. "Money a mickle maks a muckle,"—and there are many farmers in Canada. A word to the wise is sufficient.

It will be understood that all of these articles are more or less condensed, to adapt them more especially to the needs of an essentially agricultural journal.

### THE WORK OF OUR HORTICULTURAL SOCIETIES.

Mr. J. Lockie Wilson, Toronto, Ont.

You have come to this convention to discuss the problems that confront our horticultural societies. No mere mercenary motives have drawn you from the four winds at considerable expenditure of time and money to attend this meeting. It is to gratify your love of the beautiful in nature, and to signify your willingness to do your part towards making this earth more beautiful, attractive and productive that you are here to-day. I trust that our meeting may be helpful and encouraging to every horticulturist, and that all, as a result, may have higher ideals, and go home more than ever in love with horticulture, and that this may prove an epoch-marking meeting for our societies in Ontario.

The man who makes his thousands at a single deal in real estate, who has added nothing intrinsically to the value of the land, may, because of his dollars, cut a large swath in the community; but I count of far greater value to the world, one who, through the study of nature's possibilities, brings out an added flower or fruit of value to mankind, and while these dealers in lands, stock and bonds may laugh in derision at our enthusiasm over a new peach

earned fruit, has failed in the highest purpose of life.

The richest and most practical horticulturist is he who not only intelligently and successfully cultivates his own gardens and orchards, and enjoys the comforts of his well-earned prosperity, but, through the broad scope of his intellectual and spiritual vision, sees the marvellous forces and laws of the Infinite as they are shown forth in the countless forms of animals and plants, whether found in his garden as friends or enemies, or in the remotest lands beyond the seas.

The first authentic history of our race refers to a man who dressed and kept a garden. According to the Book, Adam was a horticulturist by divine order. Infinite wisdom was exercised in the choice of occupation for the highest of God's creatures. Horticulture was chosen as the best pursuit for man, and, though we have departed from many of the ancient customs, and discarded many ancient ideas, its dignity has never diminished. To-day, it ranks higher than ever before, and the progress it has made in every way justifies it to be classed, as we hope it soon will be, among the learned professions. Trace the evolution of the peach, that most delicious of fruits; from the bitter little almond we find descended all the varieties

of society is much more important than he was half a century ago. A knowledge of botany, chemistry, entomology, and ornithology is necessary in his profession. The best modes of propagation, prevention and cure of diseases and methods of dealing with destructive insects are among the subjects that claim his attention. The sons and daughters in our loved Canadian homes should be taught to regard horticulture as one in which industry is rewarded, talent developed, and virtue nurtured. The flower complete in every part, blooming in its proper season, and fruit in its perfection, should be a reminder of Him, who said "consider the lilies." Every garden, however small it may be, has in it something of Paradise. Whatever helps a life to grow upward into a purer light, a clearer atmosphere, or causes the finer feelings to take root and climb up to a more healthful place, is surely worthy of notice, and is an inspiration both noble and unselfish.

I am reminded of a quotation printed on the front page of a prize-list of the St. Catharines Horticultural Society—that society which is doing such good work in that Garden City, under the supervision of our energetic and untiring president. I will read you the quotation, though I think some of us might not agree with it to the fullest extent, but, in many cases, it would apply: "And he gave it as his opinion, that whosoever could make two ears of corn or two blades of grass grow upon a spot of ground where only one grew before, would deserve better of mankind, and do more essential service to his country than the whole race of politicians put together."

The work our horticultural societies are doing is a noble one. The St. Catharines Society is an outstanding example of what can be done by earnest effort and perseverance. Last year, they expended \$1,600 in prizes, and a total expenditure for all purposes of \$2,500. Their membership roll numbers 450. The surrounding townships have caught the spirit of that energetic citizenship, and have contributed large grants to the horticultural society. The town itself considered their grant of \$350, money well spent.

We have, in the Province, 63 societies, with a membership of 7,000. Under the new Act, six other societies found it necessary to become merged with agricultural societies; their membership was 540. The total grants to societies in 1906 was \$5,956; the grants in 1907 amounted to \$8,140.

One important feature of our work must be to spread the good tidings of horticulture. Bankers, doctors, lawyers all subscribe for journals specially written for their particular lines of business, and the up-to-date horticulturist must do likewise. How are you to know about the newest kind of fruit, flower or vegetable, and the proper way to protect them from their enemies, if you do not take a journal that deals practically with your business? I would recommend every member of our society, if they have not already done so, to subscribe for a horticultural journal. We have published in this



An English By-path.

that fills its place in the succession of fruits, or a new chrysanthemum with added attractions of form or color, we can, in our ecstasy, sorrow a little that so few people of this world know how to get the highest pleasure out of life by living near to nature's heart. There is a wonderful field for improvement in the objects with which we deal, and the more we add to our knowledge of things that lie nearest to us, the wider will open the door to a wealth of information, the acquirement of which will give us the keenest delight.

The horticulturist who does not see more beauty and have a greater source of happiness in a great thought or a lofty conception of the Infinite as manifested in the marvellous works of nature, than in the gold for which he sells his hard-

with which we are acquainted. The state of perfection to which the apple has been brought is no less wonderful. Compare the apple of to-day with a crab of some inferior variety, and the difference may readily be discerned. We see in our flowers, as well as our fruits, the fairy touch of science. Contrast the wayside briar with the beautiful roses at our exhibition in Massey Hall, and you begin to have some idea of what scientific culture has done. While in reality, horticulture has always borne an important part in the affairs of men, the term has recently been given a broader meaning, and now includes all the arts relating to orchard, vineyard and garden, as well as all the pursuits bearing on the adornment and improvement of homes, parks and highways. The horticulturist as a mem-

city the Canadian Horticulturist, edited by our Secretary, Mr. Cowan, and there are also valued farm journals that devote a number of pages to the work of the horticulturist.

Fruit, flowers and well-kept lawns and ivy-crested homes have a far-reaching effect for the betterment of humanity. Many societies are doing an excellent work in distributing seeds, plants and bulbs to school children. I would suggest that, when seeds are distributed in this way, the teachers get in touch with the members of horticultural societies and follow up the work by visiting the homes of the children, and showing that an interest is being taken in the work that the little ones are doing. Many of our working people are endeavoring in a small way to beautify their humble homes, but they do not go about it in the best possible manner. Many of them try to produce flowers and vegetables where the sub-soil has been turned up from cellars, and success does not follow their efforts, and they cannot understand why they fail. If members of horticultural societies would visit the cottars' homes, showing them how to improve their soil, and the best kinds of flowers, plants and vegetables to grow, they would be doing an unselfish work in assisting to beautify humble homes, thereby making the lives of those citizens more pleasant and happy.

We must encourage the local press to take cognizance of the work we are doing, and members of the societies should frequently send items of interest on horticultural matters for publication. Many societies hold monthly meetings at the homes of their members, and have discovered that this method is an effective one for increasing membership and adding interest to the work.

I have to thank you ladies and gentlemen for the kindly and courteous hearing you have given me. I hope that when any of you visit Toronto, you will come to my office and talk over any matters that may arise of importance to your societies, and anything I can do to further the work in which we are engaged will be gladly done. It is encouraging to see so many ladies here, and I trust many others will join us in the near future, because they are the ones who know best how to train the tender plants to grow upward, and they best understand how to care for things that are beautiful.

**WHAT CAN HORTICULTURAL SOCIETIES DO TO PROMOTE CIVIC IMPROVEMENT?**

By Major H. J. Sneigrove, M. A., Ph. B., Cobourg, Ont.

[A paper which may be made to apply equally well to the rural districts.]

To this query my answer is: By arousing and uniting all citizens to develop beautiful and wholesome surroundings.

By raising the standard of municipal taste and tidiness. By materially contributing toward making our Canadian home life brighter, healthier and happier.

To DO these things by means of organization, which we have at hand, working out its salvation by dint of patience, stick-to-itiveness and common sense.

I submit that the prime object of our horticultural societies should not be merely to cultivate a love of flowers per se by the distribution among the members, once or twice a year, of seeds, plants, bulbs, shrubs and trees, but our constant aim should be to educate public sentiment along lines of civic improvement, and thereby achieve the greatest good to the greatest number.

Can we not, in most cases, furnish the initiative, the motor power, "the push and the pull" behind the throne, by suggesting reforms in some department of civic administration, resulting inevitably in the

creation of a public sentiment that will either impel or compel our municipal authorities to DO THINGS which hitherto have been utterly neglected or sadly misunderstood in the average community.

Perhaps someone will ask, "What is the meaning of civic improvement?" It is a recognition of the rights of the people to the free and unobstructed enjoyment of the natural beauties bestowed upon us by a beneficent Creator. It is a war against ugliness everywhere.

In our natural life we are at the turning of the ways. We have commenced to think of living, but how can we live happily amidst an environment of ugliness, the defacement of nature, loathsome home surroundings, and dearth of rational recreation, the products of sordid commercialism?

We must reorganize our civic life in harmony with that domestic interpretation given by John Ruskin, when he said that the exterior of our houses is not private property—unless we build in a wilderness. Our mission should be to create a conviction of the beautiful along the highways and byways of our modern Canadian life, and to unite private individuals, voluntary associations and industrial corporations in the outward expression of this conviction. Public beauty is the dominating idea of the twentieth century.

At the annual meeting, held in January, a "Publicity Committee" and a "Look-out Committee" are appointed. The duty of the former is to contribute paragraphs to the columns of the local newspapers, offering suggestions touching every feature of the development of the æsthetic and civic side of town life, and showing that the character of the community is formed by the surroundings which even the humblest citizen maintains about the threshold of his home; also illustrating, from time to time, how efforts to beautify will induce every tenant in the block to follow suit. People who will allow weeds to grow luxuriantly about their premises are occasionally "written up" as a sort of "horrible example." The effect of this publicity is often magical.

The town is divided into wards or districts which are assigned for purposes of observation to the different members of the Look-out Committee. For two or three months this committee goes about quietly taking note of all eyesores and offences against the sense of sight, and also noting how much better the town would look if certain improvements were made with the common property of the municipality. In the spring, a meeting of the committee is held, at which notes are compared by the members, and a report prepared for submission to the town

tiative to point the way. At least, that has been our experience in Cobourg.

You have heard the story of the Sunday-school teacher who, quoting the words of the Bible verse beginning "Many are called," asked the class to repeat the remainder of the text. Only one hand went up, and the precocious child was asked to give the class the benefit of his biblical lore. "Many are called, but few get up," was little Johnny's revised version of the Scriptural proverb, which is lamentably applicable to the work of our societies to-day.

Unquestionably, the most prominent single factor in the movement for civic improvement is the influence of our women. God bless them. They are our good housekeepers, and what is more proper than that they should become good civic housekeepers. They abate nuisances in the household. Why not in the town! They make the home a place of beauty. Why not the town? Moreover, patience and perseverance more frequently characterize their efforts than those of men. This is the coin of success. "The work that never lags is woman's work." Yet, there is no dearth of opportunity in any city, town or village in this Province. It is intelligent concentration and application that tells every time.

In undertaking this work, we should not attempt to remake the town in one year. We do not purpose meddling officiously with the work of our municipal bodies, or offensively dictating to them what they should or should not do. Appreciating their responsibility, we approach them deferentially, and politely offer to co-operate with them for the good of all. Every town official who has an eye for the public good should certainly welcome the co-operation of our influential societies for bettering municipal conditions.

The making of the ideal modern town is essentially and unpolitically a business proposition, wherein the health and happiness of each citizen is considered a tangible asset equally with the annual tax bill, where the costly, ruinous regime of the incompetent, self-seeking politician is ostracized, and where public service, as an honor and a duty, is cheerfully assumed by the ablest and best citizens.

If, as has been suggested in Chicago, art is a corrective for crime, then art should be made effective as a preventive of crime. Educators are beginning to see that the sphere of the state embraces not only the redemption of those who have fallen from grace, but equally the prevention of those walking in the paths of virtue from falling out by the wayside and becoming moral castaways. "An ounce of prevention is worth a pound of cure." As a consequence, we rejoice to find that our schoolhouses are becoming more and more to be the centers of refinement for those who enter their walls. The schoolhouse should be made a real civic center of the community, and a perennial source of hopeful, helpful uplift to all classes. Unkept school-grounds leave bad impressions on children, which in after-life will surely be reproduced in their homes and work-a-day surroundings. There is no doubt the refining influence of school gardens takes out of boys the tendency to pilfer fruits and flowers. Each child feels that he has a personal stake in some living, growing thing. It implants in his fresh, impressionable mind a love of the beautiful. The public schools, wherein most of our future electors and legislators are being made "fit" for the responsible duties of citizenship, is the place where we should turn our attention in our efforts to promote a more beautiful public life in Canada. "If the Athenians desire good citizens, let them put whatever is good into the lives of their children," was the advice of a



A Vine-covered Home.

Imagine this scene were both vines and trees taken away.

The town beautiful is no longer a dream of the idealist, but in many places it is becoming an accomplished fact. Wherever one travels, whether by railroad, boat, or carriage, he cannot fail to be struck with a remarkable tendency everywhere toward embellishment. Beauty and art in the truest sense are no longer reserved for the rich few, are no longer the perquisite of luxury-loving aristocrats; but are made the common heritage of the common people, for the benefit and uplift of all.

Throughout the American continent we find gentlemen possessing the ability of statesmen devoting themselves unselfishly to the pursuit of citizenmaking and citymaking, strenuously striving to prepare a model city for the future. It is the awakening of a general civic consciousness, which means the redemption of our communities from the sordid and the shabby. The old order, the old love grown to be the old hate, must give way to the new order, the new love grown to be the new promise. To exile ugliness and enthrone beauty is our common interest.

May I describe some methods of conducting a civic-improvement campaign, which have been efficiently carried out by the Cobourg Horticultural Society.

Through the chairman, the mayor is requested to call a special meeting of the council, when a typewritten report of the committee is presented and discussed, clause by clause. A committee of the council is then appointed to co-operate with the directors of the society in carrying out, as far as possible, the recommendations of the Look-out Committee, which are handed out to the local press for publication. The effect is marvellous, the natural impulse for civic improvement manifesting itself in a general attempt to clean up and fix up throughout the town.

In appointing our civic-improvement committees, we should endeavor to avoid misfits. I mean by that, merely ornamental members with only names, who do nothing and are not worth a cent to the work-a-day purpose of any live association. And it may be said, by way of parenthesis, that even a well-selected committee, with a sincere desire to do things, rarely gets anywhere unless the chairman has the gift of initiative. Someone has said that all the world's great prizes go to initiative; that is, the faculty of seeing for one's self what should be done, and of doing it without ado. Usually an entire committee or a whole society hold back, waiting for the man or the woman with the ini-



great philosopher in ancient Greece, which we ought to take to heart today.

Here are a few concrete objects which our societies should work for, as distinguished from more general civic ideas, viz.:

Preservation of the natural beauty-spots.

Removal of unsightly bill-boards, poles, overhead wires and signs.

Object-lessons on how to plant the home grounds, showing the importance of a right start, etc.

Offering prizes for the best porch window and garden display.

A relentless war against dirty, garbage-strewn streets and vacant, weed-grown lots.

Bringing influence to bear so as to make railway-station grounds tidy and attractive. First impressions are usually lasting ones, and unfavorable impressions can only be formed by uncouth conditions about a town's main gateway. A pretty station, with flowers and vines, will afford pleasure to every resident, every visitor and every traveller who passes that way. Cemetery improvement: "God's Acre," in many towns and villages in Canada, is a wilderness of tangled weeds and matted grass—the most dreary, neglected waste in the countryside; a standing reproach to our Christian faith.

Enough perennials and bedding plants to embellish scores of small gardens are thrown away every year by professional gardeners on a large scale. It would be a good plan for our societies to request these florists with an embarrassment of riches to save their surplus plants for the benefits of schools, etc., who would be only too glad to send and get them.

I fear my address has already transgressed in length the bounds of time set for it, but I cannot conclude without giving you a final summing up and reinforcement of my argument, which I take special pride in doing in the clear, cogent and concise language of Mr. J. Horace McFarlane, the distinguished President of the American Civic Association, whose eloquence of voice and elegance of pen have accomplished wonders for "a more beautiful America."

Having written to Mr. McFarlane, informing him that I had been invited to prepare this address, and asking him for suggestions that would help to inspire a great civic awakening in this Province along the lines inaugurated by the Horticultural Societies in Massachusetts, Rhode Island, Minnesota and Philadelphia, and other parts of the United States, I had the honor to receive the following reply:

Harrisburg, Pa.,  
Sept. 19th, 1907.

Dear Sir,—In respect to the subject of your address, I may say that it seems to me that the horticultural associations and societies throughout the Province of Ontario can very profitably take up civic improvement for many reasons, among which might be cited the following:

1. To the prosperity of the horticultural trades, civic improvement directly tends, for, aside from the mere physical and decent cleaning-up which precedes adornment, most of the adornment is connected with the use of seeds, plants, trees and vines. There is, therefore, a good business reason, if such were necessary, for the interest of horticulturists in civic improvement. The amateur in horticulture has the best opportunity to be a good civic improver, because he has knowledge of the materials which help to make the surroundings of his home and his home town more beautiful.

2. It would seem to me that these associations, interested in the prosperity of bustling, active Ontario, would have reason to undertake civic improvement work, because such work always increases values. Significant commentary from this side of the case is presented in a paper which the chief engineer of the Maintenance of Way, of the Penn. Rail-

road, has prepared for presentation at the Providence meeting, in November. He calls attention to the fact that improvements instituted by that company at suburban stations have uniformly resulted in a greater business to that station, and therefore have paid the railroad. He points out that those looking for homes are attracted by pleasant surroundings, and repelled by ugly surroundings, and that, therefore, the prosperity of the community is directly connected with its relation to the improvement movement.

3. It would seem to me that the horticultural associations might be interested in civic improvement, also, because of the way in which improvement conditions tend to satisfaction and permanence in the matter of industrial workmen. Some of the most successful manufacturers realize the importance of providing pleasing surroundings, helpful recreation and proper playground facilities for the workmen and their families in a self-respecting way, to the end of keeping these workmen sober, happy and contented.

4. The education of children proceeds through the eye. Ugly surroundings give an education in ugliness. Beautiful surroundings give an education in beauty. No one would for a moment suggest that the better citizens grew out of an education in ill-looking and evil-smelling surroundings. Yet this point has been lost sight of all over our great continent, and we grow our children in pippen conditions, wondering, after a while, why they do not appreciate healthful and beautiful condi-



A Good Road, but Bare, Bleak and Uninteresting for Want of Trees Along the Fences.

tions as fully as they ought to. I am sure that I am within the facts when I say that it will pay any community to surround its children with clean beauty, to cause them to hate ugliness.

5. In making a final suggestion to your associations, it would be that the members resolve themselves into units for work, beginning with that work about the home. . . . When these units have thus acted, they will be ready to fight against the ugliness of bill-boards, the correction of poles and wires, mutilation of trees, and other ways in which so-called enterprise has turned our beautiful America, in some portions, into a most unattractive condition. These same units, then proceeding, will insist upon pleasant surroundings for school-grounds, so that the children will not have to live through the years of their education in unsatisfactory and sometimes unsanitary conditions.

I have the greatest faith in the future of Ontario, and I sincerely trust your address may be an inspiring one, with the greatest benefit to the earnest people who will hear you.

J. HORACE MCFARLANE,  
Pres. A. C. A.

Ladies and gentlemen, representatives of the horticultural societies of Ontario, let us propagate this beautiful cult, like those torches of which the Latin poet speaks, which passed from hand to hand until the whole land was aflame with light.

#### HOW ARE WE TO EXPEND OUR FUNDS TO THE BEST ADVANTAGE?

By Rev. A. H. Scott, M. A., Perth, Ont.

(A paper also rich in suggestion to all who are interested in seeing beauty displace ugliness in Canada.)

I have a friend who has riches and a garden. He says that he hopes those who come after him will take as much pleasure in spending his money as he takes in making it. Other people may be right or they may be wrong, but they say that Mr.

grudges the expenditure of a dollar unless he can see how it will make another dollar. The only reservation in this outgo is the expenditure for the upkeep and embellishment of his garden. My friend may have his own purposes in finance, but I know to his credit, he is seized of the horticultural idea.

To the horticultural idea belongs, necessarily, some right conception of money. In our fair Ontario the right expenditure of smaller or larger sums of money at the present time, for the purpose of soil and garden development, counts for a great deal. "A dollar in a university is worth more than a dollar in a jail." Since cultivated mankind from time immemorial has shown a hereditary tendency for the soil, and inasmuch as "to own, to till and to beautify a bit of land, no matter how humble, is the absorbing desire of most men of moral breadth," it is important that an association such as ours, and operating at a time and place such

of being a helper in the horticultural cause in Canada. You know of that phase in our make-up which disposes us to think well of our own. Now, in my spot in Ontario we have a pride in clean streets. We glory in overhanging shade trees. We advocate well-kept lawns and good gardens. About our premises in summer you may notice the product of intelligent cultivation, and if you visit us in the winter we will show you something that is rewarding in the indoor culture. A part of our pleasure is the result, I believe, of a certain expenditure for the bulbs and shrubs that reach us through the Perth Horticultural Society.

It soon became impressed upon our members that they were scarcely justifying their horticultural existence by confining their attention to the cultivation of those niceties which were largely for their own personal or household use. So they looked about and asked what more they could do. Their attention was fixed upon the places where many pioneers in the Perth district were sleeping. A new piece of land had been purchased for a general cemetery, and when the community began to bury its dead in the large place the old grounds came to be neglected. Prompted, no doubt, in some measure by attachment to Him through whose grace and power the dead are to rise again, in some measure, too, out of respect for the memory of the departed, and in a great measure by that sense of propriety which is shocked to see the stone wall of a sacred place broken down and mounds that should be putting forth green grass grown over with nettles, our society contributed out of its own funds, and added to these through personal solicitation among the townspeople, with the result that the old burial grounds, belonging to the Presbyterians, Anglicans, Methodists and Roman Catholics, have been made new. Perhaps no expenditure has given more satisfaction to our members and to our citizens than this upon God's Acre.

Some of the funds belonging to our society have been expended in various ways along the line of civic improvement. Ornamentation of public buildings with blooming boxes and hanging baskets has been done. The society has helped to prepare the way for beautifying the grounds about the place, which is conspicuous when we are leaving our homes and returning to them again at the season of travel.

Our most recent service was one in which we were associated and assisted by one of the departments of the Dominion Government. A waterway leads from our town to the Rideau, which again opens on the one side to the St. Lawrence, and on the other to the Ottawa. The basin at our end is the head of navigation. The banks were unkempt. But now, the Government of Canada and the Perth Horticultural Society having joined hands in the enterprise, there is a new order of things since the banks of the Tay were subjected to the skill and culture of the landscape decorator.

These are sample instances of what has been done in a single place. Expenditures for kindred purposes in places where other conditions obtain would seem to be the advantage of the localities, and in keeping with the right trend of Horticultural Society endeavor.

Taking a wider outlook, it appears to me that doors are presented to us in the three following directions:

(1) We should be free to spend money to bring in men and women who are capable of making the public platform a disseminating place for healthy horticultural information. L. H. Bailey tells of an owner of land, who, not knowing reasons for anything, has no information, and goes fishing. The fisherman's calling is time-honored and respected, but it is too bad, inasmuch as right gardening is intellectual employment, that so many fine acres should be locked up because so many operators on the soil are uninitiated and uninformed. There is a power in the living voice of an interested personality who will

Let me proceed through a concrete instance. The Horticultural Society of which I am a member is desirous

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provoke enquiries from the platform and send audiences away with a new charm for "the most beautiful, the most healthful, the most useful and most noble employment of man."

(2) There was never a time in the history of Canada when there was so significant a call to furnish our people with reliable and inspiring horticultural matter through the printed page as that which we have come upon just now. The intelligence of the Canadian, I believe, forbids the success of any venture in publication that is characterized by what is scrappy or second-hand. There is a great deal that is hopeful in the tone and talent which we read through some of our Canadian journals that devote themselves wholly or partially to the agricultural or horticultural cause. May these broaden and prosper.

(3) At the risk of being less definite than I should like to be in this concluding reference, I take advantage of this opportunity to express my own concern, as well as the concern of other thoughtful men—if the present schoolbooks of the Province are to be changed—that the new ones should have a conspicuous place for the first enterprise of the nation.

Next to the work of saving men's souls in Canada, I can conceive of no more important work to be done during this generation than the training of our children into appreciation of the Creator's gift in the soil, and in the best use of that gift, both for the development of a sturdy Canadian manhood and for the enlightened projection of our country's chief resource. We receive from the Government of the Province part of our wherewithal for promoting the horticultural cause. We look for the utilization of some of the moneys contributed by the Province to the Ontario exchequer in laying new and improved foundations with our sons and daughters, by means of the very best procurable lessons in the new series. It may be too early to go into detail; but if a forecast would be pertinent, it may not be inopportune to write here the expectation that when the new series of readers for the public schools of this Province shall have taken the place of those which have served their day, there will be afforded scope for the definite and rewarding consideration of such fundamentals in the soil as drainage and tillage, as clover and fertilizer; and that the right association will be set forth for our twentieth-century citizenship in this Canadian realm between a bed of asparagus and health, between a perennial border and happiness, between the "chief end of man" and a "watered garden."

#### SOME UGLY THINGS IN OUR COUNTRY.

[In connection with the foregoing address, the following, which was prepared some time ago for "The Farmer's Advocate," may be especially appropriate.]

We are, perhaps, inclined to idealize our country. As good red-hot Canadians we are, with our Prime Minister, "proud of every inch of Canadian soil," and so we take pride in the bustle of our towns and profess to see beauty in every square yard of Canadian grass and stretch of country roadway—Canadian roadway, of course.

There are stones along the wayside, but don't look at them—they are nice Canadian stones anyway. And here are bare houses with bare yards about them, and bare, treeless lanes, with not over-clean milking yards at the ends of them running all too near the houses. But what of that? The country is new. Give it time and it will improve. Drive on, drive on!

Get along, Jack! Get along, Jerry! Here is a stretch of roadway—one mile, two miles, three miles—not a tree for shelter or to interpose a dash of pleasing green against the whitening fields. Never mind that! Look at the crops. What good Canadian crops they are!

Here, perhaps, is a dip of woodland with a stream and some meadow rue struggling through a burst of bracken. In five years, probably,

this will be all gone, but just now it is good to look at. . . . Hold up, though! Lift your eyes lest you see it—here is a dump of tin, and glass, and old bottles, right in the midst of the greenery! Ah, we are getting near a town—a good Canadian town—and this is its herald. . . .

And here, too, where the moss has been scraped from a picturesque old boulder to make room for it, is a flaring sign—"Smith & Co., Hatters!" And further on "Perkins & Goggins—Spiced Beef and Sausages!" (appropriately bordered with fern and red elder); and yet further, rising like a hobgoblin of the woodland, albeit a very prosaic hobgoblin, an immense moustachioed head protruding over a dazzler in blue and gold, proclaiming "Mennen's Borated Talcum!" . . . Still on, and the peace of a green field is broken by a startling "Hood's Sarsaparilla!" supplemented, ere the green field is passed, by an epitaph ten feet long by five feet wide, hurling at you "Carter's Little Liver Pills!"

Out upon these placards! What has liver to do with me this fine autumn day! Drive on—drive on!

And now the town is reached. Not a tree along the bare business streets. In Paris, to be sure, the busiest of the business localities have their trees, each with its bit of ground saved from the pavement—but this is a new land. . . . Not a seat where the old or faint may sit down for a moment's rest; not a shade from the sun or the rain, as the case may be, save for the awnings, checkered hit-or-miss along the upper air. What if even in Algiers, far away, there are

eyes have been opened and you go forth with an impulse to make things, so far as in you lies, better; to speak your word, plant your tree, cut down your patch of brown dock by the roadside and in its place plant wild rose and Virginia creeper to trail over the stone fence.

There are many beautiful spots in Canada—very, very many beautiful spots; yet there are also very, very many stretches bleak, and ugly, and uninspiring. Why should this be so? Have you a farm? Are you a path-master? Are you in the council? What can you do about it?

COUREUR-DE-BOIS.

#### SELECTIONS ABOUT GARDENS.

"God the first garden made, and the first city Cain."—[Cowley.

"Who loves a garden loves a greenhouse too."—[Cowper: The Task, Book III.

"God Almighty first planted a garden; and indeed it is the purest of human pleasures; it is the greatest refreshment to the spirits of man; without which buildings and palaces are but gross handiworks; and a man shall ever see that, when ages grow to civility and elegance, men come to build stately sooner than to garden finely, as if gardening were the greater perfection. I do hold it in the royal ordering of gardens, there ought to be gardens for all the months in the year, in which, severally, things of beauty may be then in season."—[Bacon.



One of the Garish Ornaments which Break Into "the Peace of Many a Green Field" in Our Country. In Parts of Germany and Other Places, Unobtrusive Cylinders are Provided for Such Advertising as This.

arcades, continuous roofs supported by graceful pillars, with the street on the one side and the shops on the other? This is a Canadian town.

Twelve o'clock, and the street cars jangle, and the whistles blow, screech, scream, a deafening dissonance through which but one musical note runs, the boom of one big whistle, which has, somehow, caught the deep resonance of a big lake steamer. You wonder if anywhere under heaven there is a town in which all the sounds are attuned to keys that must produce chords, harmony, instead of this Plutonian discord—assuredly not in Canada. But why not?

You go into a restaurant. No green drapery of vines to entice you to your repast, no bank of flowers or restfulness of ferns. Pay your twenty-five cents; eat your soup and fish and roast beef, and heed not the flies hovering like harpies above you. Ah, bootless injunction! Next day you will go to a hotel, pay fifty cents, and pray the kind fates that from the plague of flies at least you may be delivered. You are coming to feel that even in Canada there are a few things that might be made better than they are.

Is your patriotism waning? No, waxing furiously. Be of this assured, that it is only false patriotism which can be blind to the need of improvement. Thank heaven if your

#### GOOD ADVICE FOR THE NEW YEAR.

If you have had an unfortunate experience this last year, forget it. If you have made a failure in your speech, your song, your book, or your article; if you have been placed in an embarrassing position; if you have fallen and hurt yourself by a false step, or if you have been slandered and abused, do not dwell upon it, forget it. There is not a single redeeming feature in these memories, and the presence of their ghosts will rob you of many a happy hour. There is nothing valuable in them. Wipe them out of your mind forever. Drop them. Forget them.

If you have been indiscreet or imprudent; if you have been talked about, or if your reputation has been injured so that you fear you can never outgrow it or redeem it, do not drag the hideous shadows or the rattling skeletons about with you. Forget them. Start with a clean slate, and spend your energies in keeping it clean for the future.

Resolve that whatever you do or do not do, you will not be haunted by skeletons nor cherish shadows. They must get out and give place to the sunshine. Determine that you will have nothing to do with discords, but that every one of them must get out of your mind. No

matter how formidable or persistent, wipe them out. Forget them. Have nothing to do with them. Do not let the little enemies—worrying and foreboding, anxiety and regrets—sap your energy, for this is your success and happiness capital.

A gloomy face, a sour expression, a worrying mind, or a fretting disposition, is a proof of your failure to control yourself. It is an earmark of your weakness, a confession of your inability to cope with your environment. Drive it away. Dominate yourself. Do not let your enemies sit on the throne. Do your own governing.

Dismiss from your mind every suggestion that has to do with illness. If you have had an operation—it is over; let it glide into the shadows—the background of memory. Do not dwell upon it. Do not talk about it.

Whatever is disagreeable, or whatever irritates, nags, or destroys your balance of mind—forget it. Thrust it out. It has nothing to do with you now. You have better use for your time than to waste it in regrets, in worry, or in useless trifles. Let the rubbish go. Make war upon despondency, if you are subject to it. Drive the blues out of your mind as you would a thief out of the house. Shut the door in the face of all your enemies, and keep it shut. Do not wait for cheerfulness to come to you. Go after it; entertain it; never let it go.

A despondent young writer says that while he was in the West he used to watch the cows on the prairies, and could not help envying them. "I used often to heave a sigh and wish I were a cow." "What keeps them so contented?" he asked a farmer. "Oh, they are enjoying themselves chewing their cuds," was the reply.

The trouble with many of us is that we do not enjoy chewing our cuds—letting go of our aches, pains, and anxieties, and just enjoying ourselves. We cannot bear to let go. We cling to them like a thrifty housewife, who cannot bear to throw away a rag or a scrap of anything, but piles useless rubbish into the attic. We cannot bear to let our enemies go. We cannot seem to kick out of doors the things that worry and fret and chafe, and yet never do us any good.—[O. S. Marden, in Success.

#### Current Events.

Lord Kelvin's body has been interred in Westminster Abbey.

The fisheries of Canada, during the last year, amounted to \$26,125,000.

Gustave, King of Sweden, has decided to dispense with the customary costly coronation ceremonies.

The International Paper Company has purchased 350,000 acres of heavily-wooded spruce lands on the Restigouche River, N. B.

Messrs. E. and W. S. Maxwell, of Montreal, have been selected as the architects for the plans of Saskatchewan's new Provincial buildings.

Hon. Rodolphe Lemieux, Canada's envoy to Japan regarding the Oriental-immigration question, left Yokohama for Canada on December 26th.

The St. Petersburg police recently unearthed a plot to destroy the Council of the Empire, at which many of the Russian nobility were present.

## The Quiet Hour.

### WHAT DOES THE NEW YEAR BRING?

The clock struck twelve in the tall church tower,  
And the old year slipped away,  
To be lost in the crowd of phantom years

In the House of Dreams that stay  
All wrapped in their cloaks of gray.

Then swift and sweet o'er the door's worn sill  
Came the youngest child of Time,  
With a gay little bow and a merry laugh,

And a voice like bells a-chime,  
Challenging frost and rime.

He found there was plenty for him to do.

The strong and the weak were here,  
And both held out their hands to him,  
And gave him greetings dear,  
The beautiful young New Year.

"You must bring us better days," they said,

"The Old Year was a cheat."  
Which I think was mean when the year was dead;

Such fate do dead years meet,  
To be spurned by scornful feet.

"I bring you the best a year can bring."

The newcomer stoutly spake,  
"The chance of work, the gift of trust,  
And the bread of love to break,  
If but my gifts you'll take."

The noblest thing a year can lay  
In the lap of you or me,  
The brave New Year has brought this day.

It is Opportunity,  
Which the wise are quick to see.

—Margaret E. Sangster.

Of course, I wish you all a glad New Year, but I am not at all sure that I want to pass on to you a greeting I saw yesterday on a New Year's card, which was to the effect that the well-wisher desired the coming year to be entirely free from sorrow. We don't want to stand still or go backward during the next twelve months, do we? And it seems to be strangely true that much of our best spiritual gain is wrung from pain. You may have heard of the boy who objected to the hard task of learning the alphabet, saying that it was "no use going through so much to gain so little." And he might easily think so, if he thought the acquaintance with the letters of the alphabet was all he would gain by his work. But just think of the world of literature—infinite in its extent—to which the alphabet used to be the door, in the days when we learned to read in the old-fashioned way. So we should remember, when the days bring pain as well as pleasure, that by learning this hard alphabet of pain we may find our way into a realm of joy, which will stretch out before us when the alphabet is almost forgotten.

So I don't wish you a year wholly free from pain, but one in which you may go bravely on from strength to strength, taking without shrinking whatever gifts the days may bring—"The chance of work, the gift of trust, and the bread of love to break." Though you may see difficulties or sorrows standing right in the way to meet you, never fear but that the chance is given to you to have a right happy New Year.

Lillian Whiting says: "The business of man's sojourn here is to develop spiritual powers. Whatever circumstances and conditions conduce to this end are fortunate, no matter how difficult or uncomfortable they are. Whatever hinders this development is unfortunate, no matter how alluring to the senses. To live in Communion with God is richness of life, is to find perpetual joy, peace and love; it is to radiate happiness. One may miss pleasures—and pleasure; but happiness is the Divine atmosphere, and we may live in it, if we will. Pleasure appeals to the senses alone; but happiness appeals to the spirit, and it is created by love and good-will. Perplexities and trials, far from making impossible the ideal life, really create for it opportunities of

growth and development. Probably the perpetually recurring vexations, disappointments and misfortunes are the divinely-appointed mechanism to develop the higher qualities. How does one acquire patience, serenity, generosity, save through their exercise in meeting trials and sorrows. These obstacles are as essential to spiritual development as the practice of the scales to the development of the skill of the pianist."

Let us take for our inspiration, as we start the New Year, the grand counsel given to Joshua: "Be strong and of a good courage!" We should go forward expecting success, for to start out with the expectation of failure makes the arm and heart weak and cowardly. Even if we should make many mistakes, it is possible to press failures and sins into our service, and "change stumbling-blocks into stepping-stones." True repentance includes the picking of one's self up and trying again.

"Then begin the journey onward,  
Knowing naught of fear,  
Keeping sunshine in the heart  
Throughout the glad New Year."

When the three chosen disciples failed to stand by their Master, failed to help and cheer Him with their prayers and sympathy, He did not overwhelm them with useless reproaches, which could only have crushed the heart out of them. No, He encouraged them to make a fresh start, in the conviction that there was hope for higher action on their part in the future. "Rise, let us be going!" He said to them, and the inspiring words ought to have power to help us to-day. We, too, have failed to watch and pray with all the energy needed, but let us not waste time in useless regrets. We are not told to go forward alone. With Him for a companion, we can dare to mount the steep ascent to Jerusalem. Though the cross may be in the path, it is only a difficulty to be surmounted, not an end to the journey.

"From glory unto glory! Be this our joyous song,  
As, on the King's own highway, we bravely march along!  
From glory unto glory! O word of stirring cheer,  
As dawns the solemn brightness of another glad New Year."

Why should we be discouraged? Failure is impossible to those who are working for and with God. They may seem to fail, but what the world calls failure God may call victory—and His judgment is the all-important thing. No matter how small the labor of love may be, it is valuable in His eyes, even though it be only the giving of a cup of cold water.

The great gift of the New Year is "Opportunity"—don't let us toss it carelessly aside. But—Opportunity for what? What do we want the opportunity for? If our chief desire is to grow rich in the things which are transitory in their very nature, then let us strive to be actuated by a nobler motive. This year may bring us lasting gain, enriching us with an increase of love, joy and peace—but we shall not have these things forced upon us, we must seek them with all earnestness, we must really desire them when we pray for them, we must be ready to accept God's ways of giving them to us. They are not like dead jewels, which must be hung on the outside; they are more like the warmth and life of the blood, the precious affection of the heart, the treasured sight of the eyes. They come from within, are parts of the very life, and react in increased fullness of life. Even God cannot make them ours, unless we rouse ourselves to the effort of growing.

And that is one great Opportunity laid before us—the opportunity of GROWING. In spiritual attainment, as in natural development, it is true that those who already have, will gain more, so that they "shall have more abundance." Do you think that is unfair? Think how it runs through every department of life. A good farmer studies his farming paper, and constantly learns more; while a poor farmer is very apt to stand still, working on in the old ruts, and quite behind the age he lives in. A good housekeeper is constantly on the watch for suggestions, gets a recipe here and an idea there, and so is con-

tinually becoming a better housekeeper. Because she is doing her work well, she always wants to do it better. I find that now I am a Settlement worker, a large amount of information along social lines comes right in my way, and I can hardly help absorbing some of it. Because I know something of the work, I can't avoid the necessity of learning more. So it is in practical Christianity. Those who are only Christians in name, may succeed in keeping out of its mighty influence, to some extent, but a real Christian instinctively reaches out for, and digests, the spiritual food that comes his way, even as a plant—if it is alive and planted in suitable soil—assimilates nutriment from soil and atmosphere.

What we reach out for most eagerly and persistently, that we are pretty sure to attain. People may wonder why God sometimes allows His saints to be poor or sick. If they are continually pleading for holiness, He knows that they really want holiness—perhaps He sees that poverty or sickness will best secure the result they desire. Would they be glad if He gave the lesser gift, knowing that it might impair the beauty of the higher? Surely not.

"I Do not wish thy  
Life all joy and song;  
That, Friend of mine,  
Were but to wish thee wrong.  
For sorrows oft are angels  
In disguise,

"In mercy sent to search  
And make us wise—  
To raise our earthly hearts  
To things above.  
God only chastens us in  
His great love.

"But this my prayer:  
'God give thee what is best  
To win thee to Himself,  
And make  
Thee blest.'"

HOPE.

## The Young People's Department.

### BRINGING HOME THE COWS.

When potatoes were in blossom,  
When the new hay filled the mows,  
Sweet the paths we trod together,  
Bringing home the cows.

What a purple kissed the pasture,  
Kissed and blessed the alder-boughs,  
As we wandered slow at sundown,  
Bringing home the cows!

How the far-off hills were gilded  
With the light that dream allows,  
As we built our hopes beyond them,  
Bringing home the cows!

How our eyes were bright with visions,  
What a meaning wreathed our brows,  
As we watched the cranes, and lingered,  
Bringing home the cows!

Past the years, and through the distance,  
Throbs the memory of our vows.  
Oh, that we again were children,  
Bringing home the cows!

—Charles G. D. Roberts.

### JAMIE SOUTAR'S SECRET.

From "Days of Auld Lang Syne."

"Doctor, ye've been an honest man in the pulpit an' oot o't a' thae years, an' yir warks hev gone before your words. A'll tell ye my secret before a' Dee; ou ay, I ken I'm deen', and I'm rael pleased.

"Ye'll no mind that forty-five years syne I worked a whole winter near Kildrummie, goin' and comin' night and mornin'. I met a lassie there, and I came to love her once and forever. No that I would have spoken to her, for I've been an ill-made, ill-tempered body all my days, and she . . . she was as gude as Marget Hoo, though different. What mair can man say?

"The day my wark was done I said good-bye to her, and that might have been the end, but I turned sudden, and saw the look on her face. She could have taen her pick of all the lads round

Kildrummie, but no man can lay doon the law to love; she took me, that had nothing but a faithful heart, and we gied our word ane to the ither for life. . . and death, as a man and women should after Christ's coming.

"We couldna be mairrit till the summer, and we agreed to write no letters to set the folks' tongues going; we wanted to have our ain secret. So we trusted to meet once a week at a stile in the woods between here and Kildrummie, and we hed . . . seven evenings together; that was all we ever saw of one another in this world.

"It was the month of May in an early spring that year, and the leaves were out in their bonnie first green, and the lambs were still with their mither's in the field. All nature was glad with us, and blessed our love.

"The gate has fallen to pieces lang syne, and the gaps built up with a dyke, and the trees are cut down, and the hawthorn rooted up, but it's the same place to me. I can see the tree where we sat, and the primroses at our feet, and the sun shining on her face, and the look in her eyes; I can see her wavin' her hand to me on the road after we parted, and the glint of her gown through the firs the last night.

"When I came next day she wasna there, and I hoddit among the trees for a ploy, but it was lang waitin', for she didna come, and I gied home with fear in my heart.

"It might be that she couldna get away, I said to mysel' as I worked at a dyke, but the dread was hangin' over me, and when there was nobody at the stile the next night, I could bide no longer. I set off to her house, and every turn of the road I looked for Menie. Once my heart loupit in my breast like a birdie in its cage, for a woman came along the road from Kildrummie, but it wasna Menie. When I saw her brother with his face to Drumtochie I kent, before he said a word, that he was seekin' me, and that Menie was dead. Never a tear came that day to my en, and he telt me, standing in the middle of the road where it begins to go down the hill.

"It was her throat, and the doctor was feared from the first day; the night she didna come, she was delirious; she said, 'Jamie, Jamie,' ower and ower again, and wanted to rise. About day-break she came to herself, and knew our faces. 'I'm deen'!' she said, 'and I didna keep my tryst last night. It's ower late now, and I'll no see him on earth again. Tell James Soutar that it wasna my blame I failed, and give him my Bible,' and, after a while, she said, 'I'll keep the tryst with him some day,' and that's all."

"Her brither gied me the book and waited, expectin' me to say something, but I had no words, and he left me on the road, countin' me hard of heart; I was all that night—at the stile.

"Doctor, will ye oblige me by goin' to that cupboard and bringin' me my Sabbath hat?"

Jamie took off the ring of crepe, thin and faded with the years, and held it a moment in his hand.

"Put it in the fre, Doctor, where I can see it burn; I've worn it forty-four years last spring, but I'll no need it again, for I'm gaein' out of mournin' soon.

"Here's her Bible," and Jamie brought it from a shelf in his box-bed; "gin ye come to my coffin, will ye see it be put in. There's nothin' else I want to carry with me to the ither side, and I'll just bid ye good-bye, Doctor."

### NURSING.

Dr. McCallum, of London, warns girls against the craze for the nurse's profession, and especially against training in U. S. hospitals, where, it is said, 50 per cent. of the Canadian graduates are broken in health by the severity of the work tax imposed upon them. There is a movement in some of the hospitals now, to reduce the term from three to two years. Physicians say the course it is pretended to teach nurses is an impossible one, and it is better to turn out practical, physically able graduates at the end of two years than to send them forth worn out and broken down at the end of three. In short, that any woman who cannot learn to obey the physician's instructions in two years ought to seek another vocation. It is

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said that few women can do good nurs-  
ing for much more than ten years. Un-  
less they marry, they are apt to be  
left without a vocation, and in poor  
health at an age when a woman should  
be in her prime of usefulness. Do all our  
girls know that it is possible to learn  
practical nursing by correspondence? No  
woman can afford to be without some  
knowledge of the art. How often is a  
life lost because no one in the house  
recognized a disease, or knew what to  
do?

Dear Cousin Dorothy.—I have my  
school lessons done, so thought I would  
write a few lines to the "Young People's  
Department." Coaticook is a fine place.  
My friends and I go out tobogganing,  
sliding and snowshoeing in the winter,  
and in the summer we play golf, or  
have picnics; but I like winter best. I  
think if we had a discussion on this  
subject it would be interesting to some:  
"Which is the Best Life—City or Coun-  
try?" I think country life is the best.  
What do you think, friends?

HILDA BALDWIN (age 14 years).  
Coaticook, P. Q.

"THE FARMER'S ADVOCATE"  
FASHIONS.



6005.—Ladies' Sack Nightgown, 4 sizes,  
32 to 44 inches bust.



6002.—Ladies' Housework Set, 3 sizes—  
small, medium and large.

The above patterns will be sent to any  
subscriber at the very low price of ten  
cents per pattern. Order by number, and  
be sure to give waist and bust measure-  
ment. Allow from one to two weeks  
in which to fill order.

Address: "Fashion Department," "The  
Farmer's Advocate," London, Ont.

[Note.—Where two numbers appear, ten  
cents must be sent for each number.]

TRADE TOPIC.

GET READY FOR NEXT SUMMER'S  
STRAWBERRY CROP.

Kellogg's strawberries, for quality and  
prowess, are known all over America.  
In order that they may be grown to per-  
fection, the Kellogg Co. has published a  
book, beautifully illustrated, and with  
full directions for strawberry culture.  
Write for it to the R. M. Kellogg Co.,  
Three Rivers, Michigan.

The Ingle Nook.

A Letter From an Old Ingle Nook  
Friend.

Dear Dame Durden,—Am writing to  
wish you and our friends of the Ingle  
Nook that good old wish, "A Merry  
Christmas and a Happy New Year."

What has become of our old friends,  
"Jack's Wife," for instance? I sup-  
pose everybody must be like myself,  
busy, and, when the day's work is  
through, too indolent to bother with  
any letters, except those of necessity.

If your invitation to pay you a call  
had appeared a little earlier, I would  
have been so happy to avail myself of  
it. I spent two weeks in London, and  
several times strolled past the office of  
"The Farmer's Advocate," wondering if  
callers were admitted, and at last re-  
luctantly let slip the opportunity of say-  
ing "Hello!" to you.

The small park, or reserve, do you  
call it? reminded me something of the  
reserves in Melbourne, Australia, only  
those are much larger, and there is the  
constant laughter of the laughing-  
jackasses. The first time I heard those  
birds I thought some small street boys  
were laughing noisily at my expense, and  
had an ugly feeling of possible back  
buttons being undone.

Once more wishing our friends every  
good wish for Christmas and New Year,  
including yourself, Dame Durden dear,  
Believe me to be,

Yours cordially,  
NEW CHUM.

Illinois, U. S.  
You naughty, naughty, "Chum," to  
go right past the Nook and never even  
peep in! What a shy little woman you  
must be! . . . No, I never got the  
wedding cake to which you refer in your  
private note. Some ugly post-office man  
must have gobbled it up. I think it is  
lovely of you to keep on making an  
anniversary wedding cake after twelve  
years of married life. Too many let all  
the sentiment go, and just hang on to  
the dry bones of making a living—or  
more—and washing dishes, and having a  
"man" to go to church with on Sun-  
days. I don't believe we have enough of  
the rose leaves of life in our homes, as  
a rule. . . . Many thanks, Chummie,  
even if the wedding cake didn't arrive.  
Am sorry I didn't have it to dream  
over. It should have absorbed added in-  
spiration after so many years.

Health Reform Before Dress Re-  
form.

In reply to a letter on "Modes of  
Dress," in a recent number of "The  
Farmer's Advocate," Dame Durden ap-  
peals to "Institutors," and asks "why  
cannot someone design a National Cana-  
dian Dress." A few regulations to be  
complied with were given, namely:

1. Dress must appeal to us as artistic.
2. It must be worn without a corset.
3. Weight must fall entirely from the shoulders.
4. It must not sweep the floor.
5. It must contain a pocket.
6. It must be light in weight.
7. It must be convenient.
8. The photo of such a dress must be shown on a girl or woman.

In considering this idea of "Dress Re-  
form," we wish to see if, by adopting  
this measure, we would ensure the  
"strength and nobility of mind and  
body of our future generations."

In the first place, in order to have the  
population of America appear as a uni-  
form people, we would have to consider  
the dress of our men, as well as the  
style to be adopted by the ladies. For  
it would scarcely appeal to an artistic  
eye to see a crowd of well-groomed men  
and women assembling at some social  
function, the men in their spick-and-span  
dress suits, and the ladies in loosely-fit-  
ting robes, "hanging from the shoulders,  
but not long enough to touch the floor  
when walking." Of course, this little  
difficulty could easily be remedied. Our  
men would sally forth in broadcloth  
pyjamas on Sunday and cottonade  
bloomers on Monday.

Then, when we are all equipped with  
this new "National Dress," is it going  
to successfully save the nation from  
either physical or moral deterioration?  
Is it the style of our dress alone that is  
causing the physical condition of the

people to be so far below what it ought  
to be? And, if we adopted the Eastern  
style of dressing, would there be fewer  
nervous breakdowns among the American  
women of to-day? It must be admitted  
that we often spend more of our time,  
money and energy in considering what  
we shall wear than is at all necessary;  
not that it is an unimportant feature in  
our lives. I believe that it is every true  
woman's duty to give serious considera-  
tion to her dress, and if one new style  
is more becoming to her than another, to  
adopt it with a clear conscience. When  
we think of all the beautiful plants and  
flowers, and how exquisitely each one is  
tinted, making them so pleasing to the  
eye, does it not seem that the God who  
made them must be pleased to see us  
study ourselves enough to be pleasing in  
the eyes of others? If all the plants had  
been made with plain, square leaves and  
bloomed in the shape of China Asters,  
how little they would appeal to us. And  
when He who made the flowers and trees  
showed the same thought in making all  
the people with an individuality of their  
own, surely we can appreciate that con-  
sideration enough to use taste and com-  
mon sense in our manner of dressing. It  
is a sad fact that the voice of the  
world is so all-prevading that it  
reaches every question with which a  
woman has to do. Instead of dressing  
in a tasteful way, we are apt to spend  
a lot of useless energy in trying to be  
what the world calls "in the style."  
We dress for the eyes and the opinions  
of the world; our children are dressed  
for the same end. We build our houses  
with this feeling, and even associate with  
people we have no particular interest in,  
merely because others do so, and if we  
did not, "Gracious me! what would  
people say?"

If we could only rise above this nar-  
row manner of living, how much  
stronger we would be as a nation. Give  
dress its proper place in our lives, and  
there is no reason why every woman  
should not be tastefully and even  
fashionably gowned. It is not the style  
of dressing that is killing the nation, but  
it is the feeling of rivalry. Were we to  
adopt the style of the Eastern ladies  
there would be the same mad rush for  
the "latest thing" in wide-sleeve pat-  
terns, or the newest design in em-  
broidery, because the Japanese ladies  
dress just as elaborately as do we  
Americans.

There is another reason why our dress  
is preferable to any loose-fitting gown.  
Our climate is such that snugly-fitting  
clothes are much more comfortable than  
if we wore our garments all draped from  
the shoulders.

We all feel that we should like to do  
something towards saving the health of  
the nation, but there is more to think  
of than "Dress Reform." What we  
need is "Health Reform." If the  
women of to-day paid more attention to  
their health, and the health of their chil-  
dren, they would all be quite strong  
enough to wear even the much-abused  
corset, if they felt like it. The trouble  
is the majority of the women in the  
world to-day are disregarding all the  
common rules of health. Through this  
neglect, they discover their figure is not  
as upright, and that they do not walk  
and carry themselves as gracefully as it  
is natural for a healthy person to do.  
Instead of trying to improve their general  
appearance by giving a little scientific  
care and attention to their health, they  
foolishly seek for some particular corset  
or form support that will help them to  
appear, as well poised as their more  
sensible sisters. The "sensible sisters"  
have found out years ago that there is  
no tonic so good and so effective as the  
oxygen of the air and water, deep  
breathing, proper exercise, and, above all,  
the art of complete relaxation—of rest.  
With these safeguards, the vitality of her  
body is built up, and she walks with  
an upright carriage, expressive of per-  
fect health and freedom. The style of her  
corset is a matter of indifference to her,  
as her body is quite strong enough to  
withstand the pressure.

No woman can afford to fall below her  
best. It is as much her duty to be  
artistic and attractive in her dress as it  
is to make her home artistic.

If we all dressed in a common "Na-  
tional" costume, how soon we would  
lose our individuality. It is natural for  
the feminine mind to take pleasure in  
selecting her clothes. And it is only  
the weak-minded woman who is forever

fussing over the matter of dress, until  
her health breaks down, and her poor  
husband is almost a nervous wreck, too.  
If she was not worrying over her dress-  
making, she would have something else  
just as distracting on her mind.

Now, why cannot the Institutors take  
a special interest in this question of  
"Health Reform"? Great progress has  
been made during the last seven years  
in household science. What wonders  
may be accomplished during the next  
seven in a new science, namely, "Health  
and Happiness." With these two safe-  
guards we would have homemakers, as  
well as housekeepers. The future gener-  
ations would be more likely to be strong  
and noble in mind and body. If, at the  
end of seven years, we still need "Dress  
Reform" in order to att the highest  
human development, we will, at least,  
be physically stronger to meet the op-  
position which will doubtless arise.

Peel Co. FLO. M.

I am very glad to publish this letter.  
There is a great deal of common sense  
in it, and yet I think the writer has  
somewhat misunderstood our "condi-  
tions" as enumerated. We did not say  
that gowns should be loose and flowing,  
in Oriental style; it is quite possible to  
have the weight resting on the shoulders  
without that. Also, it is quite possible  
to have a certain uniformity, and still  
have infinite variety. As a matter of  
fact, we saw, not long ago, pictures of a  
number of gowns invented by Mrs.  
Noyes, of Brooklyn, which well illus-  
trated both of these points. Some of  
them were a sort of shirtwaist suit,  
with waist and skirt sewn together, and  
without any perceptible pressure at the  
waist line; others had a sort of jumper  
effect at the top, and were worn over  
very dainty under-blouses; some were of  
silk-and-wool material, others of cotton,  
others of all silk; some were braided,  
some embroidered. The Oriental women,  
you know, achieve infinite variety in  
color, and by the use of hand em-  
broidery and lace, the latter being used  
chiefly for sleeves, etc. In fact, quite the  
loveliest lace I ever saw was worn by a  
Jerusalem Jewess, Lydia von Pinkel-  
stein, who, as a "lady" of Jerusalem,  
wore it in the form of bell-shaped under-  
sleeves for an exquisite blue silk gown.

However, the point is this, that we  
should have such a uniformity as would  
do away with our present system of be-  
ing often obliged to cast off dresses and  
coats before they are even shabby, for  
fear of appearing hopelessly odd and out  
of style. In the cities, at least, this is  
a very crying evil, and it is deplorable  
that so many people are so weak  
as to yield to it. It is simply  
ridiculous that at one time we must  
wear sleeves with bags at the bot-  
tom, and that at another the bags must  
be at the top, and so on, ad in-  
finitum. You know that this change,  
and such as this, have taken place with-  
in the last few years. It is the same  
with hats. At one time you must  
to be at all "in the style," wear  
a toque or turban, at another a hat  
turned up behind, at another one turned  
down all around like an inverted pudding  
pan—the mushroom effect, under which  
we have slouched about for the greater  
part of the past year. You know this is  
so, and that it is silly. Just last night  
I heard a girl wishing she knew "what  
they would be wearing" next spring, as  
if so, she would get to work and make  
some shirtwaists. She was simply afraid  
to make any according to the present  
mode, for fear they would be hopelessly  
antiquated next spring.

No, my dear, we don't want loose,  
floppy, "nocturnal" garments; they  
would be always "getting into" things.  
Neither do we want to see all the  
women going out looking as alike as so  
many peas in a pod. We want variety,  
but we do want common sense in it. . . .  
By the way, if any of you choose to de-  
velop a dress for competition, you may  
make it out of five-cent print, if you  
choose—that will look as well in a photo  
as anything else. Neither will it be  
necessary to have the photo taken at a  
regular gallery. Those taken by ama-  
teurs often make very good reproduc-  
tions. If cameras swarm your part of  
the country, as they do ours, there will  
not be much difficulty on this score. Re-  
member, too, that we are quite prepared  
to give prizes for as many designs as  
appeal to us. There may be several  
"bests."

. . . . We heartily approve of your

**COMPLEXIONAL AILMENTS!**

No one wants a spotted, pimpled, blotched complexion, but how many there are thus afflicted! Is your face free? If not, use

**Acne and Pimple Cure.**

It will clear away all spots, pimples, blackheads, etc., and make your skin pure and fine. Price, \$1.50, post-paid.

**Goitre Sure Cure**

Goitre sufferers will find our home treatment reliable in every respect. To use it is to be cured. Write now for our booklet "F" on skin, scalp, hair, and complexional troubles. Superfluous Hair, Moles, etc., eradicated forever by our method of Electrolysis. Satisfaction guaranteed.

**HISCOTT DERMATOLOGICAL INSTITUTE:**  
Formerly **GRAHAM**, Tel. M. 53, Hiscott Bldg.  
11 College St., Cor. LaPlante Ave., Toronto.

**My Free Trial Treatment May Cure You.**

Kingston, Ont., June 6th, 1904.

Dear Mrs. Currah,—I feel so very much better after using the 10 days' treatment of Orange Lily you were kind enough to send, that I will not require any more. In fact, I feel entirely well, and it is now a month since I stopped using the treatment. (Miss) F. T. W.

Similar letters to the above are not infrequent, though, of course, such cases are not of long standing. Most women who have suffered



for any length of time will require to use Orange Lily longer than the Free Trial Treatment in order to effect a complete

cure, but in every case they will be perceptibly benefited. Further, the benefit will be permanent whether they continue to use Orange Lily or not. It is not taken internally, and does not contain any alcohol or other stimulant. It is an applied treatment, and acts directly on the suffering organs. In all cases of women's disorders, these organs are congested to a greater or less extent, and Orange Lily will relieve and remove this congestion just as positively and certainly as the action of ammonia or soap on soiled linen. It is a simple chemical problem, and the result is always the same, a step towards better health and complete cure.

In order that every suffering woman may prove its good qualities, without cost, I will send enough of Orange Lily for 10 days' treatment, absolutely free, to each lady who will send me her address.

MRS. F. V. CURRAH, Windsor, Ont.

PLEASE MENTION THIS PAPER



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TAXIDERMY BOOK FREE

**Mount Birds**

Animals, Game Heads, and All Trophies!

The wonderful art of taxidermy which has long been kept a secret can now be easily and quickly learned by mail in your home in a few weeks. Success guaranteed. There are big profits in it. You can make money! Taxidermy for men, women and boys. Trophies are sent hundreds of miles for the best taxidermist to mount. A skilled taxidermist like a skilled doctor can charge as much as he pleases.

**BEAUTIFUL TROPHIES for Your Home**  
You can decorate your own home and den with your rare and beautiful specimens. Hunters, trappers and naturalists learn in a very short time. By our method the profession is simple.

**Great Book FREE**—"How to Learn to Mount Birds and Animals." This beautifully illustrated book, a copy of *Taxidermy Magazine* and hundreds of letters from graduates sent free if you write at once. Make yourself independent by learning this great profession. Write now for free book. N.W. SCHOOL OF TAXIDERMY, Box 488 Omaha, Neb.

remarks on rivalry. Flo. Do you think we will ever get rid of it in anything until we have grown out of narrowness and ugliness of spirit, and have developed into broad-minded, generous men and women, interested more in pulling ourselves up to a certain ideal, for the ideal's sake, rather than in reaching a top rung from which we can look down on a lot of poor, frantic heads bobbing about on the ladder below?

I hope you all read Mrs. Wilcox's article in the Christmas number. She is right. We women are too subjective. We need to get out of ourselves—our too often petty, insignificant selves—and get interested in the broader things of life. If we thought less about ourselves and more about others, and about the wonderful things of nature, and art, and science (even the science of domestic things), and literature and music, it would be better for us and for the world. Incidentally, why might not dress reform help to bring about health?

Many thanks for the kind thoughts expressed in your private note. We are glad to know that you think "The Farmer's Advocate" is "getting better every year."

**Devonshire Cream.**

"Mrs. J. B. C., York Co., Ont., asks for a recipe for Devonshire cream. Put fresh milk into a large, shallow pan to the depth of three or four inches, then leave in a cool place for the cream to rise, usually twelve hours in summer and twenty-four in winter. Next place the pan on the stove, and heat gently without allowing the milk to boil. When the cream forms a ring around the pan, and the undulations on the surface look thick, it is done. Remove from the fire to a cool place, and, when cold, skim and use. Devonshire cream is fine served with baked apples or apple pie.

**Carmichael.**

BY ANISON NORTH.

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**CHAPTER X.—Continued.**

To-day, however, instead of being closely drawn, in order to serve two purposes, that of keeping out the flies and concealing the thin film of dust which would accumulate somehow, the blinds were run up to their highest, and Mrs. Torrance sat on the extreme edge of the slippery hair-cloth sofa looking on at such a destruction of her household gods as had never been known.

We were ushered in by a small Torrance, and so engrossed was Mrs. Torrance that at first she did not see us.

"My Berlin wreath, Gay!" she was saying, while the small iconoclast, Gay, with her saucy curls tied up in a towel, stood balancing in her two dimpled hands a ponderous creation of pink roses and yellow lilies, marvellously wrought in wool. "My Berlin wreath—you'll not put that away!"

"But it's so out of date, mamma—yes, it must go," said Gay, imperiously, plunging the great clumsy thing into the gaping limbo of a box already almost bulging with peacock feathers, paper flowers, and cardboard frames, that stood in the middle of the floor.

Mrs. Torrance looked on dubiously, then, catching sight of us:

"Bless my heart, Miss Tring!—and Peggie! It's good for sore eyes to get sight o' ye! Here, sit down"—bustling about to get us chairs—"we're in a dreadful muddle to-day"—apologetically—"Gay's been turnin' things upside down generally"—with proud glance at Gay. "Gay, my dear, run 'n' take that thing off yer head, 'n' put on a clean apron fer the teacher. Now, Miss Tring, what do ye think of puttin' all them things away?"

"Well," said Miss Tring, while I, mentally congratulating Gay on this new order, contrasted this trumpery room with our cozy house at home, where Miss Tring's taste had been the

ruling genius, "well, I suppose you can spare a few of them if Gay doesn't care for them. You know, Mrs. Mallory's things were nearly all burned in the fire, and really, after a time, one scarcely missed them, and there was so much less to dust and fuss over. And, after all, nice white curtains, and a few flowers, and bright fires, and some books and pictures, seem about all the decorations one really needs to make things cheerful."

"Yes," said Mrs. Torrance, "Mrs. Mallory's house does look uncommon snug, but"—with her motherly pride coming obviously forward again—"Gay's been gettin' some new notions in the town. She's been makin' some great fancywork. Gay, run 'n' get yer cushions."

Obediently Gay went into the "spare room," and when she returned it was as evident as that Gay ruled the establishment that one set of idols had been displaced only to make room for another.

Proudly Mrs. Torrance displayed the flimsy creations of silk and lace, much too fine to carry with them any suggestion of comfort, while Gay chattered gaily on, telling us how she had got the pattern of this from Bessie Upton, "Lawyer Upton's daughter, you know," and the stitch of that from "Clara Jones, Dr. Jones' sister," until we were in a fair way to know something of all the elite of Saintsbury.

Nevertheless, there was something so genuinely unaffected about Gay, something so wholesomely friendly, that one could not but like her. As she chattered on of her own life, like a child elated over a new toy, with her dimples coming and going, and her hair tumbling in little kinks about her peach-blossom face, it seemed to me that I was years older than she, and I wondered if I should have felt differently, less solemn and staid, had my path through life been less like mine and more like hers, a round of pleasure and gaiety, and getting just what one wanted, without care or responsibility. Yet it seemed that Gay was scarcely doing right in taking all the advantages, and running away from the "tother" at home, instead of staying to bring order out of the chaos. However, after all, it was Mrs. Torrance's ambition to make a "lady" of Gay, so perhaps the little fairy was not so much to blame.

When we were leaving, Mrs. Torrance insisted that I should call for Gay on the way to the paring-bee, and, as the Torrance homestead was directly on the way between the Clearing and the Might's, I willingly consented.

When I was dressing that evening, Miss Tring manifested an unusual interest in my toilet.

"That gray suits you, my dear," she said, "but it needs something to brighten it up. Upon so rare an event as a party you should look your prettiest!"

"My prettiest!" I laughed, but but there was a little sinking of heart with the laugh, for what girl who knows she is plain would not be beautiful? It is not all vanity which prompts such a wish, but the sense of the æsthetic in us, which makes us love to gather flowers, and to look long upon beautiful women. So resigned, however, was I to my plainness, that I did not glance even once in the mirror after Miss Tring had fastened a cherry ribbon at my throat, and pronounced it becoming. Instead, I thought of a day long ago when I, the little brown mouse, had sat on a lumber pile, and watched Gay, the butterfly, hovering about. I was the brown mouse still, and Gay was the butterfly.

Before I went out, on hearing the rattle of Tom Billings's wagon, in which I had determined to secure a ride as far as the Torrances's, my mother, with some sort of presentiment, as it afterward seemed, called me to her room. She seemed agitated, and before she spoke I knew that what she had to say was connected in some way with the Carmichaels.

**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 80 cents.

**FOUR SALE**—All varieties of pure-bred geese and ducks. White Holland turkeys. Or birds won twenty-nine prizes at last Winter Fair. Grand quality. Satisfaction given. Baker Bros., Box 317, Guelph.

**INGLE NOOK POULTRY FARMS**—Special offer to introduce our birds. Every one choicest Cockerels only. S.C. White and Brown Leghorns, White Wyandottes, Buff Orpingtons, R. C. Rhode Island Reds. One dollar each. Not a bird worth less than three. First orders first choice. W. H. Smith, 41 Spruce St., Toronto.

**LARGE Narragansett turkeys.** Rose-colored Rhode Island Red and Barred Rock cockerels. Fred Baldwin, Colchester, Ont.

**MAMMOTH** Bronze turkeys for sale. Bred from a heavy prize-winning tom and high-class hens. T. Hardy Shore & Sons, Glanworth, Ont.

**PURE-BRED** Barred Rocks, White Wyandotte and White Leghorn cockerels, \$1 each. John E. Morgan, Wales, Ont.

**WHITE** Plymouth Rocks. Best American line bred. Cockerels, two dollars to ten dollars. Pullet reasonable. Eggs two and three dollars. Willowdale Stock Farm, Lennoxville, Quebec. J. H. M. Parker.

**WHITE** Rock cockerels for sale. Satisfaction guaranteed or money back. J. R. Dods, Alton, Ont.

**Hatch Chlokers by Steam with the EXCELSIOR INCUBATOR OR WOODEN HEN**  
Simple, perfect, self-regulating. Hatch every fertile egg. Lowest priced first-class hatched. GEO. H. STARR, Galtway, Ill.  
Send for free Catalogue.



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 80 cents.

**TO RENT** or for sale on easy terms, Wood-lan Grange farm (40 acres), 4 1/2 miles from Meosomin, Sask. 170 acres cultivated, 160 acres of remainder fenced. For particulars apply to: W. H. Hewgill, Druggist, Meosomin.

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

**WANTED**—Man and wife (no children). Man to work on stock farm; wife to do housework in home of owner. Also two married men, with small or no family, to work on farm. Home furnished and satisfactory wages paid to men who are willing to work in interest of employer. References required. Address: M. D., care of Farmer's Advocate, London, Ont.

**Wanted!** I want to tan your hides, skins and furs soft and pliable; never get hard. Also to make and line your robes, or make your fur coats. Try me for best of satisfaction. I aim to please you. Address: B. F. BELL, Delhi, Ont.

**MILK COWS WANTED!**

100 milk cows wanted; not over six years old; must be good milkers and in perfect condition. Answer quickly, stating breed, age, lowest price, number of head offered, and where they can be inspected. Address: E. WALTON, P. O. Box 1166, Montreal, Que.

**Tobacco Habit.**

Dr. McTaggart's tobacco remedy removes all desire for the weed in a few days. A vegetable medicine, and only requires touching the tongue with it occasionally. Price \$3.

**Liquor Habit.**

Marvellous results from taking his remedy for the liquor habit. Safe and inexpensive home treatment; no hypodermic injections, no pain, no loss of time from business, and a cure certain. Address or consult Dr. McTaggart, 75 Yonge Street, Toronto, Canada.

**Every Woman**

is interested and should know about the wonderful **Marvel Whirling Spray Douche**

Ask your druggist for it. If he cannot supply the MARVEL, accept no other, but send stamp for illustrated book—sealed. It gives full particulars and directions invaluable to ladies. **WINDSOR SUPPLY CO., Windsor, Ont.** General Agents for Canada.

PLEASE MENTION THIS PAPER WHEN WRITING ADVERTISERS

"Ye'll be meeting that young Carmichael to-night," she said.

"Probably, mother; what of that?"

"Ye'll not forget," she said, as though half distrustful of me, "that he's the son of the man that killed yer father?" She always spoke of Mr. Carmichael to me as the man who had killed my father.

"I'll not forget."

"And ye'll promise me ye'll hev' nothing to do with him?"

"I promise."

"I'm satisfied then. Ye know my wish in the matter."

My poor little mother. It was the only thing in this world upon which she strongly asserted herself, that I should have nothing to do with the Carmichaels; and, as I gave such ready assent to her will that evening, I little thought how soon and how severely my own will was to be tested.

Gay met me at the door of the parlor, which, wonderfully metamorphosed since the morning, and all pink in the light of a lamp draped in a new red silk shade, looked very inviting.

"Come right in, Peggie," she said, making haste to place me in the largest armchair. "How nice you look! Now, then, tell me if you think my dress is pretty," and she spun round before me, a bewildering flutter of soft pink and cream lace, while her mother looked on, so tired-looking, but the proudest of mothers.

"We can't go just yet," she said, sitting down upon the sofa, and arranging the new cushions most bewitchingly about her, "because Dick Carmichael's going to call. It was so good of him! I was talking about how dreadfully afraid I am of the dark, so he said he'd come, as I might feel safer with him than just with Choddy. Afterward, Hud Jamieson told Toddy he was coming too. I think he might have called to asked permission, don't you? But we'll have one apiece, my dear."

In our quiet little district, you will see, this arrangement could cause no comment. Upon all such occasions as parties, and meetings in the church, it was a time-honored custom that the lads and lasses should go unchaperoned, the lads holding it as an honored right to see the lasses safely home, and never dreaming of presuming upon the privilege. Only once, indeed, in the whole history of our community, had there been a lapse from virtue within its borders, and so great had been the horror consequent upon it that he had fled the country, and she, unable to face the fury of her father, her only living parent, had gone out to service somewhere. Poor Jean Moffat—but once did she return, and that was to her father's deathbed. Folk said he forgave her, and died with his head on her breast. But that did not alter the fact that but seldom, then or after, was Jean Moffat's name spoken, and that with bated breath.

As I watched Gay Torrance that evening, for I could not keep my eyes off her, I thought again that the little drama of the mouse and the butterfly was being enacted over again, only that Gay was now a much more radiant butterfly. From the tip of her tiny slipper to the top of her shining head, she was daintiness itself, and, as she talked, with the dimples coming and going in her cheeks, and her eyes sparkling with merriment, I wondered if this earth could provide anything fairer to look at; and when Dick Carmichael and Hud Jamieson came in I felt they must think so, too.

I had seen so little of either of them during the last few years that it seemed like meeting them anew. Hud had indeed grown into a very handsome young man, slight and rather undersized, to be sure, but with a vivacity of expression, and a little way of saying things as though he had kept them just for you, which promised to make him, on occasion, rather dangerously attractive. As for Dick, he stalked into the room, straight and strong of limb and broad of shoulder, a

veritable Carmichael, but with a severe and solemn countenance little like that of the boy, Dick, with whom I had roved the fields in those happy days of long ago. When he spoke, in a low voice, yet rich and deep as that of his father, it was as though he thought life a serious matter, not to be frittered away in trivialities; yet it was for Dick that Gay had all her smiles, and all her bright chatter; and when she talked to him, moving her hands, with all the soft roundness of her arms showing to the elbow, where the dainty frills of lace covered them, with the color burning in her cheeks and the excitement in her eyes, she looked the most winsome creature in the world, and I thought it but little wonder that Dick should look at her and occasionally break forth into one of the rare smiles that transformed his face, or yet more rarely into the deep laugh which belonged to none but the Carmichaels.

It was surely enough that he had spoken to me courteously. Long ago he had come to know fully of the edict which my mother had issued in regard to our friendship, and he had never presumed. I, too, was I not in honor bound to have naught to do with the house of Carmichael? And had I not, though my reason exonerated Dick of any complicity in his father's misdeeds, kept that honor in all faithfulness? Why, then, should a little sore spot come into my heart as he talked to Gay, and why, though I hated and despised myself for the weakness, should I strain my ears to hear what they were saying, while Hud Jamieson's platitudes, uttered in his peculiarly musical tones, came to me as a far-off tinkling?

Utterly demeaned in my own conscience, ashamed so that I felt the hot blood surging in my cheeks, I compelled myself at last to attend, and even to talk with unusual gayety to Hud, even when it came time to go, and Dick, placing Gay's cloak about her shoulders, passed out of the door with her without even a glance at me.

Again, I resolved not to care, and clenched my hands until the nails hurt the flesh in determination, but was so little successful that the evening passed to me like a weary dream, in which I was compelled to act a part, while everywhere before me danced a vision of Gay smiling at Dick, talking to Dick, although Hud Jamieson, too, now hovered near her, darting to catch up her handkerchief, or to perform any such small gallantry as presented itself.

As I had surmised, the apple-paring was continued for but little of the time, and good Amanda Might had full satisfaction in seeing all the old Hallowe'en games, which had delighted her on that memorable night of her youth, played over again. With the supper, too, came the culmination of her happiness. The girls carried up dainties to the cellar, until it seemed that there were no end to them, while the boys found enough to do in passing about the clear, fresh cider and hot coffee.

For my part, I felt little enough like eating, and, after a sip of cider and a bite of berry pie, for looks' sake, I slipped out of the open door and stood near it. It was a wonderfully warm night for the first of November, for the Indian summer had come early that year, yet the moist air seemed to cool my brow and leave me better able to think.

(To be continued.)

TRADE TOPIC.

COLORED CARDS AND CALENDARS.—Raphael Tuck & Sons, Ltd., of world-wide fame as publishers of colored picture cards, unique calendars and the like artistic productions, have sent "The Farmer's Advocate" a very beautiful sample outfit of their productions for the present season. A glance over them explains their popularity. The firm have offices in London (Eng.), Paris, Berlin, New York, Capetown and Montreal.

# ATTENTION!

Is again called to our list of **Substantial Premiums** offered to subscribers who succeed in obtaining new subscribers for us.

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <p><b>For One New Subscriber:</b></p> <ol style="list-style-type: none"> <li>Farmer's knife, Rodgers, a first-class article.</li> <li>The choice of any two of the following: Reading glass, large mouth-organ (harmonica), mariner's compass.</li> <li>Lady's hand-bag, leather and lined with leather, large enough to carry letters, etc., in.</li> </ol> <p><b>For Two New Subscribers:</b></p> <ol style="list-style-type: none"> <li>Bagster's Comprehensive Teacher's Bible.</li> <li>One copy of "Carmichael," bound in cloth, and well illustrated.</li> </ol> | <p><b>Watches:</b></p> <ol style="list-style-type: none"> <li>Gentleman's nickel watch for three new subscribers.</li> <li>Gentleman's gold-filled Elgin or Waltham watch for thirteen new subscribers.</li> <li>Lady's sterling silver watch for eight new subscribers.</li> <li>Lady's gold-filled watch for eleven new subscribers.</li> </ol> <p><b>We have ample testimony to the genuineness of all these articles, and the reward is well worth the effort.</b></p> |
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In addition, we have books bearing on almost every department of farming, full list of which will appear from time to time in "The Farmer's Advocate," or may be obtained by applying to this office.

Tell your friends about our journal. Secure their names, and let us send you one of these premiums. State definitely which premium you prefer. In each case of above, the regular subscription rate, \$1.50 per annum, must be sent.

Address: **THE WILLIAM WELD CO., LTD.,**  
London, Ont.



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You don't pay a cent extra for the 56 years' experience that goes into Tudhope Sleights.

You don't pay a cent extra for a dozen little improvements that mean extra strength and service.

You pay only for what the **BEST MATERIALS** and **WORKMANSHIP** are worth.

Every Tudhope Sleight is sold with a guarantee that has been lived up to for 56 years.

**TUDHOPE No. 67**

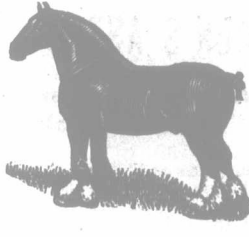
This is an all-round, serviceable sleigh. Built for rough roads—an easy, comfortable runner for hard driving.

Write for free booklet showing different Tudhope styles.

**THE TUDHOPE CARRIAGE CO., Ltd. ORILLIA, Ont. 21**

## JOHN CHAMBERS & SONS

Holdenby, Northampton, England,



Have at their American branch, at St. Thomas, Ont., under the management of C. K. Geary, a number of good big stallions, also several very fine fillies coming three years old, and safe in foal to some of England's leading sires. Address all communications to:

**C. K. Geary, St. Thomas, Ont.**

## The Eastern Ontario Live-stock & Poultry Show

WILL BE HELD AT  
**Ottawa, Ont., Jan. 20 to 24, 1908.**

Exhibits will consist of Live and Dressed Cattle, Sheep, Swine and Poultry; also a Dairy Show and a Seed Exhibit. Large cash prizes offered in the various departments. The Show will be held in the splendid new building. Practical lectures will be given by experts every day.

Live-stock Entries Close Jan. 11. Poultry Entries Close Jan. 6.

Reduced rates on all railways. For Prize List, Entry Form or Programme, apply to:

**J. C. SMITH, President. A. P. WESTERVELT, Secretary, Parliament Buildings, Toronto.**

# Subscribe for the Farmer's Advocate.

**RY**

ments will be inserted two cents per word each counts for one word, and Names and addresses are always accompany the ment under this heading. re-bred poultry and eggs of customers by using our advertisement inserted

eties of pure-bred geese and Barred Rock cochin chickens, Ont. Satisfactions give. Baker

**RY FARMS**—Special our birds. Every one S.C. White and Brown dots, Buff Orpingtons, eds. One dollar each. an three. First orders Smith, 41 Spruce St.,

t turkeys. Rose-co and Barred Rock co. Colchester, Ont.

turkeys for sale. Brod ewinning tom and high- shore & Sons, Galtworth,

ocks, White Wyandotte n cockerels, \$1 each. Ont.

ocks. Best American arels, two dollars to ten onable. Eggs two and ale Stock Farm, Lennox- Parker.

rels for sale. Satisfac- or money back. J. B.

**Chickens by steam with the ELSIOR INCUBATOR Or WOODEN HEN**

o, perfect, self-regulating, every fertile egg. Lowest first-class hatchery made. E. STARR, Galt, Ont.

be inserted under this Properties, Help and Pet Stock.

per word each insertion. ne word and figures for addresses are counted. mpany the order. ©No or less than 50 cents.

on easy terms, Wood- 0 acres, 4 1/2 miles from oses cultivated. 160 need. For particulars ill. Druggist, Mooncoin.

ood subscription agents 's Advocate and Home ns. The William Weld

wife (no children). Man farm; wife to do house- Also two married men, to work on farm. Home ory wages paid to men in interest of employer. dness: M. D., care of don, Ont.

want to tan your hides, ins and furs soft and Also to make and line r fur coats. Try me for aim to please you. Ad Delhi, Ont.

**WANTED!**

not over six years old; d in perfect condition. bred, age, lowest price, and where they can be E. WALTON, P. O. l, Que.

**Habit.**

o remedy removes all few days. A vegetable res touching the tongue ce \$2.

**Habit.**

taking his remedy for, and inexpensive ho- nic injections, no p- om business, and a cure

. McTaggart, 75 Yonge om

**ry Woman**

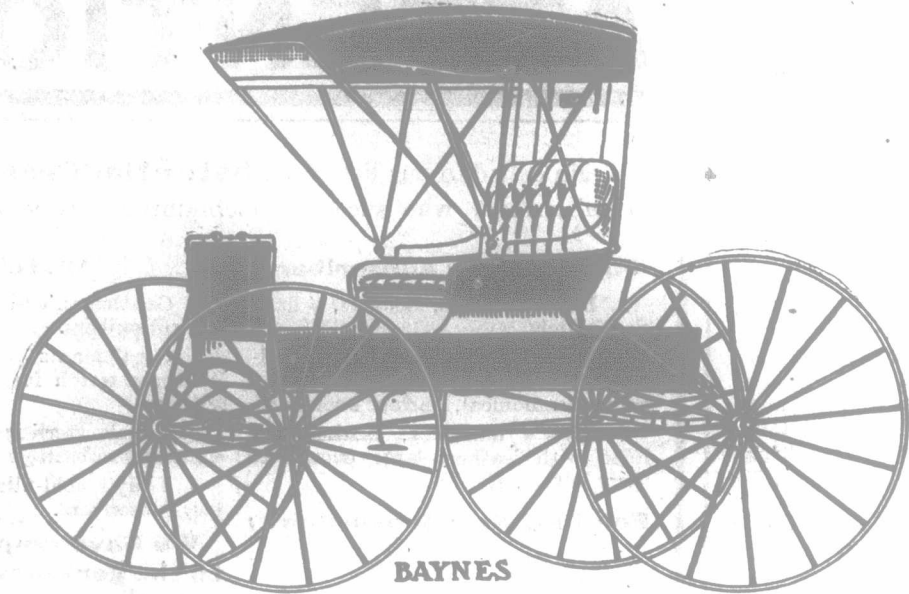
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vel Whirling Spray Douche

o r illus- ives full invaluable

PLY CO., Windsor, Ont. or Canada.

**N THIS PAPER ADVERTISERS**



BAYNES

No. 450

The above is a portrait of **Our Standard Canadian Plano Box Buggy** as made by us. It is fitted with our **long distance axle** which we recommend as the best type of carriage axle in existence.

Our Catalogue illustrates a full line of pleasure and business vehicles for town and country use.

Every vehicle built by us has our trade mark under the seat, which is an insurance policy that the vehicle is of the best quality and style.

SEE OUR CATALOGUE AT ANY CARRIAGE DEALER'S.

**THE BAYNES CARRIAGE CO., Limited** Hamilton, Ont.

#### BOOK REVIEW.

##### BUTTERMAKING.

In view of the development of butter-dairying in Canada, creamerymen and dairy farmers will appreciate the opportunity of securing a thoroughly comprehensive volume, dealing with the principles and practice involved in the manufacture of the product. The authors of this large and copiously-illustrated volume are: Profs. G. L. McKay and C. Larsen, M. S. A., chief and assistant, respectively, in the Department of Dairying, Iowa Agricultural College, which will be indicative of its practical excellence. Like all the works of a technical character, published by John Wiley & Sons, New York, whose Canadian agents are the Renouf Publishing Co., of Montreal, P. Q., it appears in admirable typographical style. The chapters on judging and grading butters will be appreciated not only by buttermakers, but by those in the trade. Price, \$1.50. It may be ordered through this office, or from the publisher's agents.

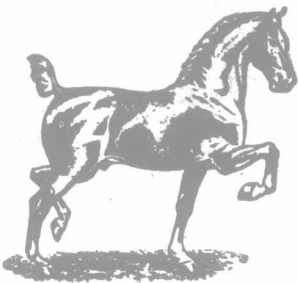
##### PURE-FOOD CAMPAIGN.

A warfare against adulterations of all kinds is the keynote of the report of the tenth annual convention of the U. S. Association of State and National Food and Dairy Department, recently issued in book form. Adulterations of butter, canned goods, spices, liquors, are comprehensively dealt with; also such subjects as preservatives, bleaches, coloring matters, port inspection of foods, light weights, etc.; and, incidentally, some valuable information re the vexed question of milk standards, butter, cheese, etc., and their manufacture, is incorporated. The latter part of the book, which is made up of over 300 pages, is devoted to the rules and regulations for the enforcement of various food and drug acts, and meat inspection. The work appears at a singularly appropriate time in Canada, in view of the inception of our new meat and canned-goods inspection system. The book is published by John Wiley & Sons. Price, \$3.50. Canadian agents are Renouf Publishing Co., 61 Union Ave., Montreal; or, it may be ordered through this office.

### Union Stock Yards Co., Ltd.

Paid-up Capital Stock \$500,000.00.

TORONTO JUNCTION, ONTARIO.



Auction sales of Horses, Carriages and Harness every Monday and Wednesday throughout the year. Private sales every day. The great opening auction sale at the new Horse Exchange will be held on **Monday, Jan. 6th, 1908, at 11 o'clock a. m.**

This new market is being opened as a strictly commission market for the auction sale of horses and registered stock of all kinds, giving breeders a central place, with the very best accommodation for taking care of all kinds of stock until day of sale. Horse dealers and stock breeders will do well to send for our terms and conditions of sale.

**HERBERT SMITH, Manager.**  
(Late Grand's Repository.)

### DAIRYMEN'S ASSOCIATION OF WESTERN ONTARIO.

41st Annual Convention and Winter Dairy Exhibition,  
Woodstock, January 15, 16, 1908.

Three sessions each day. Addresses delivered at each session by the best dairy and agricultural experts of both Canada and United States.  
Reduced rates on all railroads. Every person welcome.  
For all information apply to:

**FRANK HERNS, Sec.-Treas., LONDON, ONT.**

#### GOSSIP.

Mr. Robert W. Brown, Carrollton, Missouri, has been appointed secretary of the American Galloway-breeders' Association, to succeed Mr. Chas. Gray, resigned.

The attention of dairymen and farmers generally is called to the advertisement of the annual convention of the Western Ontario Dairymen's Association, to be held at Woodstock, Ont., Jan. 15th and 16th, where helpful addresses will be delivered by the leading dairy and agricultural experts of Canada and the U. S. Reduced rates on all railways will render the expense so moderate that the attendance should be very large.

#### TRADE TOPIC.

**MOUNTING ANIMALS AND BIRDS.**—This is the season when destructive wild animals and birds are captured in great numbers. Young and old are fond of a little natural-history museum collected in that way. But one must know how to preserve, stuff and mount the specimens. The School of Taxidermy, Omaha, Neb., whose advertisement appears elsewhere, undertakes to teach this subject by mail, and it would be worth while writing for their free books that explain the plan of instruction. Look up the advertisement.

#### GOSSIP.

The new horse exchange at Toronto Junction, recently completed at a cost of \$25,000, will be opened on January 6th, as advertised, when the first auction sale will be conducted. The stables will accommodate between 200 and 300 horses, and the yards an additional 1,200, if required. This promises to be one of the greatest horse markets in the Dominion.

The many friends of Mr. Wm. Linton, of Aurora, Ont., widely known as a prominent breeder of Shorthorn cattle, will be interested to know that he and Mrs. Linton recently celebrated their golden wedding, on which occasion complimentary addresses were delivered by prominent men of the district, and many valuable presents, including one from Sir William Mulock, were given. "The Farmer's Advocate" tenders congratulations and best wishes for many more years of health and happiness to Mr. and Mrs. Linton.

#### IMPORTANT SALE OF SHORT-HORNS.

It is with pleasure we call attention to the advertisement in another column of the sale of imported and Canadian-bred Scotch Shorthorns, to be held in Woodstock, Ont., Jan. 16th, last day of the Western Dairymen's Association meeting, in order to secure half rates on all railways. The place, the time, and the cattle will please, we think, the Shorthorn breeders and farmers generally. The best of accommodation is being provided, and below is given a brief description of a few of the cattle, which will be completed in our next issue: The Manor herd of John T. Gibson, Denfield, contributes five head—two choice, young bulls, the get of Proud Gift (imp.), that was sold, lately, at a very long price. These bulls are of the celebrated Miss Ramsden family; and the heifers are of the Clipper and Lavinia families, and are all sired by Proud Gift (imp.). Probably no better sire of strictly show cattle is living to-day than the above bull. These calves are all eligible for registration in American Herdbook, and are a choice lot. The herd of J. W. Innis will contribute eight young things, including the fine young imp-in-dam bull, Fascinator. It will be remembered that the imported Cruickshank Dairymaid heifer, Nellie, Vol. 53 E., in calf to Mr. Gordon's Royal winner, Fascinator, fell to the bid of Mr. Innis at the successful sale held at the farm of H. J. Davis last year, and she has produced this fine roan calf for her owner, which should be a prize worth coming after, as the sire was recently sold at \$7,500. Mr. Innis also contributes some good, thick, useful bulls of different good-milking strains, sired by a Dalmeny imported bull of good breeding, and also some good Mina heifers in calf to the first-prize bull in the junior calf class at Toronto, 1906. From the well-known herd of H. J. Davis, Woodstock, will be contributed eleven head of imported and Canadian-bred bulls and heifers, some recently imported, and the offering will include some extra good young bulls, three of which are recently imported, and are of the Nonpareil, Lovely and Marigold families, and the Canadian-bred bulls are the get of the Duthie-bred bull, Westward Ho (imp.), a Missie in breeding, and they are off imported Roan Lady and Broadhooks cows, of which a fuller description will be given in our next issue. Catalogues will be mailed on application to H. J. Davis, Woodstock, Ont.

#### A RECORD-BREAKER.

Among the army of Blackpool carriage drivers is an Irishman noted for his native wit. It stood him in poor stead one day, however. Pat was engaged by a gentleman to drive to a hydrotherapeutic establishment.

On arrival at the gate the fare enquired: "What's your fare, driver?"

"Well, sor," said Pat, "the manest jintleman I ever drove here gave me two shillings."

"Is that so?" exclaimed the gentleman who was a bit of a wag. "Well, here's a shilling for you, my man; I like the idea of breaking records."

## The Value of a Telephone

An unconnected telephone instrument has only a limited dollars-and-cent value; a telephone connected with your neighbors, your doctor, your market, has a value unlimited—for it may be the means of saving your property from destruction by fire, your family from serious illness, your products from a drop in price. But a telephone upon which you cannot depend in emergencies is worse than useless.

Buy Northern Electric telephones and line material and you will have a line you can depend upon and one that will give you service when you need it most.

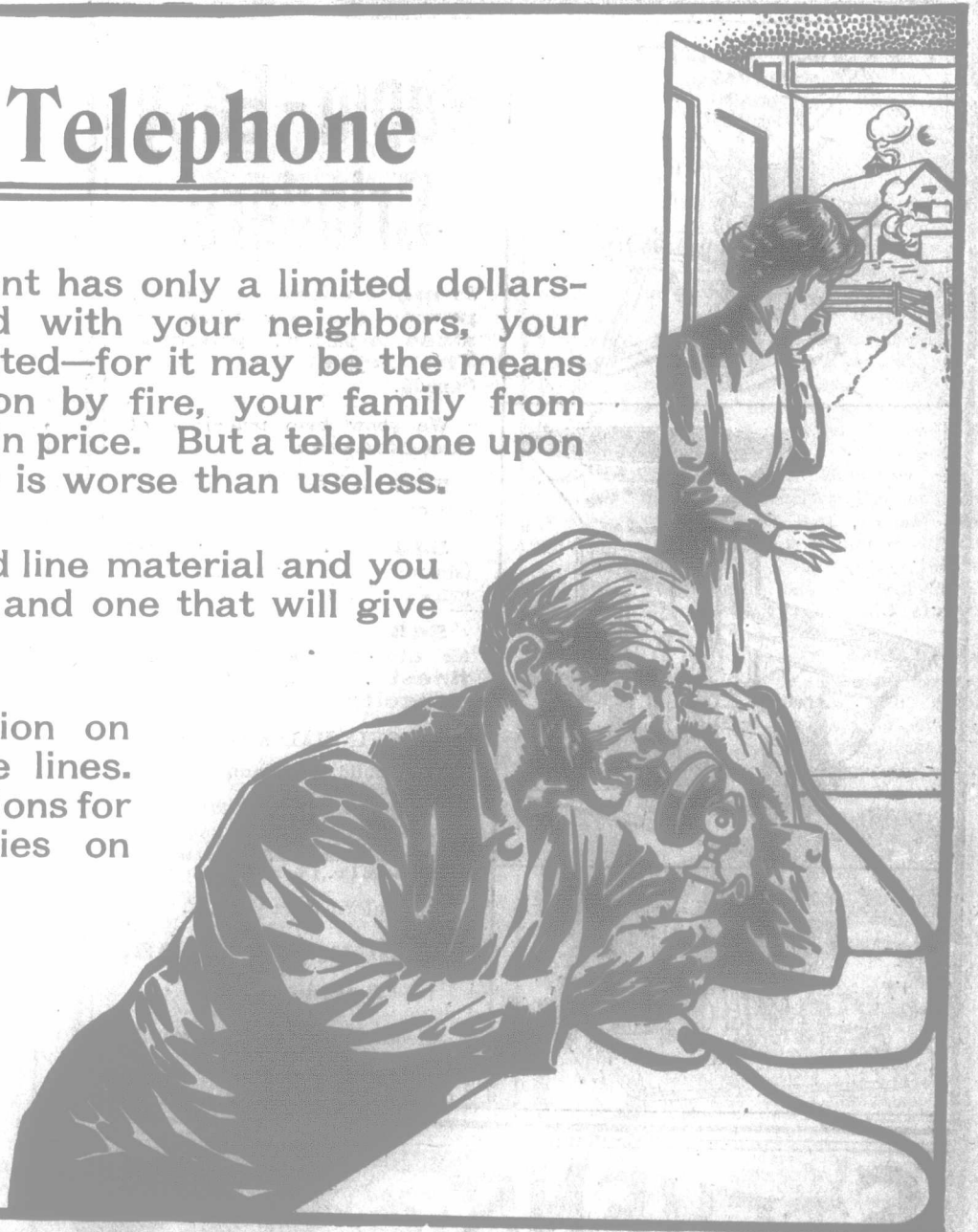
Write us for prices and information on building and constructing rural telephone lines. We will send you our book of instructions for building lines and organizing companies on request.

### The Northern Electric & Mfg. Co., Ltd.

Cor. Guy and Notre Dame Streets,  
MONTREAL, QUE.

181 Bannantyne Street,  
WINNIPEG, MAN.

Use address nearest you.



#### GOSSIP.

Kyle Bros., Ayr, Ont., write: "We have recently sold the following Shorthorns: To W. G. Gerrie, Belwood, the red ten-months-old bull calf, Vice Chancellor =68607=, a right good calf, of the Cruickshank Lovely family, sired by our old stock bull, Bapton Chancellor =40359= (78286). This calf stood third at the Canadian National, and second at the Western Fair, and, going into the hands of such a good feeder as Mr. Gerrie, he should be heard of in the future. We still have a good lot of Canadian-bred bulls, from eight to thirteen months old, that will be sold reasonable. One of them, Jessie's Chancellor =68605=, out of Jessie 4th (imp.), and sired by Bapton Chancellor (imp.), won second at the Canadian National and first at the Western Fair. We are importing two young bulls from Scotland that will be home between Christmas and New Year's; they are good bulls, and choicely bred, and will be priced right."

Mr. D. Milne, Ethel, Ont., writes: "The Farmer's Advocate finds the buyers. Since changing my advertisement a short time ago, I have had quite an enquiry for Shorthorns, both males and females, and expect to have a few intending purchasers visit Maitland Bank during the holidays. Mr. John Scott, of Morris, called the other day and selected the thick, mossy-coated young bull, Broadhooks Earl, got by Broadhooks Prince (imp.); dam Lady Minto, a large cow and excellent milker. Amongst the young bulls for sale is the red, sixteen-months-old bull, out of Countess 3rd (imp.); the red-roan eight-months-old, out of Bertha 5th (imp.); the red sixteen-months-old Campbell Bessie, out of Bessie Maitland; the red-roan ten-months-old Marr Beauty, first-prize bull calf; and several others of similar breeding, all got by the grand breeding bull, Broadhooks Prince (imp.) =55002=. Scottish Girl and Scottish Lass, first-prize three- and four-year-old cows at East Huron Fall Show, also Perfection's Rose, have each had heifer calves; and Roan Strawberry, Roan Jewel and Rosa Lenton 3rd, the grand old Campbell Rosebud cow, have dropped bull calves, all by the same

### IMPORTANT AUCTION SALE

OF HIGH-CLASS IMPORTED AND  
CANADIAN-BRED

## Shorthorns

TO BE HELD UNDER COVER,  
IN THE

CITY OF WOODSTOCK, JAN. 16, 1908

CONTRIBUTED BY THE FOLLOWING  
WELL-KNOWN BREEDERS:

John T. Gibson, Denfield, Ont.  
T. E. Robson, London, Ont.  
J. W. Innis, Woodstock, Ont.  
H. J. Davis, Woodstock, Ont.

HALF-FARE ON ALL RAILWAYS.  
CATALOGUES ON APPLICATION TO:

H. J. DAVIS, WOODSTOCK, ONT.

Capt. T. E. Robson } Auctioneers.  
P. Irving & Son }

When Writing Advertisers Kindly Mention "The Farmer's Advocate."

bull. Stock is doing well. Some of the heifers would be good export best—68 head on hand, and 17 cows to come in yet. Any or all are for sale."

#### SALE DATES CLAIMED.

Jan. 8th.—H. M. Vanderlip, Cainsville, Ont., Berkshires.  
Feb. 12th.—John E. Disney & Son, Greenwood, Ont., Shorthorns and Clydesdale mares (imported and home-bred).  
Jan. 16th.—Joint sale at Woodstock, Ont., Shorthorns.  
March 4th.—Provincial sale of pure-bred cattle, at Guelph.

#### THE OTTAWA FAT-STOCK SHOW.

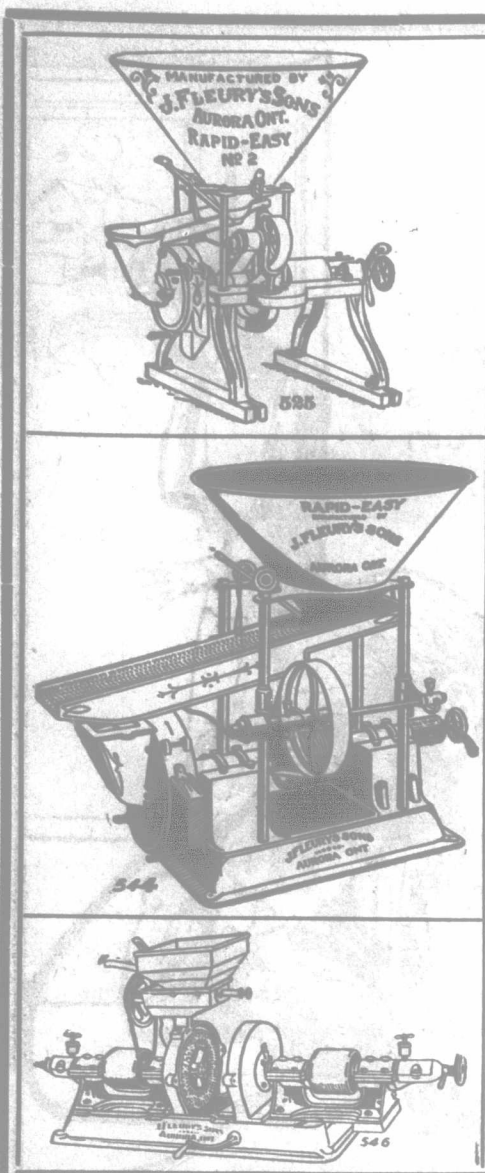
Attention is called to the new advertisement in this issue of the Eastern Ontario Live-stock and Poultry Show, to be held at Ottawa, Jan. 20th to 24th, when reduced rates on all railways will be available. A dairy and seed show will also be included. Live-stock entries close Jan. 11th. Poultry entries close Jan. 8th. Write to the secretary for prize-lists and entry forms, and plan to attend the Show.

#### BOOK REVIEW.

##### HOME GROUNDS.

Farmers all over the country are awaking to recognition of the fact that home grounds should be beautified; but, while some plunge into the work blindly, with the almost positive certainty of making a bungle of the job, others seek for the best information possible on the subject before beginning operations. The latter class will be glad to hear that Kellaway's "How to Lay Out Suburban Home Grounds" takes up all the problems regarding the laying out of home grounds, construction and care of lawns, driveways, etc.; the planting and pruning of shrubs and trees; treatment of hedges; arrangement of flower-beds, etc. The book is generously illustrated, handsomely printed, and published by John Wiley & Sons, New York. It may be procured from the Renouf Publishing Co., 61 Union Ave., Montreal, agents; or ordered through "The Farmer's Advocate." Price, \$1.50.





## Rapid-Easy Grinders

do more work with same power than any other. In sizes to suit all powers. The largest line made in Canada.

We show here machines of three classes:

**525** for home work with any sort of power.

**544** for custom work (stationary or for moving from place to place).

**546** ATTRITION MILLS, for elevators, mills, etc.; finest work and greatest capacity.

PROVINCIAL AGENTS:

The Fairchild Co., Winnipeg, Regina and Calgary.  
T. J. Frapp & Co., New Westminster, B. C.  
J. Clark & Son, Fredericton, N. B.  
The Loundsbury Co., Newcastle, N. B.  
A. Horne & Co., Charlottetown, P. E. I.

Any information you ask.

**J. Fleury's Sons,**  
Aurora, Ont.

Medals and diplomas: World's Fairs, Chicago and Paris.



# STEVENS

## RIFLES

are so quick-firing, straight-shooting and hard-hitting, that a frog on the jump is an easy mark for the boy who has

had a Stevens only a little while. Mechanism is simple—nothing to get out of order—unapproached for accuracy by any other rifle in the world.

HERE ARE OUR LEADERS

Little Scout, - - \$2.25  
Stevens-Maynard, Jr., \$3  
Crack Shot, - - \$4  
Little Krag, - - \$5  
Favorite, - - \$6

For 5c. in stamps to cover postage, we will send free, our complete catalogue of Shotguns, Rifles, Pistols, showing all sorts and styles, and describing the arms in detail. Gives interesting information about Cartridges, Ammunition, Sights, Targets, Care of Firearms, etc. Most good dealers have Stevens Firearms. Insist on getting the genuine. If you find it difficult, write to us.

J. STEVENS ARMS & TOOL CO., 25 Front Street, Chicopee Falls, Mass., U. S. A.

## LAMENESS

Whether it is a fresh Bruise, Cut or Strain—or an old Spavin, Splint, Ringbone or Swelling—you can cure your horse with

## Kendall's Spavin Cure

Thos. Castles, of Newark, N. J., bought a horse—lamed with a Jack Spavin—for \$100. He cured every sign of lameness with Kendall's Spavin Cure—won five races with the horse—then sold the animal to his former owner for \$1,000.00.

WELLINGTON, N. Z., Nov. 2nd, '05.  
"I have found your Spavin Cure a very fine remedy for all sorts of lameness in horses and I am never without it."  
E. J. WISBEY.

Get Kendall's Spavin Cure—the remedy used by two nations for two generations. \$1. a bottle—6 for \$5. Our book—"Treatise On The Horse"—will save you many a dollar if carefully read and acted upon. Write today for a free copy.



DR. B. J. KENDALL CO., 27  
ENOSBURG FALLS, - VERMONT, U. S. A.

## GOSSIP.

### SWINE AT SMITHFIELD.

The £20 champion plate for the best pen of two pigs in the Show, as well as Prince Christian's challenge cup for the best pen of two pigs, bred by the exhibitor, went to the Earl of Ellesmere for his champion pen of Large Whites (Yorkshires), ten months three weeks six days old. The reserve for both cups was the Middlesex Asylum's champion pen of Berkshires. The champion plate for the best single pig of any breed went to Mr. Julius Fricker, the reserve being H. R. H. Prince Christian. These were Berkshires. The champion single pig in the carcass competition was a Berkshire, and the reserve was also a Berkshire.

### SHEEP AT SMITHFIELD SHOW.

The principal awards in sheep at the 1907 Smithfield Fat-stock Show were, for Leicesters, only English Leicesters being shown, the first-prize pen of three yearling wethers, were from the flock of Mr. E. F. Jordan, their average weight at twenty-one months being 296 lbs., and they were awarded the Long-wooled championship, the reserve being a pen of Lincoln lambs, shown by Mr. W. B. Swallow. In this case, the judges of the championships overturned the decision of the breed judges, who had given the Lincoln championship to Messrs. Dean's first-prize pen of twenty-one-months wethers, which weighed 375 lbs. each. Mr. Swallow's Lincoln lambs weighed, at ten months, 199 lbs. each.

The Prince of Wales' prize for the best pen of sheep in the Show went to Mr. Adeane's first-prize pen of Southdown lambs, which weighed, at ten months, 143 lbs. each, Mr. Jordan's Leicesters being the reserve. The Short-wooled championship, of course, went to Mr. Adeane's Southdown lambs, the reserve number being Mr. Flower's champion pen of Hampshire yearling wethers. The Suffolk championship went to Mr. H. E. Smith, and the Shropshire championship and reserve to Sir R. P. Cooper for his first and second pens of yearling wethers. The first weighed, at twenty-one months, 268 lbs. each.

## QUESTIONS AND ANSWERS.

### Miscellaneous.

#### NODULAR DISEASE IN SHEEP.

1. What causes hard lumps on the intestines of sheep? Have butchered several, and find those hard lumps on the intestines of each. I find, after cutting open those growths, that they are hard and greenish. The sheep are well fed during winter, but still they are not fleshy.

2. How should one treat a cow affected with horn distemper? Is it a good plan to bore the horns, or have hen dehorned, and pine tar applied to draw the matter? Have known such practice to cure bad cases. A. B. C.

Ans.—1. This is called nodular disease, and is caused by a worm called *Gesophagostoma Columbianum*. The "knots" do not do much harm when few in number, but the trouble is a cumulative one, and the nodules increase until after a time digestion and absorption are much interfered with. It is doubtful whether any treatment can be used with probability of a cure. None has been suggested by veterinary authorities.

2. There is no disease in the veterinary list described as horn distemper. Half a century ago there was an illusion that "hollow horn" was a disease of cattle, but the idea has long been discarded, and the condition considered an effect rather than a cause. Of the two classes of treatment suggested, we should certainly have more faith in dehorning, taking in half an inch of the hair of the skull, as the bleeding might have a good effect, and the tar applied would have a healing effect as well as keeping out the cold. Care should be observed that no dirt or chaff gets into the wound, which would be liable to cause irritation and inflammation. If the cow is not thriving, a purgative of one pound of Epsom salts, followed by a tonic, such as equal parts of saltpetre, sulphur and ground gentian root. Give a tablespoonful twice a day in feed, if she will take it; if not, as a drench in a pint of water.

## SHAKE IN A BOTTLE.

Now is the time when the doctor gets busy, and the patent-medicine manufacturers reap the harvest, unless great care is taken to dress warmly and keep the feet dry. This is the advice of an old eminent authority, who says that Rheumatism and Kidney-trouble weather is here, and also tells what to do in case of an attack.

Get from any good prescription pharmacy: one-half ounce Fluid Extract Dandelion, one ounce Compound Kargon, three ounces Compound Syrup Sarsaparilla. Mix by shaking in a bottle, and take a teaspoonful after meals and at bedtime.

Just try this simple homemade mixture at the first sign of Rheumatism, or if your back aches or you feel that the kidneys are not acting just right. This is said to be a splendid kidney regulator, and almost certain remedy for all forms of Rheumatism, which is caused by uric acid in the blood, which the kidneys fail to filter out. Anyone can easily prepare this at home and at small cost.

Druggists in this town and vicinity, when shown the prescription, stated that they can either supply these ingredients, or, if our readers prefer, they will compound the mixture for them.

Blacksmith.—Tha knows 'im. 'E was t'mayor one year.

Old Man.—Nay, 'e never got as 'igh as that. 'E wor nobbut ex-mayor.

# Barn Roofing

Fire, Lightning  
Rust and Storm Proof

Durable and  
Ornamental

Let us know the size of any roof you are thinking of covering and we will make you an interesting offer

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

# STOCK MEN



Advertise your fancy stock by means of first-class

DRAWINGS

AND

ENGRAVINGS

Send us your photos, and our stock artist will bring out the points.

THE  
**TORONTO ENGRAVING COMPANY LIMITED.**  
TORONTO - - - CANADA.  
DESIGNERS, ILLUSTRATORS, ENGRAVERS

BOTTLE. en the doctor gets medicine manufac- unless great care fully and keep the advice of an old says that Rheu- double weather is at to do in case

prescription phar- Fluid Extract Compound Kargon, and Syrup Sarsa- in a bottle, after meals and

homemade mix- of Rheumatism, or you feel that the just right. This kidney regulator, edy for all forms is caused by uric h the kidneys fail can easily prepare all cost.

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AVING ITED. ANADA. S. ENGRAVERS

# FROST AND WOOD CALENDAR

If you have not already received one of our handsome 1908 Calendars and a copy of our latest Catalogue of Farm Implements, we will be glad to send you one FREE, provided you cut out the coupon below, fill it in distinctly and mail it to us AT ONCE. The supply is limited, but we want YOU to have one, as it is an attractive picture for any wall.

Cut along this line.

Please send a copy of your 1908 Calendar and Catalogue "F" of Farm Implements to:

Name \_\_\_\_\_

Post Office \_\_\_\_\_

County \_\_\_\_\_ Prov. \_\_\_\_\_

The Frost & Wood Co., Limited, SMITH'S FALLS, CANADA.

## ONE DOLLAR ONLY

Buy this handy little

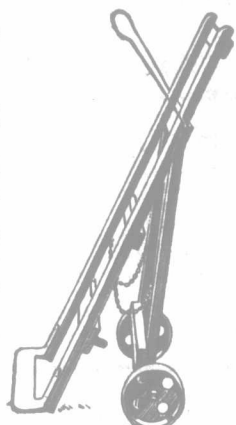
\$3.00 Bag Truck

Offers stand good till Jan. 31st only.

Orders coming after supply is exhausted, money will be refunded.

ORDER AT ONCE AND SECURE A SNAP

Just the thing for handling



### GRAIN AND POTATOES

Send your \$1.00, and shipment made same day as received.

Ont. Wind Eng. & Pump Co., Ltd. TORONTO, ONTARIO.

**ROOF RIGHT NOW**

There is one roof that saves money because it will last 100 years. Guaranteed in writing for 25 years.

**"OSHAWA" GALVANIZED STEEL SHINGLES**

This roof saves you work because its so easy to put on (do it yourself with a hammer and snips) and save you worry because they fireproof, windproof and weather-proof the building they cover. Write us about it and hear all about ROOFING RIGHT. Address

**The PEDLAR People** (Est'd 1861) Oshawa Montreal Ottawa Toronto London Winnipeg

SUBSCRIBE FOR THE ADVOCATE.

### QUESTIONS AND ANSWERS. Miscellaneous.

#### SULPHUR FOR CATTLE.

1. Will the feeding of sulphur to cattle in winter prevent them from becoming lousy?
2. If so, how often, and in what quantities should I feed it?

#### NEWBEGINNER.

Ans.—1. Sulphur is not recommended by veterinarians for this purpose, although there are stockmen who assert confidently that the feeding of sulphur to sheep will keep them free of ticks. When taken into the system, it is excreted principally through the pores of the skin; hence, has a good action in skin diseases, and may possibly prove of some efficacy in repelling or destroying ticks. By improving the health of feeding cattle, it may also make them more resistant to the effects, if not to the attack, of parasites. The most advantageous insecticide for cattle lice that we have ever heard of was given by Thos. McMillan at the Ontario Winter Fair in 1905, and has been since endorsed by correspondents of "The Farmer's Advocate." It consists of one part hellebore, or insect powder, mixed with three or four parts cement, and dusted along the backs of the cattle.

2. If sulphur is to be fed, it might be mixed with salt in the proportion of about one part sulphur to three or four of salt, and kept constantly before the cattle, then they will not be liable to take overmuch. If given freely with their food, the effect would be to unduly open the pores of the skin, rendering the cattle liable to colds, especially if subjected to rain or other exposure.

#### PRUNING SHADE TREES.

The town council here are considering the pruning of the shade trees on the streets, and I am instructed to ascertain the opinion of your experts as to the best time of year in which to do this. Our trees are principally maple. I would be obliged if you can give me an early reply.

J. H. S.

Ans.—This matter of pruning trees is one which comes up frequently, and there are so many points to be considered that it may be well to discuss them somewhat fully. With regard to the proper time for pruning, there are probably as many opinions as there are months in the year. This, in itself, is evidence that there is no particular time very much better than another, or, in other words, that the time of pruning is far less important than some other factors which should be considered. I think it goes without saying that light pruning may be safely done any time of year, but where heavy pruning has to be done, and large limbs are to be removed, the rapid healing of the wounds is an important matter. The danger of removing large limbs is principally in the exposure of the cut surfaces to moisture, and the entrance of germs which induce decay. Probably the chief objection to late fall or winter pruning is that there is a tendency for the bark and cambium at the edge of the wound to die back, and thus retard healing over. One of the chief objections commonly urged against spring pruning is that it is the cause of injury by excessive loss of sap, or what is commonly spoken of as bleeding. As a matter of fact, however, this bleeding is not a severe injury to the tree. It is due largely to root pressure in forcing the moisture taken up by the roots into the growing parts of the tree, and has no more serious effect upon the trees than the ordinary tapping of maples for purposes of sugarmaking. On the whole, the best time for pruning, taking into consideration convenience of time and rapid healing of the wounds, is in March or April, after severe frosts are over, and before growth begins.

A factor of far more importance than time is that of the method of removing the limb and treating the wound. Wherever large limbs are to be removed, care should be taken to avoid splitting or tearing of the bark, and the cut should be made as close as possible to the main branch, so as to bring it in a line as nearly as possible with the flow of sap and cambium, which causes the healing over of the part. When large limbs are to be removed, it is best to cut them off first with stubs a foot or so in length, cutting first on the lower side of the branch, and then on the upper side to prevent tearing

down of bark when the limb falls. These stubs can then be removed, cutting as closely as possible to the main branch.

All large wounds should be covered with heavy lead paint, which will exclude moisture and prevent entrance of germs which cause decay.

It goes without saying, however, that all pruning which necessitates cutting out heavy branches is more or less severe upon the tree, and should be avoided by beginning with the young tree and cutting out branches while they are yet small. If street trees were taken in hand and properly trimmed when set out, and for two or three years following, the necessity for heavy pruning afterwards would be avoided.

O. A. C. H. L. HUTT.

#### STOVEPIPE DRIPPING—FATTENING POULTRY.

1. Could you give the cause and cure of chimney and stovepipes leaking a black fluid? We use dry wood. It is both offensive and dirty.

2. Could you tell us how to fatten thirty chickens quickly? Would it be more profitable to sell them as they are, weighing about four or five pounds? If you think best to fatten them, please give definite instruction, as we have not been very successful.

NOVICE.

Ans.—1. When the fuel burns, even if it be perfectly dry, a certain amount of water vapor is one of the products of combustion, and this, on coming in contact with a cold material, condenses into liquid water. Where a long pipe leads through a cold room, there is an extra amount of this water vapor condensed on the chilled stovepipe, and this, being mixed with soot and other materials, forms the offensive black fluid referred to. The trouble may best be overcome, perhaps, by shortening the pipe, if that can be done; otherwise, the only thing to do is to warm the room through which the pipe passes, or to keep up a steady fire, which will mitigate the nuisance.

2. We would scarcely consider it advisable for an amateur poultryman to undertake crate-fattening. A good deal may be done to improve the market condition of the birds by confining them in comparatively limited quarters, in a dusky, but dry, clean and well-littered apartment, and feeding liberally on gains, with a morning or noonday mash, taking particular care never to feed more than is eaten up promptly. Commence by feeding considerably less than they will eat, so as to get their digestive systems in good working order. Allow plenty of grit, with clean water, a little green food, and some meat scrap. Corn is the best fattening grain, though it produces a yellow carcass, which is objected to on some markets. Outside of this it does not make so much difference what is fed, so long as enough is given, and a mixture used rather than a single kind of grain.

#### GOSSIP.

##### SIR MARCUS SOLD.

The imported Clydesdale stallion, Sir Marcus [7790] (18205), winner of the championship as best Clydesdale stallion, any age, at the Canadian National Exhibition, Toronto, and the International Exposition, Chicago, 1907, has been sold by his importers, Graham-Renfrew Co., Bedford Park, Ont., to Captain T. E. Robson and Martin H. Rosser, of Denfield, Ont. Sir Marcus is a bay four-year-old horse, sired by Sir Simon (10465), who was by Sir Everard, the sire of Baron's Pride, and the dam of Sir Simon was by Mains of Airies, by Prince of Wales (673), and his grandam by Darnley (222). Sir Marcus is a model draft horse and a typical Clydesdale, combining size with quality, evenly-balanced conformation, flat, flinty bone, fine hair and true action. It is questionable whether another horse of his class, quite his equal in all-round excellence, has ever been brought to this country.

Captain Robson has also purchased, from Mr. O. Sorby, Guelph, the imported Clydesdale stallion, Gartley Standard (13494), brown, foaled June, 1905; sire Everlasting, by Baron's Pride; dam Gartley Forecast, by Prince Thomas; grandam by Prince of Carruchan, by Prince of Wales (673). This is an exceptionally well-bred colt, the four top sires having been Highland Society champions; while, individually, the Captain considers him likely to make as good a horse as the International champion.

### DOCTOR WANTED TO AMPUTATE.

But for the timely arrival of a box of Zam-Buk, Mrs. E. F. Fonger, 34 Myrtle Street, St. Thomas, Ont., would have lost her toe. She says: "I am most thankful I discovered the existence of Zam-Buk. For about nine months I suffered cruelly from the effects of having a corn removed from my little toe, for with its removal a hole remained, and my toe was in a terrible state. The Doctor wanted to amputate it. About this time I received a sample box of Zam-Buk, and began using it on my toe. The first application gave me the greatest ease from pain, and encouraged me to give Zam-Buk a thorough trial. Two months after commencing with Zam-Buk there was no sign of a hole, for the flesh had grown in very firmly, and all soreness and pains were entirely banished. Zam-Buk brought about this healing, when all other remedies failed. We find Zam-Buk so valuable that we would not be without a box in the house."

Zam-Buk heals cuts, bruises, old wounds, running sores, eczema, ulcers, boils, eruptions, scalp sores, itch, piles, chapped hands, burns, scalds, and all skin diseases. 50c. a box, all druggists and stores, or Zam-Buk Co., Toronto.

**The Angle LAMP**

There's no longer any reason for prejudices against kerosene lighting. The Angle Lamp employs a new principle which does away with all smoky and offensive odors and makes the best and the most satisfactory light in the world.

**Brilliant as Gas**

or electricity, and better than either because its light is soft and mellow and does not hurt the eyes. It's the light with "no under shadow," lighted and extinguished like gas. It is safe, clean and convenient. A great difference between the Angle and any other lamp.

**Sold on 30 Days Trial**

You should get the Angle book and read about this lamp. Write us for catalog 62 J 871

**THE 1900 WASHER Co., TORONTO**  
2644 Yonge St.

**A COMMERCIAL TRAINING**

is of value to every man and woman; it is an absolute necessity to every person having any relations whatsoever with the business world, and it is the key to successful business management. We give a thorough practical training in Commercial work, including Bookkeeping, Shorthand, Penmanship, Commercial Arithmetic, Commercial Law and Business Correspondence. You take the instruction at home and save money thereby. Write to us to-day. We have over 100 other courses. Ask for what you want. Address as below to

**Canadian Correspondence College,**  
607-573 Temple Building Toronto, Can.

**CANADIAN CORRESPONDENCE COLLEGE LIMITED**

**IF YOU SAW**

lumber or saw wood, make lath or shingles, or work lumber in any form, you should know all about our improved

**AMERICAN MILLS**

All sizes Saw Mills, Planers, Edgers, Trimmers, Lath Mills, Shingle Mills etc. Complete line, wood working machinery. Catalogue free.

**American Saw Mill Moby. Co.**  
113 Hope St., Westchester, N. Y.  
624 Engineering Bldg., New York City.

### Clean Skimming Means Good Living

The hog trough is no place to put butter.

Wide awake farmers want the cream separator that skims the cleanest. It means more profit—better living. That separator is the Sharples Dairy Tubular—the separator that's different.

Sharples Dairy Tubulars have twice the skimming force of any other separator—skim twice as clean.

Prof. J. L. Thomas, instructor in dairying at the agricultural college of one of the great states in the Union, says: "I have just completed a test of your separator. The skimming is the cleanest I have ever seen—just a trace of fat. I believe the loss to be no greater than one thousandth of one per cent."

That is one reason why you should insist upon having the Tubular. Tubulars are different, in every way, from other separators, and every difference is to your advantage. Write for catalog & list and valuable free book, "Business Dairying."

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



### WOODSTOCK COLLEGE

Woodstock, Ont.

A residential school for boys and young men, offers educational facilities not excelled anywhere.

Four courses: Matriculation, Teachers', English Scientific, Commercial.

A thorough scholastic training, teaches the boy "to do" by "knowing."

A fully-equipped manual training teaches the young man "to know" by "doing."

A new gymnasium under medical supervision ensures healthy physical conditions.

The distinctly christian and moral life of the school safeguards from immoral and hurtful influences.

College reopens Tuesday, Jan. 7th.  
Write for calendar.

A. T. MacNeill, B. A., Principal.

### Champion Evaporator CONSTRUCTION.

The corrugated pan of a Champion Evaporator placed directly over the hottest part of the fire is its shallow boiling heater.

The arrangement is such that the first sap entering the evaporator is first made into syrup.

Simple operation and easy to clean. A boy fourteen years of age can handle our largest outfit. Send for description circular.

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

SUBSCRIBE FOR THE ADVOCATE.



# RAW FURS!

Commissions Solicited. We want thousands of furs. Write for latest price list. We pay all express charges.

1865 E. T. CARTER & CO., TORONTO, ONT. 1907

The Largest WOOL, HIDE and RAW FUR HOUSE in CANADA.

QUESTIONS AND ANSWERS.  
Veterinary.

**SALLANDERS.**

Pregnant mare has a crack in front of hock.

W. C.

Ans.—Purge her with 8 drams aloes and two drams ginger. Follow up with 1½ ounces Fowler's solution of arsenic, twice daily for a week. Dress the crack, once daily for three days, with butter of antimony, applied with a feather, and, after that, dress, three times daily, with oxide of zinc ointment until healed. These cracks, on account of the motion of the joint, are very hard to treat.

V.

**URINARY TROUBLE.**

Five-year-old gelding has urinary trouble. He urinates very frequently, and passes only a little at a time, and he also passes a foul-smelling matter in drops. His coat is rough and dry, and his back humped.

R. P. J.

Ans.—The symptoms indicate chronic inflammation of the mucous membrane of the bladder, which is hard to treat. The bladder should be flushed out twice weekly with a one-per-cent. solution of creolin, heated to 100 degrees, Fahr. This is done by inserting a catheter into the bladder, and then attaching a rubber bulb syringe to the exposed end of the catheter, and forcing the fluid into the bladder. He should be given 1½ ounces tincture of hyoscyamus, three times daily for a week, then cease for a week, and, if necessary, repeat.

V.

**UNTHRIFTY HORSE.**

Horse, fifteen years old, whose teeth I had dressed six weeks ago is not doing well. He eats well, and is fed five quarts rolled oats three times daily, with plenty of good hay and some cut straw. He is generally constipated. The last few weeks he has been dull and unable to stand work or drawing, and he grunts when standing over in the stall or backing.

T. H. M.

Ans.—Give him a laxative of 1½ pints raw linseed oil. Take 3 ounces each of sulphate of iron, gentian, ginger and nuxvomica. Mix, and make into twenty-four powders. Give a powder night and morning in damp food. Feed as you have been doing, but add to the oats half a cupful of linseed meal, twice daily, and give a couple of carrots or turnips daily. Give regular, but light, exercise daily, and, as he improves in condition and spirits, you may, if necessary, increase the amount of work.

V.

**DISLOCATION OF PATELLA.**

Colt has something wrong with one hind leg at times. When affected, he cannot lift the foot at all, but drags the leg with pastern knuckled forward, and then he, all at once, recovers.

T. A. S.

Ans.—This is dislocation of the patella, commonly called stifed. The stifle bone slips out of position. Keep him as quiet as possible. Tie up, and see that the bone is in place. If not, get an attendant to hold the leg forward, and then you must press inwards and forwards on the bone with your hand to force it in. If necessary to keep it in, tie his foot forward to a collar on his neck. Clip the hair off the joint, and blister the front and inside. Take 2 drams each of biniodide of mercury and cantharides, and mix with 2 ounces vaseline. Rub this well in once daily for two days; on third day wash off, and apply sweet oil. Turn in loose box now, and oil every day until the scale comes off. Then tie up, and blister again, and, after this, blister once monthly all winter.

V.

Miscellaneous.

INFORMATION WE MAY NOT PUBLISH.

Please let us know where is the cheapest place to buy bran. Would you give us the address of some milling company in Manitoba who would ship to Hastings, and the address of some corn dealer from Chatham, or the district where corn is grown, and name a commission poultry dealer in Hamilton?

W. L.

Ans.—Subscribers should understand that there is a limit to the time and resources of an editorial staff, and that the ethics of the publishing business debar us from printing in the regular reading columns information of a purely advertising nature. While we endeavor to keep a wide eye open over the whole agricultural situation, it is manifestly impossible for us to be able to state definitely just where is the cheapest place at any particular moment to buy bran, or to vouch for the reliability of firms engaged in the produce business here and there throughout the Dominion, and, as stated above, it would not be admissible to publish their names, even if we knew. A good way to obtain the names of such firms is to secure from a local business man the privilege of looking through Dunn's or Bradstreet's report, which gives the names and financial rating of every business man or firm of any account in Canada. About the only good purpose such letters as the above serve is in pointing the wisdom of those engaged in such business making use of the widely-read and closely-scanned advertising columns of "The Farmer's Advocate."

CASTRATING STALLION.

I have a five-year-old stallion that I wish to castrate.

1. Is it safe to castrate a stallion of that age?
2. If so, at what season of the year should it be done?
3. Describe the most approved and safest mode of operating.

S. C. J.

Ans.—1. There is always a danger of this operation resulting in untoward conditions, and the danger is, of course, greater in a five-year-old than in a younger horse. At the same time, the danger is so slight, if the operation is properly performed, that there is very little risk.

2. From the middle of May to the middle of June is the most favorable season; but the operation is performed at all seasons.

3. Fast him for twelve hours. The instruments necessary are a castrating knife, an emasculator and casting harness, unless the operation is to be performed with the horse standing. Make a five-per-cent. solution of creolin in a basin. Put instruments in the solution. Also, make 4 ounces of a five-per-cent. solution of carbolic acid. Cast and secure the horse; wash your hands and the horse's scrotum with the solution; grasp a testicle, and cut into the scrotum, when the testicle will drop out; sever the cord with the emasculator. When both have been removed, pour some of the carbolic solution into each wound, and let the horse up. Keep him in a thoroughly clean place, and feed lightly, and give regular exercise. If the weather be favorable, allow him on grass, but do not allow him to get wet or chilled for ten days after the operation. I think it would be wise to employ a veterinarian to operate.

V.

A colonel, on his tour of inspection, unexpectedly entered the drill-room, when he came across a couple of soldiers, one of them reading a letter aloud while the other was listening, and at the same time stopping the ears of the reader.

"What are you doing there?" the puzzled officer enquired of the latter.

"You see, colonel, I'm reading to Atkins, who can't read himself, a letter which has just come from his sweetheart."

"And you, Atkins, what in all the world are you doing?"

"Please, colonel, I am stopping up Murphy's ears with both hands, because I don't mind his reading my sweetheart's letter, but I don't want him to hear a single word of what she has written."

## Fistula and Poll Evil

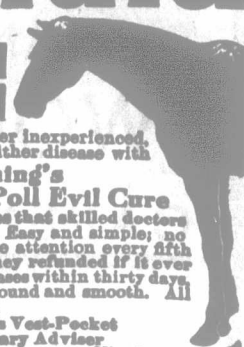
Any person, however inexperienced, can readily cure either disease with Fleming's

### Fleming's Fistula and Poll Evil Cure

—even had old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in Fleming's Vest-Pocket Veterinary Adviser.

Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durable bound, indexed and illustrated.

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

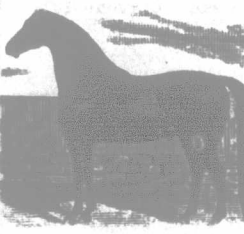


## Dr. Page's English Spavin Cure.

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements.

This preparation (unlike others) acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by Dr. Fredrick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents: on

J. A. JOHNSTON & CO., Druggists,  
171 King St. E., Toronto, Ont.



## Imported Clydesdales

Just arrived, a choice shipment of stallions and fillies; dark colors; all first-class breeding. Inspection invited. Terms to suit. Long-distance 'phone.

Geo. G. Stewart, Howick, Que.

## HACKNEY STALLION

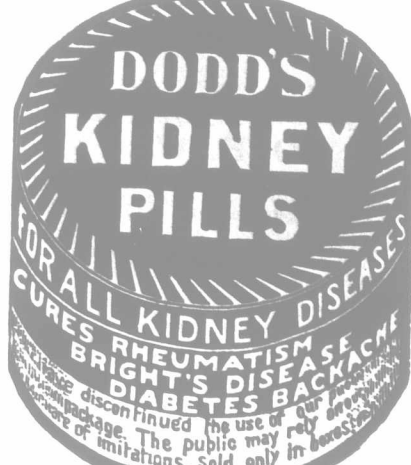
MARQUIS OF DUFFERIN—Rising 4; registered; Silver Medal, Dominion Exhibition. A beauty. One year, 15.5; fine action; splendid condition; sure getter. Sire Bell Boy, champion of Canada Exhibition, recently sold for a large sum in U.S.; dam first at Dominion Exhibition, by Barhorpe Performer. Bargain for quick buyer. Railway fare of purchaser deducted from price. MOUNT VICTORIA STOCK FARM, (Clydesdales and Hackneys), Hudson Heights, P. Quebec, Can.

A well-known bishop relates that while on a recent visit to the South, he was in a small-country town, where, owing to the scarcity of good servants, most of the ladies preferred to do their own work.

He was awakened quite early by the tones of a soprano voice singing "Nearer My God to Thee." As the bishop lay in bed he meditated upon the piety which his hostess must possess which enabled her to go about her task early in the morning singing such a noble hymn.

At breakfast he spoke to her about it, and told her how pleased he was.

"Oh, law," she replied; "that's the hymn I boil the eggs by; three verses for soft and five for hard."



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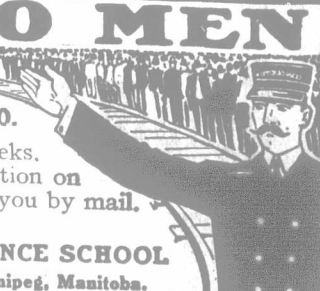
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**1000 MEN**

**Wanted as Brakemen and Firemen** Salary \$75 to \$150.

Study a few hours a day for eight to ten weeks, and we guarantee to assist you in getting a position on any railway in Canada. We teach and qualify you by mail. Write us for booklet and full particulars.


**THE DOMINION RAILWAY CORRESPONDENCE SCHOOL**  
Dept. F  
Winnipeg, Manitoba.



**CLYDESDALES AND FRENCH COACHERS, IMP.**

Scottish and Canadian winners, stallions, mares and fillies. The Clydes represent the blood of such noted sires as Baron's Pride, Up-to-Time, Royal Favorite, Ethiopia and Aome. They combine size, quality and action. The French Coachers are a big, flashy, high-stepping lot, and are winners in both France and Canada. Our prices are right, and our horses as good as the best. Long-distance telephons.


**ROBT. NESS & SON, Howick, Quebec.**



**Largest Importation of Clydesdales, Hackneys and Percherons of the Year.**

My latest importation has just arrived home. I have now on hand for sale: 30 Clydesdale stallions from 1 to 5 years of age; 25 Clydesdale fillies from 1 to 4 years of age; 19 Hackney stallions from 2 to 5 years of age; 19 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.**



**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.**



**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. Yonge street cars pass the door every hour. Phone North 4483.

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



**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've made. Look them up in our barn on Exhibition Grounds. Over 30 head to select from.


**SMITH & RICHARDSON, COLUMBUS, ONTARIO.**

Long-distance phone.



**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 Germny Stations.




**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. Shropshires—imp. and from imp. stock; singly or in car lots. About 30 choice young Berkshires, imp size and dam. Everything strictly high class. T. A. COX, Manager, Brantford, Ont.

**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. **MOGKINSON & TISDALE, BEAVERTON, ONT., G. T. & G. 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. Phone.



**Imp. Clydesdale Stallions and Fillies.**

Our new importation of stallions and fillies are the best we could select in Scotland, particularly well bred, with the size, smoothness and quality that Canadians admire. Show-ring stuff. Come and see them. Will sell on terms to suit.

**JOHN A. BOAG & SON, RAYENSHOE P. O., BROWN HILL STA.**



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

**QUESTIONS AND ANSWERS.**  
Miscellaneous.

**TREATMENT OF IN-FOAL MARE**

How should a mare that is in foal be treated at foaling time? At what length should the navel string of foal be cut from the body, and what should it be tied with? I have two mares in foal, and this is my first experience. Should a Clydesdale mare, in foal, be trotted?  
YOUNG FARMER.

Ans.—A mare in foal should have regular exercise, either running loose in a roomy yard or worked in moderation. Gentle trotting will do her no harm, and she should not be required to draw heavy loads. She may do farm work up to within a few days of foaling, and be the better for it. Tie within an inch of the body with silk thread dipped in a solution of carbolic acid (one part of acid to ten of water), and cut off two inches below the thread. Then dress the end of the navel string below ligature, twice daily, with the carbolic solution till withered and dried up.

**GOSSIP.**

Commando, the leading Thoroughbred stallion in America, had \$274,000 to his credit up to November 12th last, his stock having won considerably more than double the amount secured by the progeny of his nearest opponent, Sain. Peter Pan and Colin are Commando's chief winners. The latter, in all, as a two-year-old, has secured twelve races of the aggregate value of \$135,290.

At a meeting of the Iowa State Board of Agriculture, held in Des Moines, December 12th and 13th, the premium list for the 1908 fair was revised and adopted. The cash premiums were increased in the cattle, swine and horse departments. In the horse department, a full classification for Hackneys has been added, and the Government classification for American carriage horses was adopted. Other classes have been strengthened, and a new and liberal classification for draft geldings and grade mares in harness is offered. This classification carries a thousand dollars in prizes, and assurance has been received that it will be supplemented with specials from several breeders' associations.

**TRADE TOPIC.**

**RAISING POULTRY AS A SIDE LINE.**—There is money in raising poultry for the market. As a side line it fills in many unprofitable hours, and pays handsome dividends the year round. You can start without a feather and select enough pullets from the first season's hatching to lay all the eggs you need for the next season, or you can market them as broilers at a good round price. The business of raising poultry is one that doesn't require a large amount of money to start. For a few dollars you can buy either the Wooden Hen or the Excelsior incubator, and either one will more than pay for itself with the first hatch. There's no need to pay high prices for incubators that won't do as well. These incubators are made by George H. Stahl, Quincy, Ill., who is widely known as one of the largest and most successful manufacturers of hatchery and brooders in the country. Begin to-day by writing for a free copy of Stahl's catalogue—an instructive book on poultry-raising. It is quite elaborate, containing many plates in natural colors, including views showing development of the chick from the egg to the bird.

**THE UNKNOWN SEX.**

During the time that a certain Middlesex regiment was quartered in Cawnpore, a large order was sent to a shoemaking firm for boots for the men. The manager sent the order to the chief baboo with instructions that it was to be attended to without delay. The baboo took the paper and read it with evident surprise on his face. He reread the order, and appeared more mystified still. He read it a third, then a fourth, and finally a fifth time. Then he went off to the manager. "Please, sir," he said, "not understand. Male sex I know, female sex I know, but what is Middlesex?"

**THE BEST LINIMENT**  
OR PAIN KILLER FOR THE HUMAN BODY

**Gombault's Caustic Balsam**  
IT HAS NO EQUAL

For the Human Body

—It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, External Cancers, Boils, Corns and Bunions, Sore Throat, Chest Cold, Backache, Neuralgia, Sprains, Lumbago, Diphtheria, Sore Lungs, Rheumatism, and all Stiff Joints.

Perfectly Safe and Reliable Remedy for Sore Throat, Chest Cold, Backache, Neuralgia, Sprains, Lumbago, Diphtheria, Sore Lungs, Rheumatism, and all Stiff Joints.

REMOVES THE SORENESS—STRENGTHENS MUSCLES


Cornhill, Tex.—"One bottle Gombault's Balsam did my rheumatism more good than \$100.00 paid in doctor's bills."  
OTTO A. BEYER.

Price \$1.50 per bottle. Sold by druggists, or sent by express prepaid. Write for booklet to The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.



**RIVER VALLEY CLYDESDALES AND SHORTHORNS.**

For Sale—Two stallions, one imp., the other imp. in dam; 3 imp. mares 3 and 4 yrs. of age—a grand pair, with size and quality; 1 fully foal imp. in dam. Shorthorns all ages, of both sexes; straight milking strain. A. V. GARDNER, Thorntonsbury Sta., Re/wing P. O.



**NOTHING BUT THE BEST**

New importation of Clydesdales and Hackney Stallions. For sale more Old Country premium and H. and A. Society winners than any other importer. Such horses as Aome, H. S. Sheriff, H. S. Quis, Rozelle, Ardetham, Goldsmith, H. S. Seal, Baron's Charm, Baron's Carriok, Abbey Fashion, Medallion and many others equally good. Thirty six in all. Prices reasonable.

**OSWALD SORBY, GUELPH P. O., ONT.**

Clydesdales, Shorthorns and Cotswolds—For 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.**

**Aberdeen - Angus Cattle**

FOR SALE!


Young bulls, also females of various ages. Good, growing, quick-feeding animals, of excellent breeding and type. Come and see them or address: **WM. ISO - E.** P. O. and G. T. R. Sta., Sebringville, Ont.

**THE SUNNYSIDE HEREFORDS**

To reduce herd will sell:

- 10 cows at ..... \$100 each
- 10 heifers at ..... 50 each
- 10 bulls from \$50 to 100 each

Come and see them or address **M. H. O'NEIL, Southgate, Ontario.**



**W. R. BOWMAN, MT. FOREST.**

Durham bulls, roans and reds, sired by imported Newton P-inoe, \$75. Shropshire ram and ewe lambs, \$10 to \$15 each, sired by our oak rams—Froline (imp.) a Chicago winner, and Dickie (imp.). A few choice breeding ewes at \$15 to \$18 each. Yorkshire sows due to farrow in February, sired by an imported boar, weighing over 300 pounds, at \$25 each. One boar ready for service at \$15. A Jersey bull, two years old, a winner at London; quick sale \$25.


**ABERDEEN - ANGUS**

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

**WALTER HALL, Washington, Ontario**

**J. BRYDONE,**

Breeder of pure Scotch Shorthorns. Breeding females imported. Headed by the pure Oriskany (Dunthie bred) bull, Sittyston Victor (imp.)—50088—(5737). Young stock from imp. dams for sale. Prices reasonable. Telegraph, Telephone, R. R. Sta. and P. O., Milverton.



**High-class Shorthorns** Royal Chief, a son of Mildred's Royal, at head of herd. We are offering a few choice heifers of show-ring form. Pure Scotch. Terms reasonable. **A. DUNCAN & SONS, Galt, Ont.**

**Brown Lee Shorthorns!**

Nonpareil Victor—62307—at head of herd. Young stock for sale at all times. Prices very reasonable. **Ayr, C. P. R.; Drumbo, G. T. R.**  
**DOUGLAS BROWN, Ayr, Ont.**

## ONLY A Common Cold

**BUT IT BECOMES A SERIOUS  
MATTER IF NEGLECTED.  
PNEUMONIA, BRONCHITIS,  
ASTHMA, CATARRH or CON-  
SUMPTION IS THE RESULT.**

Get rid of it at once by taking

### Dr. Wood's Norway Pine Syrup

Obstinate coughs yield to its grateful soothing action, and in the racking, persistent cough, often present in Consumptive cases, it gives prompt and sure relief. In Asthma and Bronchitis it is a successful remedy, rendering breathing easy and natural, enabling the sufferer to enjoy refreshing sleep, and often effecting a permanent cure.

We do not claim that it will cure Consumption in the advanced stages, but if taken in time it will prevent it reaching that stage, and will give the greatest relief to the poor sufferer from this terrible malady.

Be careful when purchasing to see that you get the genuine Dr. Wood's Norway Pine Syrup. Put up in a yellow wrapper, three pine trees the trade mark.

Mr. Wm. O. Jenkins, Spring Lake, Alta., writes: "I had a very bad cold settled on my lungs. I bought two bottles of Dr. Wood's Norway Pine Syrup but it only required one to cure me. I have never met with any other medicine as good."

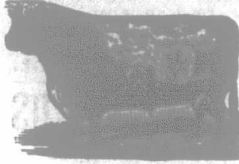
Price 25 cts., at all dealers.

**Shorthorns**—Sweepstakes herd at Wallacetown, Aylmer, London, Ridgeway, and Highgate, 1907. We have for sale at reasonable prices 3 choice young bulls, 1 red and 2 roans, of grand type and quality. All sired by the good breeding bull, Ridge-wood Marquis—45936—, a son of the old champion, Spicy Marquis. Also a few young cows and heifers. JNO.

LEE & SONS, Highgate, Ont.

### T. DOUGLAS & SONS

STRATHROY, ONT.



Breeders of Short horns and Clydesdales. 15 bulls, 60 cows and heifers, 1 imp. stallion, imp. and home-bred sires. Write us what you want or come and see our stock. Farm 1 mile north of town.

### 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.

B. ALLAN BLACK, Kingston, Ont.

### Maple Grove Shorthorns



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.

### SHORTHORNS

For want of stable room will sell cheap 10 heifer calves, 19 yearling heifers, 4 two-year-old heifers in calf, and 3 red bulls about 14 months old. Right good ones. OLYDESDALES.—Two-year-old mare in foal, and a good pair 4 and 5 year old. Write, or come and see them.

JAMES McARTHUR, GOBLES, ONTARIO.

### 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. E. Farm 11 miles east of City of Guelph.

Advertise in The Farmer's Advocate

### GOSSIP.

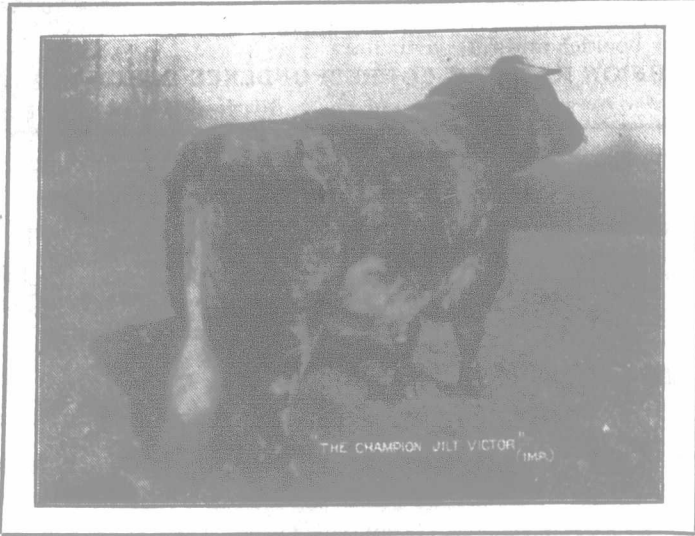
It is most desirable, says the London Live-stock Journal, that the support of breeders, feeders, and the public generally, should continue to be extended to the fat-stock shows. There never was a time when it was more necessary and important that every possible stimulus should be given to the skillful breeding and feeding of cattle, sheep and pigs. The perfected specimens exhibited demonstrate the capabilities in flesh production of the various breeds. They are not put forward merely as commercial stock, which can be seen any day. They are the result of careful breeding and feeding, and indicate where the farmer should go if he wishes to have the kind of stock calculated to improve his own animals and to enable him to hold his own in face of competition.

A feature of the trade in milch cows at the Chicago Stock-yards, and in all the region tributary to that great market, is the demand for large cows of the milking Shorthorn type. These cows, showing plenty of size, are eagerly bought at long prices by the dealers from New York and Pennsylvania. Newly-calved, or well along in calf, such cows elicit the strongest competition. The dealers explain the demand for them by saying that, as the Eastern dairyman no longer makes any attempt to rear his own heifers into profit, he must have something that will yield a remunerative flow of milk for a time, and then fatten readily into beef that brings a good price. This combination is found in the Shorthorn type of cow, which is bringing as much as any other sort of distinctive dairy breeding.

Mr. J. Ernest Kerr, of Harviestoun Castle, Dollar, Scotland, has added to his other live-stock enterprises a herd of Shorthorns. He has purchased from Mr. Wm. Duthie, as a foundation, five well-bred heifer calves. One of these is a Princess Royal of red color, by Bapton Favorite, out of Princess Royal 65th. Bapton Favorite, it will be remembered, was sold at the Uppermill sale for £1,260, while the dam is the dam of the highest-priced two-year-old heifer (£240) and the highest-priced yearling heifer (£336) at the Uppermill sale, where her sister, only seven months old, made £346 10s. The Missie representative is a white, by Pride of Avon, seven gets of which at the last Collynie sale averaged £450. The sire of her dam is Scottish Champion. The other families represented in the group are the Roan Ladies, the Golden Drops, and the Butterflies. The Roan Lady calf is by Scottish Fancy; the Golden Drop one by Strowan Champion; and the Butterfly one by Captain Webb. The pedigrees are all of the best, and the heifers are a correspondingly choice lot, the last three mentioned being roans.

The first winter in a colt's life is an all-important time, and if the colt is neglected then, by want of food, or exposure, or too close confinement, the loss can never be regained. Therefore, the aim should be to keep the colt in good, growing condition, by liberal feeding and plenty of exercise. It should have three quarts of crushed oats per day, mixed with an equal quantity of bran, and all the good hay it will eat; and, unless very stormy, it should have at least three hours' exercise every day in a yard or paddock. The most successful horse-breeders always feed their colts well, and give them plenty of exercise, especially during the first winter. They know that the surest way to ruin a colt is to keep it in a close box or stall all the winter; and that exercise is all important, as it grows bone and hardens the muscle. Examine the colt's feet, also, and keep the toes from growing long by rasping the hoof into shape, as this must be done before putting the colt on to pasture, when, if neglected, the hoof breaks up. Many a horse goes through life with poor feet because they were not properly attended to at this period.

## Salem Herd of Shorthorns



The number of important premiums won by this herd is excelled by no other. It has placed herd headers that have earned distinction for their buyers in many leading herds of the United States and Canada. At present there are a number of this kind for sale; also some high-class heifers. They are bred, fed and priced to the advantage of buyers.

J. A. WATT, SALEM P. O.

Elora Stns., G.T. and C.P.R., 13 miles north of Guelph. Long-distance 'phone.

### SPRING VALLEY SHORTHORNS

Two young imported bulls of the very best quality and breeding. Six Canadian-bred bulls, mostly the get of Bapton Chancellor (imp.) prices right.

KYLE BROS., AYR, 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.

## 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.

### Glover Lea Stook 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.

### FLETCHER'S SHORTHORNS & YORKSHIRES

Present offering: Young bulls red or roan, 10 to 12 months old, sired by my noted stock bull (imp.) Joy of Morning; also heifers and cows in calf. In Yorkshires: Choice sows bred, and born fit for service, from imp. sire and dam.

GEO. D. FLETCHER, Binkham P.O., Ont. Erin Sta., C. P. R.

## 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—50977—(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.,

BREDS

### Scotch Shorthorns

exclusively. Herd bulls: Scottish Hero (imp.) =55042= (90065), a Shethin Rosemary; Gloster King =68703= 283804, A. H. B., a Cruickshank Duchess of Gloster. Young stock for sale. Long-distance 'phone in house.

M  
A  
P  
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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  
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## Scotch Shorthorns

Our breeding females are very heavy milkers, also good individuals. For sale are a few young bulls and a few choice heifers, all from imported sires, and a number from imported dams. The imported Bruce Mayflower bull, Royal Bruce 55038, heads the herd.  
R. J. DOYLE, Box 464, OWEN SOUND, ONT.

# 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.**

## Boo Spavin

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.

**Fleming's Spavin Cure (Liquid)** is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Orb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be misapplied. Easy to use, only a little required, and your money back if it ever fails.

**Fleming's Vest-Pocket Veterinary Adviser** describes and illustrates all kinds of blemishes, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

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

## J. Watt & Son

For sale—2 high-class bull calves of the richest breeding; 20 young cows and heifers, a number of which are well gone in calf to Imp. Pride of Scotland. Moderate prices. Correspondence invited.

Salem P.O., Elora Sta. G.T.R. & C.P.R.

## SHORTHORNS AND LEICESTERS.

For sale: Young bulls, age 7 to 12 months, by Imp. sire, and 1 on grade milking dams. Leicesters: A number of choice rams and ram lambs, also a choice lot of shearing ewes now bred to good ram of the finest type and breeding, at easy prices for quick sale. **W. A. DOUGLAS,** Caledonia station, **Windsor P. O.**

## 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., Meadowdale, Ont.**  
Stations: Meadowdale, C.P.R.; Brampton, G.T.R.

## Glen Gow Shorthorns

Our present offering is 9 bulls from 6 to 14 months of age sired by Imp. Ben Loman and Imp. Joy of Morning, and out of Imp. and Canadian-bred cows. Also a number of very choice heifers. No fancy prices asked. Long-distance phone.

**WM. SMITH,** Columbus P.O.  
Brooklin & Myrtle Sts.

## WILLOW BANK Shorthorns and Leicesters.

ESTABLISHED 52 YEARS. Have a special good lot of either sex to offer in Shorthorns of various ages. Also a few choice Leicester sheep. Write for prices, or, better, come and see. Choice quality and breeding.

**JAMES DOUGLAS CALEDONIA, ONT.**

## Shorthorns, Cotswolds, Berkshires

On hand: two yearling bulls and a number under one year, also females of all ages. In Cotswolds, about 30 lambs. Have also a few young Berkshire boars.

**CHAS. E. BONNYCASTLE,** P. O. and Station, Campbellford, Ont.

**Shorthorn Bulls**—Ready for service. One will make a show bull. Also young things from Matchless, Crimson Flower, Miss Ramadea, Rosemary, Diamond and Lady Fanny dams, the ges of Chancellor's Model. Prices to suit times. Come and see. **ISRAEL GROFF, Elmira, O. T.**

**Shorthorns & Leicesters** for sale. Two young bulls for sale from good milking dams. Leicesters—a few females for sale, different ages. **JOHN LISHMAN,** Hagersville, Ont., P. O. and Stn.

**ROSE COTTAGE STOCK FARM**—2 Shorthorn bulls for sale—14 and 20 months—one red and one roan. The red a Matchless. The roan, sired by Royal Prince is a full brother to Fair Queen and Queen Ideal, the two champion females of two continents. **H. K. Fairbairn,** Thedford, Ont.

## QUESTIONS AND ANSWERS. Miscellaneous.

### WHERE CANADIAN PATENTS ARE ISSUED.

Where are patents issued in Canada?  
D. J.  
Ans.—From the Patent Branch, Department of Agriculture, Ottawa, Ont.

### OWNERSHIP OF BRICK-KILN.

1. A leases a piece of ground for the purpose of making brick for a term of years, and erects a kiln thereon. A quits business before lease expires, and sells the kiln to B. Has he the right to do so?  
2. B removes part of the kiln. The property on which it stands is sold to C, with no reserve, except dry sheds, they being held for back rent. Can B claim the remainder of bricks, which are still on the ground?  
Ans.—1. Yes, if just the ordinary brick kiln.  
2. Yes.

### SORE EYES IN SHEEP.

A stray blind sheep was in my flock, and, examining it, I found on its eyes a pink-like scum. Is it pink-eye? I have noticed, since, that some of my sheep are not looking very bright, seem to be discharging a little. Is there any cure or prevention? If any should go blind, would the mutton be all right to eat? What is the exact period of pregnancy with ewes?  
SUBSCRIBER.

Ans.—Pink-eye is not listed among diseases of sheep. There is an infectious complaint of the eyes in sheep in which a temporary scum of pinkish color covers the pupil, and, indeed, the whole surface of the eye, but which generally disappears without treatment in the course of two or three weeks. In any eye trouble, relief may be had from dropping a strong solution of any of the coal-tar dips into the eye. We do not think that a disease of the eyes affects the wholesomeness of the flesh. The period of pregnancy in ewes is 150 days, or practically five months.

### REQUISITES TO SUCCESSFUL FRUIT-GROWING.

Have a lot with a number of fruit trees on it which have apparently been neglected of late years. The pears were very wormy, and mostly fell. One Northern Spy apple tree, which the former owner tells me is planted twenty years, has borne, last two seasons, only a very few apples, which are wormy and small. Tree is very bushy. Plums are very tall and lanky. Please state what to do to make Northern Spy bear profitably, and if it would hurt plum trees if the whole tops were cut back two or three feet; also state best time to do pruning in each case.

Ans.—The most important factors in successful fruit-growing are good cultivation, maintaining soil fertility, regular and careful pruning, and thorough spraying. It is quite evident from your letter that your trees have been neglected with regard to pruning and spraying, and possibly also in the other requisites. These subjects are too wide to discuss here. You will find them dealt with more or less fully in the bulletin on "Apple Culture," to be had from the Department of Agriculture, Toronto. The principles that apply to successful apple culture, apply equally well to pear and plum culture. With regard to heading-back top of plum tree, this might be done to advantage if the trees are growing too tall and it was found desirable to give them a more spreading habit of growth. It is not best, however, to cut back much farther than last year's wood. The best time to do this pruning is early in the spring before growth begins.  
H. L. HUTT.

O. A. C.

## Six Thick, Thrifty Shorthorn Bull Calves JUST HOME FROM SCOTLAND.

They are ready to use, and I am going to sell them. Will change for your old imported bulls if good. Will also sell imported cows and heifers and home-bred bulls; also some good Shropshire and Cotswold ewes, bred to great imported sires.

**ROBERT MILLER, STOUFFVILLE, ONTARIO, CANADA.**

Special offering of **Shorthorns.** Herd bull, Scotch and Scotch-topped **British Flag** (imp.) (50016). Six cows sired by Chief of Stars (imp.) and Palermo (imp.) Some with calves at foot and bred again to British Flag. Also heifers and young bulls sired by British Flag and Hot Scotch (champion at London). Prices and terms reasonable for quick sale. **JOHN M. BEKTON, Glencoe, Ont.** G.T.R., C.P.R. and Wabash.

**MAITLAND BANK SCOTCH SHORTHORNS!** 7 bulls, superior breeding, 11 to 15 months; 5 high-class bull calves 5 to 8 months; and a number of cows and heifers and heifer calves; at half prices formerly asked. **DAVID MILNE, Ethel, Ont.**

## 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. **C. RANKIN & SONS,** Wyebridge P. O., Wyevale Sta.

## TEN IMPORTED SHORTHORN BULLS

Just arrived from quarantine. All young and of good quality, representing leading Scotch families. Have some extra good yearling bulls of our own breeding, mostly sired by Prime Favorite, imp., grand champion 1907. Also a number of excellent females suitable for show purposes. Catalogues on application. Correspondence invited. Visitors welcome.

**W. G. PETTIT & SONS, FREEMAN, ONTARIO.**

Burlington Junction Station, G. T. R. Bell telephone at each farm.

## 1854 Maple Lodge Stock Farm 1907

An exceptionally choice lot of heifers and young bulls for sale now. Best milking strains.

**A. W. Smith, Maple Lodge P.O., Ont.**

## Scotch Shorthorns

Representing the choicest strains. Young stock of both sexes for sale.

**F. W. Ewing, Salem P. O., Elora Stn.**

## 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.

## 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 months old—the last will make a show bull. Flors bred—will be sold easy. **L. S. POWELL,** Wallenstein P. O. and Stn. G. P. R.

## STONEYCROFT STOCK FARM, St. Anne de Bellevue, Quebec.

(Adjoining the new Macdonald College.)

Breeders and Importers of High-class

**Ayrshire Cattle, Clydesdale Horses, Yorkshire Swine and Collie Dogs**

Anything for sale. We offer especially a few select young bulls to clear cheap. Orders booked for spring pigs.

**HAROLD M. MORGAN, Prop.** **E. BJORKELAND, Manager.**  
Bell Phone connection.

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

**D. M. Watt, St. Louis Station, Quebec,** breeder of **HIGH-CLASS AYRSHIRES** Canadian and Scotch-bred. All of deep milking qualities.

## Hillview Herd of Prizewinning AYRSHIRE CATTLE.

All animals bred and carefully selected for use, constitution, long teats and deep-milking qualities. Select animals of both sexes for sale at reasonable prices. For further information and prices write

**A. KENNEDY & SON,** Hillview Stock Farm, Vernon, Ont. Winchester Station, C. P. R.

## AYRSHIRES! SEE STOCK NOTES.

To dairymen:—We offer cheap 3 young bull calves, bred from large, heavy-milking cows with good teats.  
To breeders:—We have several very choice bred young bull calves, combining showing and dairy qualities; 3 young bulls fit for service; spring females, any age, either milking or dry. Orders taken for importing in 1908. Our J. Retson is now in Scotland.

Phone Campbellford. **ALEX. HUME & CO., Menie, Ont.**

**SHANNONBANK Ayrshires and Yorkshires**—Am now offering 2 young bulls 10 months old, and half a dozen heifers from 6 to 12 months of age, bred from producing, show sire and dams. Yorkshires, both sexes, imp. in dam sire and dam, different ages. **W. H. TRAN, Cedar Grove P. O., Locust Hill Sta., C. P. R.**

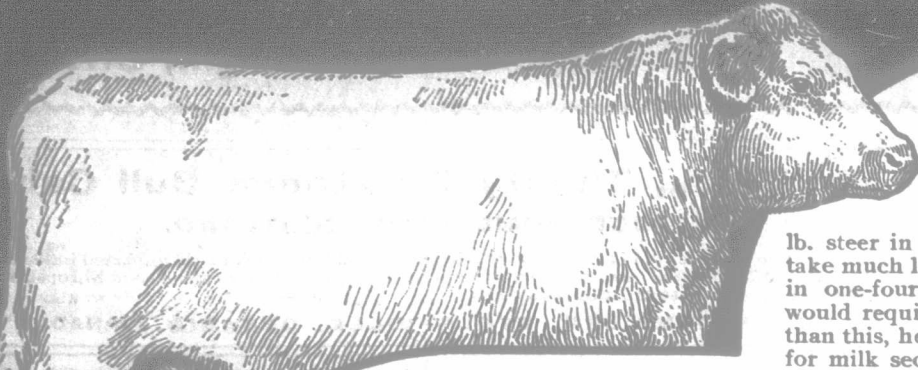
**When Writing Advertisers Please Mention this Paper**

**STOCK FOR SALE**—At Springburn Stock Farm, Williamsburg, Ont. 5 1-year-old Ayrshire bulls. Females any age. 13 Oxford Down ram lambs and a number of young ewes. Prices reasonable.

**H. J. WHITTEKER & SONS, Props.**

**AYRSHIRES FROM A PRIZEWINNING HERD** Have some nice bull and heifer calves for sale at reasonable prices. For particulars, etc., write to **WM. STEWART & SON,** Campbellford Sta. Menie P.O., Ont.

## Do Healthy Animals Need A Tonic?



Probably not, if always permitted at liberty to secure such diet as Nature intended. We must remember, however, that the animal domesticated is subject to unnatural conditions. The feeder is striving to make a 1000 lb. steer in a year's time, when Nature would take much longer. He is making a 200 lb. hog in one-fourth the period unassisted growth would require for the same operation. More than this, he is asking the cow, whose capacity for milk secretion was limited to the brief infancy of the calf, to do violence to Nature's plan

and produce milk for eleven months. Now, of course, extra production means extra food, and extra food, if long continued, means a deranged digestive system. Hence it is easy to see that even a healthy animal continuously overfed needs the assistance of a corrective tonic.

## DR. HESS STOCK FOOD

the prescription of Dr. Hess (M.D., D. V. S.) contains elements which the most advanced medical science recommends for the conditions we are considering—iron for the blood—bitter tonics for digestion and nitrates to expel poisonous matter. It gives appetite for roughage, thus saving more costly foods, and by increasing assimilation saves nutriment that would otherwise enrich the manure heap. Dr. Hess Stock Food makes more milk, hastens the fattening of a steer or hog and is the best known tonic preparation for horses. 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. Free from the 1st to the 10th of each month—Dr. Hess (M.D., D. V. S.) will prescribe for your ailing animals. You can have his 96-page Veterinary Book any time for the asking. Mention this paper.

**DR. HESS & CLARK, Ashland, Ohio, U. S. A.** Instant Louse Killer Kills Lice.

Also Manufacturers of Dr. Hess Poultry Pan-a-cosa and Instant Louse Killer.



**ROCK SALT**  
for horses  
and cattle,  
in ton and  
car lots.

**TORONTO  
SALT  
WORKS,  
TORONTO.**

## Brampton Jerseys!

Select your stock bull or family cow from Canada's most famous and largest Jersey herd.

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

Reinforce Your DAIRY HERD with the Blood of the Winners.

### DON JERSEY HERD

can furnish you with young bulls sired by Golden Lad of Thorncliffe, who was the sire of the herd winning first prize for the progeny of one bull at the Toronto Exhibition, 1907. If you want practically money-making Jerseys secure one of these well-bred bulls. **D. DUNCAN, Don, Ont., Duncan Station, C. N. O.**

**Jerseys & Extra Choice Young Bulls For Sale.** 8 and 9 months old, grandsons of the great Financial King, out of large, heavy-milking dams. Inquiries solicited. **ARTHUR H. TUFTS, Box 111, Tweed, Ont.**

**SPRING BROOK HOLSTEINS AND TAMWORTHS.**—Holsteins of richest breeding and highest production. Tamworths of best British blood and ideal bacon type. Herd headed by prizewinning Imp. Knowle King David Stock of all ages and both sexes for sale. Young sows bred to imp. boar. Write, or come and see: **A. C. HALLMAN, Breslau, Waterloo Co., Ont.**

### Holsteins and Yorkshires.

**R. HONEY, Brickley, Ontario,** offers a very choice lot of young bulls also boars and sows fit to mate.

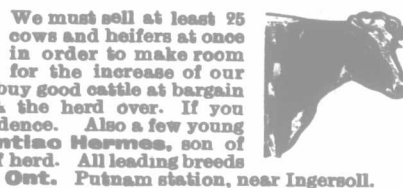
**Holstein Bulls** For sale: One three-year-old; active, sure and perfectly quiet. Also bull calf two months old. Prices right for this class of stock. **JAS. M. BOYD, Grey Gables Stock Farm, Lynden, Ont.**

**MAPLE GROVE HOLSTEINS.**—Herd headed by Sir Abbekerk De Kol 2nd, whose dam is Tidy Abbekerk—butter record 25.49 lbs. He is assisted by Mercena's Sir Posch, son of Mercena 2nd—butter record 25.78 lbs. in 7 days. If you want young stock of such breeding write: **H. BOLLERT, Cassel, Ont.**

A newly-imported Norwegian girl, sent upstairs to tell the master of the house that dinner was waiting, found that gentleman brushing his teeth. "How soon will Mr. — be down?" the mistress asked when Karan returned. "Right away," answered Karan; "he is just sharpening his toothbrush."

## 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 Hermes, 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.



### RECORD OF MERIT HOLSTEINS

Herd 110 strong. Over 40 head now in the Record of Merit Two of the richest-bred bulls in Canada at head of the herd. For sale: 18 bulls, from 9 months to 1 year of age, all out of Record of Merit cows and sired by the stock bulls.

**P. D. HDE, 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 Posch DeBoer, whose dam and sire's dam average in official test 25.87 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 19 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 26.40 pounds butter in seven days with second calf. I have over 60 cows and heifers in calf to him. Come and look my herd over before making your selections elsewhere. **E. H. DELER, Havelton, St. Lawrence 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.**

### Annandale Great Dairy Herd

Holsteins and Ayrshires

**ONLY BULLS, 4 to 10 months old, for sale at present. Bred from great producing ancestors. Bred right. Fed right.**

**GEO. RICE, Tillsonburg, Ont.**

### "THE MAPLES" HOLSTEIN HERD

is made up of Record of Merit cows and heifers with large records, and headed by Lord Wayne Meethilde Calamity. Bull calves from one to five months old for sale

**Walburn Rivers, Folden's, Ont.**

### 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.**

### Grove Hill Holstein Herd

Offers high-class stock at reasonable prices. Only a few youngsters left. Pairs not this G. T. R. and C. O. Railway connections

**HILTON STOCK FARM—Holsteins, Cotswolds and Tamworths—Free ant 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.**

**Homestead Holsteins** Yearling bulls for sale, out of cows with records from 16 to 21 lbs., and sired by Rottie Bros' famous bulls, Cornelius Posch and Count Mercena Posch. Write for prices. **G. & F. Griffin, Box 43, Burgessville, Ont.**

### STEVENS DAIRY FARM HOLSTEINS

I have now for sale two bull calves 6 months old sired by a grand son of Pieterje Hengerveld's Count De Kol; also four choice young cows due to calve in February.

**W. C. STEVENS,**

**PHILLIPSVILLE P. O., DELTA STATION.**

### MAPLE GLEN HOLSTEINS

Herd of 35 head with A. R. O. breeding, backed up by butter 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 26 lbs. for dam and 6. dam. Come and inspect the herd. Any animal will be offered for sale.

**G. A. GILROY, GLEN BUELL, ONT.**

**EVERGREEN FARM HOLSTEINS** are headed by the richly-bred bull, Sir Mercena's Faforit Dam, Faforit 7th, and sire's dam, Mercena 3rd, have records averaging 25 1/2 lbs. butter in 7 days—85% fat. Young bulls for spring service, out of Advanced Registry cows; also young cows and heifers for sale. **F. G. PETTIT, Burgessville, Ont.**

### QUEEN CITY HOLSTEINS.

For sale: seven bulls from twelve months down; good individuals; some have record of merit dams; several of them have full sisters in record of merit.

**R. F. HICKS, Newton Brook P. O.**

## QUESTIONS AND ANSWERS. Miscellaneous.

### CONTENT OF A BUSHEL OF CORN.

What is the authorized cubic content of a bushel of corn in the ear, i. e., a comprehensive rule whereby the contents of a box or crib can be legally reduced to bushels?

T. H.

Ans.—A box 12 x 18 x 16 1/2 inches will hold one bushel of ears of corn, which will shell, in the case of flint varieties, 27 to 28 pounds, and 28 to 30 pounds of the dent varieties. No fixed rule can be made, as the proportion of cob to grain varies considerably.

J. O. DUKE.

### SPACING OF BUSH FRUITS AND PLUM TREES.

1. We are planting out this fall and next spring one acre of gooseberries and currants, both varieties. We have about half an acre already in; some of them three-year-old plants that fruited last year. As we have not too much land here for a fruit place (20 acres), and as we have some eleven acres in, we are getting short of room, and have planted the gooseberries (Am.) and the currants 4 x 4. In bulletin, "Bush Fruits," by Macoun, he advises 6 x 5. We had many of them planted before we got this. We would like to know now, would they do that distance we have already planted, and would it be advisable to go on planting them the same distance, viz., 4 x 4? We are of the opinion that, by keeping them well pruned and cut back, they will do that distance, will give us as much fruit per acre as if planted the wider distance, and be finer; also, being so well cut back, the bushes are more likely to be regular bearers.

2. A neighbor has four acres of plums; they are planted 10 x 12. Now, at six years old, they almost touch. He claims that by such close planting he takes a heavier crop the first few years, and when they begin to touch he prunes severely, keeping them from interlacing, and that by this system he gets more fruit, and finer, with regular bearing. They have certainly carried good crops of nice stock each year for the past three years to the writer's knowledge. Our plum trees, set out last spring, are planted 18 x 18, with the intention of planting, as an experiment, peach trees alternately. As these are such a gamble, am thinking of planting more plums in the plum rows, to make them 9 x 18, with peaches in between the rows. How would this do? If the peaches kill out, will the plums stand 9 x 18? Is our idea correct, re planting bush fruits close together and pruning severely, with a view to getting larger fruit, and still a great crop?

S. B.

Ans.—1. It is not advisable to unduly crowd trees or bushes in a fruit plantation. It is, of course, quite possible, by good cultivation, liberal applications of fertilizers, and careful pruning, to grow fruit much more closely than might be done where such attention is not given. In the case of the currants, you will find, after a time, that 4 x 4 is rather close planting, and I would advise, in your new plantation, that the plants be set 5 x 6, or, at least, 5 x 5 feet apart. You would then have an opportunity to judge for yourself which distance gave the better results. I am of the opinion that the heading back of bearing wood on currants and gooseberries is sometimes overdone. It is better to thin out every year a few branches of the older wood, and allow a few of the new canes to take their place. These, of course, should be well shortened back to induce them to branch low; but the two- and three-year-old wood, which bears the greater part of the crop, will bear good fruit right to near the ends of the branches.

2. With regard to the close planting of plum trees, I may say that the distance you mention (10 x 12) may be all right for a few years, until the trees begin to touch; but you will find that it will then become necessary to cut out the alternate trees, and give those which remain room for full development. I fully approve of the plan of close planting to begin with, in order that we may get as much as possible from the space available; yet, when the time comes to thin out, it requires nerve to cut out the alternate trees which are crowding.

O. A. C.

H. L. HUTT.

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H. L. HUTT.

### DOES YOUR HEAD

Feel As Though It Was Being Hammered?

As Though It Would Crack Open?  
As Though a Million Sparks Were Flying Out of Your Eyes?  
Horrible Sickness of Your Stomach?  
Then You Have Sick Headache!

### BURDOCK BLOOD BITTERS

will afford relief from headaches no matter whether sick, nervous, spasmodic, periodical or bilious. It cures by removing the cause.

Mr. Samuel J. Hibbard, Belleville, Ont., writes: "Last spring I was very poorly, my appetite failed me, I felt weak and nervous, had sick headaches, was tired all the time and not able to work. I saw Burdock Blood Bitters recommended for just such a case as mine and I got two bottles of it, and found it to be an excellent blood medicine. You may use my name as I think that others should know of the wonderful merits of Burdock Blood Bitters."

### HAMPSHIRE SHEEP

"Reserve" for Champion in the Short-wool Classes, Smithfield, London, 1905, 1906 and 1907.

SPL. NID MUTTON  
GOOD WOOL GREAT WEIGHT

This highly valuable English Breed of Sheep is unrivalled in its

Wonderfully Early Maturity.

Hardiness of constitution, adapted to all climates whilst in the quality of mutton and large proportion of lean meat it is unsurpassed, and for crossing purposes with any other breed unequalled. Full information of

**JAMES E. RAWLENCE,**  
Secretary Hampshire Down Sheep Breeders' Association.  
Salisbury, England.

### 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.

### Southdowns

FOR SALE: 9 imported prize-winning rams, and 60 home-bred and imported ewes. COLLIES.—Puppies by champion sire, and out of prize-winning dam.

Robt. McEwen, Byron, Ont.  
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.

**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 shearings in prospect among ewe lambs. **J. & D. J. CAMPBELL, FAIRVIEW FARM, WOODVILLE, ONT.**

### SPRINGBANK OXFORDS

A number of select ram and ewe lambs and shearing rams by an Imp. Hobbs Royal winner. Prices reasonable.

**WM. BARNET,** Living Springs P.O.  
Fergus, G.T.R. and C.P.R.

### SHROPSHIRE

Choice breeding ewes for sale at reasonable prices. White Wyandottes at all times

**W. D. MONKMAN, BONDHEAD, ONT.**

**Leicesters** A few choice ram lambs and ewes of various ages. Also DUROC JERSEY SWINE. **MAC CAMPBELL & SONS, Harwich, Ontario.**

### GOSSIP.

The Mitchell Poultry and Pet-stock Society intend holding their first annual show at the town of Mitchell, on Jan. 14th, 15th and 16th, 1908. As this is their maiden effort, special efforts are being put forth by the committee to make it a pronounced success. A large number of valuable prizes will be offered for competition. Entries close Jan. 10th. Full information may be obtained by writing the secretary, Mr. Wm. Martin, Mitchell P. O.

Mr. Geo. A. Brodie, Bethesda, Ont., the well-known importer of Clydesdale horses, has lately sold to Mr. F. Russell, of Mount Forest, the high-class, quality stallion, Baron Hugo, a son of the great Sir Hugo; dam by Prince Albert of Rosehaw, a son of the £3,000 Prince of Albion; grandam by Macgregor. This horse we have always thought one of the most perfectly-built animals we ever saw, intensely sweet of mould, choke-ful of style and quality, and with breeding absolutely gilt-edged. The farmers of that section are certainly fortunate in having the privilege of using such a horse. Other sales are: To W. G. Faris, Bradford, two fillies; to S. J. Faris, Aurora, three fillies; to R. M. Holby, Manchester, one filly; to a Mr. Boreland, two fillies.

### THE GREAT BERKSHIRE SALE.

This is the last call for H. M. Vanderlip's great Berkshire sale, to take place on January 8th, at his farm at Cainsville, Ont., near Brantford, where, without doubt, the grandest lot of Berkshire hogs will be sold ever offered in Canada. They represent the best blood on show-ring lines in England; the get of such world-famed stock boars as Baron Kitchener, several times champion of England, and the sire of perhaps more winners than any boar ever owned in the home of the breed; Dancesfield Robert, winner of many first prizes; Highmoor Mikado, winner of twenty-two first prizes and seven championships; Oxford Emperor, also winner of many first prizes and championships; and several others of more or less note as prizewinners in England. A number catalogued for sale are sons and daughters of sows sired by the great Baron Kitchener, and themselves sired by the noted champion, Oxford Emperor, all imported in dam, breeding that cannot be improved upon.

Ten of the sows are imported, representing in blood lines such fashionable strains as Dancesfield Duchess, Compton, Highmoor and Highclere, recognized, in England, as the very best blood lines of the breed, the whole making an aggregation of high-class Berkshires, the equal of any herd in the world. Very many of these were imported by Mr. Vanderlip the past summer at prices probably never before paid for Berkshires for importation to Canada; and now Canadian breeders are to get the benefit at their own prices. It is only to be hoped Mr. Vanderlip's enthusiasm and efforts for the benefit of the breed will be appreciated. All told, about one hundred will be sold, so that all may rest assured of getting what they are looking for. On the same day, he will sell his Shorthorn stock bull, Prince of Stars (49804), a roan four-year-old son of Chief of Stars (imp.), by the great Star of Morning, dam Estelle of Sylvan (46623), by Imp. Blue Ribbon, grandam Estelle (imp.), by Challenger. He is a low-down, thick, sappy bull, and has proven a sire of sterling worth. Remember the date, Wednesday, January 8th, at the farm, two miles from Cainsville Station, and five miles from Brantford.

Not long ago a young lady of Macon, Ga., visited the home of her fiance in New Orleans. On her return home an old colored woman, long in the service of the family, and consequently privileged to put the question, asked: "Honey, when is you goin' to git married?" "The engagement not having been announced, the Macon girl smilingly replied: "Indeed, I can't say, auntie. Perhaps I shall never marry." "The old woman's jaw fell. "Ain't dat a pity, now!" she said. "But after all, missy, dey do say dat ole maids is the happiest critters there is, once dey quits strugglin'."

### Try Dorset Ram on your GRADE FLOCK.

They produce the very choicest butcher's lamb. I have several on hand at very reasonable prices. For particulars apply to:

**R. H. HARDING, Mapleview Farm,**  
Telephone connection. **Thorndale, Ont.**

### Sheep Breeders' Associations.

American Shropshire Registry Association, the largest live-stock organization in the world  
**G. Howard Davidson, Pres., Millbrook, N. Y.**  
Address correspondence to **MORTIMER L. V. BRING, Secretary, Lafayette, Indiana.**

### SHROPSHIRE

Can sell about 20 Ram Lambs. Mostly by an Imp. Buttar-bred ram.

**GEO. HINDMARSH, Altona Craig, Ont.**



**Monkland Yorkshires** imported and Canadian-bred. 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, ONTARIO.**  
G. T. R. and C. P. R. Long-distance phones.

**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.**

**DUNROBIN STOCK FARM** Clydesdales, YORKSHIRE, Shorthorns. We are booking orders for breeding stock from our grandly-bred Yorkshire sows. Twenty five sows to farrow in the next few weeks. Unrelated pairs a specialty. Write for prices and particulars. **DONALD GUNN & SON, Beaverton, Ontario.** Inspection invited. G. T. R., C. N. O. B. stations 1 1/2 miles from farm. Customers met on notification.

**MAPLE GROVE YORKSHIRES** Imported and Canadian-bred boars and sows of the best possible breeding, with lots of size and quality. A fine lot of both sexes and all ages. Everything guaranteed as represented. Prices reasonable.  
**H. S. McDIARMID,**  
Fingal P. O., Sheddin Sta.

Advertise in The Farmer's Advocate

**LARGE ENGLISH YORKSHIRES.**—We have a limited number of choice young pigs for sale, bred from our choicest sows and got by the imported boars, Daimeny Joe 13577 and Broomhouse Bean 14514. Pigs from the latter won all the first prizes at the Ottawa Fat Stock Show last March for the best dressed carcasses, and sweetestakes over all breeds or grades. We guarantee satisfaction in all mail orders  
**JOSEPH FRATHERTON & SON, STREETSVILLE, ONT.**

**PINE GROVE BERKSHIRES!** Bred from imp. and Canadian-bred sires and dams, which are of choicest breeding stock, all ages, for sale. Some imp in dam. Guaranteed as represented.  
**W. W. BROWNRIDGE,**  
Milton, C. P. R. Ashgrove P. O. Georgetown G. T. R.

**FAIRVIEW BERKSHIRES** Bred from imported and Canadian-bred sires and dams, and bred on prize-winning lines. My brood sows are large, choice animals. Young stock of both sexes. Some sows bred to imp. boars. **HENRY WASON, SCARBORO P. O.** Street cars pass the door

**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; paid trees and safe delivery guaranteed. Address  
**W. GEORGE PRINCE, Milton, Ont.**

Subscribe for "Farmer's Advocate"

**100 BERKSHIRES 100** Catalogues Ready Dec. 1st. Write for one. Sale under cover.  
**H. M. VANDERLIP,**  
Importer and Breeder, Cainsville, Brant Co., Ont., Can.  
Wednesday, January 8, 1908, at 12 o'clock.

### LARGE ENGLISH YORKSHIRES

Pigs of the most approved type of both sexes, all ages, for sale at all times. We have more imported animals in our herd than all other breeders in Canada combined. We won more first prizes at the large shows this year than all other breeders combined. We won every first but one and all silver medals and Bacon prizes at Toronto and London, and at St. Louis we furnished all the first-prize hogs in the breeding classes except two; also supplied both champion and grand champions. Prices reasonable.

**O. G. FLATT & SON, Millgrove, Ont.**

**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, Hayville, Ont.**

### Large English Berkshires

for sale from imported stock. Sows with pig and pigs for sale All ages. At reasonable prices. Guarantee satisfaction. Boars and sows delivered at Woodstock station, C. P. R. or G. T. R.

**JOSHUA LAWRENCE,**  
Oxford Center, Ont.

**NEWCASTLE TAMWORTHS.** Oldest established herd in Canada. For sale: 19 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.**

**MOUNT PLEASANT HERD OF Tamworths and Holsteins.**—For sale: Pigs of either sexes, from 6 weeks to 7 months; pairs not akin; also bull and heifer calves under 5 months. Those in residence. **BERTRAM HOSKIN, The Gully P. O.**

### 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.

**WILLOWDALE BERKSHIRES** are unsurpassed for quality and breeding. Young stock, all ages, for sale reasonable. Satisfaction guaranteed. Long distance telephone in residence.  
**J. J. WILSON, Importer and Breeder, Milton P. O. and Station, G. T. R. and C. P. R.**

### 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.



**ENGLISH BERKSHIRES**

Boars ready for use. Choice sows to farrow in March and April. Shorthorns of both sexes.

**JOHN RACEY,**  
Lennoxville Que.

**East Bank Herds** Large English Yorkshire and Berkshire Swine, Shorthorn Cattle and Barred Rock Poultry.—Quality, coupled with breeding, in all above breeds. Sows in young sows bred and ready to breed. Boars fit for service. Suckers either bred or sex. Also cows and calves; some prize-winners. Barred Rock cockerels, 75c. and \$1. Satisfaction guaranteed. Write, call or phone.

**IRA L. HOWLETT, KELDON P. O.**  
Shelburne Station, C. P. R.

**Elmfield Yorkshs.** 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. S. MUMF,** Ayr, Ont.

**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.

**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,**  
Morriston P.O.  
Schar St., C.P.R.

**Meadowbrook Yorkshires.** Young stock of both sexes. A number of sows old enough to breed, all sired by Imp. Dalmeny Topman. Everything guaranteed as represented.

**J. H. SNELL,** Hagersville P.O. & Station.

**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 prize-winning lines and true to type. Everything guaranteed as represented. Long distance phone.

**L. E. MORGAN,** Milliken P.O., Co. of York.

**Desiccated Eggs.**  
Publication has been given to a process devised in Melbourne, but carried out in Sydney, for desiccating eggs. For this process, high claims have been made, and J. S. Larke, Canada's alert Commercial Agent in Australasia, transmits an account of it in his regular report to the Department of Trade and Commerce. It has been thus described:

Desiccated eggs are not substitutes for eggs, but newly-laid eggs treated by a process by which only the shell and water contents of the egg are removed, and the whole substance of the egg, yolk and albumen converted into powder. The eggs first pass through a dark room, being carried on a perforated rolling table over a 50-candle-power light. Any eggs not perfectly fresh, or dirty in any way, are at once detected and put on one side. The sound eggs are carried along, and go into a centrifugal separator, revolving at a tremendous rate. Here the eggs are smashed, and the shells separated from the liquid matter, which flows into a small tank, and is then pumped up to another tank, where a preservative is added. Below this tank, in a very hot room, with a temperature of 120 to 130 degrees, there are great cylinders, or drums, slowly revolving at the rate of 1 to 2½ minutes. The liquid-egg substance goes from the tank into troughs below these cylinders, and, as they revolve, become attached to them. By the time a cylinder has completed its revolution, the coating has dried, and a further coating adheres. Ultimately this coating comes off in flaky pieces, which are ground into a powder. This powder will, it is claimed to have been proved, keep for years, and only requires the addition of milk or water, when the powdered eggs will reconstitute, and be ready for use for any purpose, the same as a newly-laid egg. The powder is rich and attractive looking, and is reported, by the government analysts of New South Wales and Victoria, to contain no chemical preservative. No part of the egg, except the water, has been removed.

"In all probability," adds Mr. Larke, "an account of this process will reach Canada. There is no question that if it were perfect, as the newspapers state, it would be of great value in Canada as in Australia. It must, however, be added, that the process is not yet perfected. The inventor has some difficulties still to overcome before it can be a commercial success; one of which is the reduction of the dried egg to powder. It is hoped that this and other obstacles to success will shortly be overcome. If so, the appliance should receive consideration in Canada, where a cheap process of preserving eggs would be most useful."

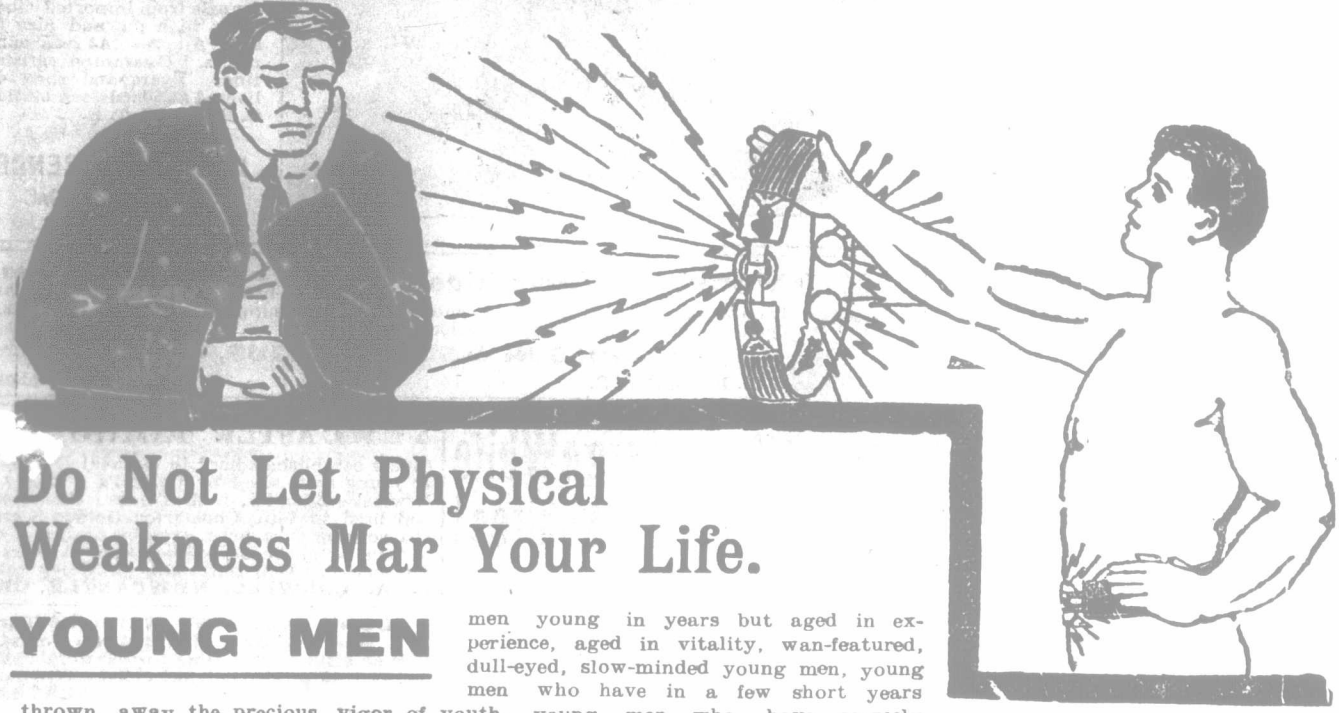
**Split-log Drag Competition.**  
We are in receipt of your handsome Christmas number, containing the results of the split-log-drag competition. We wish to thank Mr. McLean and "The Farmer's Advocate" for awarding us first prize. We gave our piece of road our best efforts, and are glad to think it was considered worthy of first place. However, we wish to call your attention to a slight error in print. You have the initials of the name W. A., which should be W. S. Wishing "The Farmer's Advocate" a Happy and Prosperous New Year.

**W. S. McIlquham,**  
Perth Co., Ont.

Two young ladies on the promenade of a seaside resort had been watching the vessels pass, through a telescope lent them by an "ancient mariner." On handing the glass back, one of them remarked that it was a very good one. "Yes, miss," said the old tar; "that ere telescope was given me by Lord Nelson." "Good gracious! Why Nelson has been dead nearly a hundred years." "Well, I'm blowed," remarked the salty one, quite abashed; "ow the time do fly."

The Father.—What is that book you are reading, my son?  
The Son.—It's a story of a man who invested his money in a Western gold mine and lost every cent of it.  
The Father.—O, that's all right, my boy. I was afraid you'd got a hold of a work of fiction!

**MEN, BE MANLY**



**Do Not Let Physical Weakness Mar Your Life.**

**YOUNG MEN** men young in years but aged in experience, aged in vitality, wan-featured, dull-eyed, slow-minded young men, young men who have in a few short years thrown away the precious vigor of youth, young men who have scarcely stepped upon the pinnacle of manhood and find that they have lost their right to stand upon it, young men who look back a few years and see themselves as they were, blooming into manhood, and now, as they are, at the age when manhood should be complete, the heart strong, the eye bright, they find the force of manhood gone. Middle-aged men and old men, who realize that they have not the force of vitality that should be theirs—men of any age who are lacking in animal vitality—can be made new by Dr. McLaughlin's Electric Belt. It will not fail. It cannot fail, as it infuses into the weakened parts the force of life and strength—the force which is the origin of all vital power, Electricity.

**DR. McLAUGHLIN'S ELECTRIC BELT**

The grandest invention of the age for weak men; the surest and easiest cure for all nervous and chronic diseases. Its wonderful power is directed to the seat of the nervous system, through which its vitalizing strength penetrates into all parts of the body, carrying new life to every function which has been weakened by excesses or dissipation, restoring energy to the brain, and power to the vital organs. No weak man, no sickly or delicate woman will ever regret a fair trial of the Dr. McLaughlin Electric Belt, which is nature's restorer of vitality. It will cure every case of Rheumatism, Nervous Debility, Weak Stomach, Kidney and Liver Troubles, Lamé Back, Sciatica, Varicocele, loss of Vitality, and all Weaknesses in Men and Women.

**READ WHAT THE CURED SAY:**

**Dr. McLaughlin:** Milltown, N. B., Dec. 16th, 1907.  
Dear Sir,—Have been wearing Belt for about two weeks, and now report improvement. I was almost intoxicated first application of the Belt. Slept eight hours first night of it, and eleven the second, and sleep normal since. Have now one and sometimes two bowel movements daily. Appetite is sharper. Much less irritation at bladder. Rheumatism almost gone; feel it only very slightly on exposure to bad weather.

**ALEX. CLENDENNING.**

**Dr. McLaughlin:** Care of McFadden & Malloy, Camp No. 4, Webbwood, Ont., Dec. 13th, 1907.  
Dear Sir,—It is now high time that I should report to you. I must say that I feel like a new man since I began the use of your Belt. My sore back has not troubled me since the first time that I buckled my Belt around my waist, and my appetite is very good.

**HUGH McCULLOCH.**

I can send you one from your own town if you will drop me a card. I don't ask anyone to buy my Belt on speculation. I know that it will cure any case of Rheumatism, Varicocele, Indigestion, Constipation, or any weakness caused by ignoring the laws of nature, Lamé Back, Sciatica, Kidney Disease that has not gone as far as Bright's Disease. I am willing to take all chances. All I ask is for you to give me reasonable security that I will get my pay when you are cured, and I will arrange a Belt with all necessary attachments suitable for your case, and send it to you, and you can

**PAY WHEN CURED.**

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Dear Sir,—Please forward me one of your books, as advertised.

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