

**PAGES
MISSING**

The Farmer's Advocate

"Persevere and Succeed."

and Home Magazine

Established 1866.

Vol. XLIII.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.
LONDON, ONTARIO, JANUARY 9, 1908.

No. 798.

EDITORIAL.

CONSIDERATIONS FOR SHORTHORN BREEDERS.

Elsewhere in this issue is a letter by "Homecroft," containing some timely suggestions for Canadian Shorthorn breeders. It omits to mention, however, the most important and far-reaching question that should engage the attention of the next annual meeting of the Dominion Shorthorn Breeders' Association, viz., the inauguration of a system of official testing of milking Shorthorns, and the publication, in the form of an appendix to the herdbook, of a Record of Performance of officially-tested Shorthorn cows. Some such action is imperative if the breeders of the red, white and roans are to make any considerable progress towards ultimately regaining the ground that they have been losing to the dairy breeds year by year. The Shorthorn cow, as we have her in Canada, is no longer, in any profitable sense, a dual-purpose animal, save only in the case of a few individuals or a few herds where the milking tendency is still sought; and the breed as a whole will never again be entitled to this designation until a radical and systematic effort is made to re-establish in it the milking quality which generations of selection, breeding and feeding according to an all-beef ideal have seriously impaired. The Dominion Shorthorn Breeders' Association, at their last annual meeting, passed an academic resolution, reaffirming the dual-purpose attributes of their breed. But the Canadian public are past the stage of taking stock in bald resolutions of that kind.

* * *

Is the dual-purpose ideal a feasible one? For answer, hark back to the past. Almost every aged or middle-aged reader can recall the Shorthorn cows we used to have, with their broad backs, and deep, level quarters, which fleshed up into excellent beef form when dry, but milked down when fresh, rivalling the dairy breeds in performance at the pail. These old-fashioned dairy matrons were hardy, comparatively free from teat and udder troubles, and good honest workers, yielding liberal returns, while milking and drying off in time to develop a good thrifty calf after their own stamp. Even to-day, the English Shorthorn commonly stands at the head in milking contests at the London, Eng., Dairy Show. There is an immense amount of balderdash written about the great contrast of beef and dairy types, and the alleged incompatibility of beef and dairy tendencies. The "type" is more a matter of condition than of conformation, and such difference as there is in the skeletons of the two types is enormously exaggerated in the show-ring by our custom of exhibiting the dairy breeds in spare flesh and the beef breeds in gross condition. We have seen well-bred Herefords or Shorthorns in thin condition that looked surprisingly like dairy cows, while Holsteins and Ayrshires in high flesh approach surprisingly near the beef-breeder's ideal outline. To be sure, there is some difference in the skeletons of beef and dairy breeds, but not nearly so much as generally imagined, while there is no such inseparable connection between type and tendency as faddists would have us believe. Such relation as does seem to exist is, perhaps, as much a matter of coincidence as of cause and effect. The real essentials of beef and dairy types are not very radically dissimilar, except that the dairyman places stress upon the udder, and the beef breeder on the arch of rib. Between these two characteristics there is nothing more incompatible than the difficulty of combining any other two excellencies in one and the same individual. As for tendency, that

is a matter of breeding, selection and development; and, while it is true that the modern beef breeds have been developed with a view to beefing proclivities only, and their milking function has consequently been lessened, that is no reason whatever on which to base an opinion that the dual function is impracticable. It was not impossible in the old days; it is not in these times, if we strive for it. It has simply declined under a system of all-beef breeding, selection and management. Are we to surrender because the achievement is difficult?

* * *

In the undoing of the Shorthorn (speaking from the average farmer's point of view), the show-ring has played a large part. The dual-purpose standard is not, never has been, and never will be, a favorite with show-ring judges. If the special-purpose dairy cow is difficult to judge according to her intrinsic dairy value, much more difficult is it to judge a class in which the discernment of dairy quality is complicated by regard for beefing propensities. The show-ring is not a good means of developing a dual-purpose breed. Partly for this reason, and partly because the Shorthorn men were ambitious to rival the other beef breeds from a block standpoint, the all-beef ideal began to assert itself in the show-ring, which rapidly established the beef type as the summum bonum of Shorthorn excellence. And the breeders were nothing loath. It relieved them from the necessity of milking their cows. Letting the calves suck their dams for two or three months, and, after that, a number of nurse cows kept for the purpose, did away with the work of milking, was less of a tax upon the cows, permitting them to gain flesh for another show season, and resulted in the production of thriftier, fatter bull and heifer calves, which sold for enhanced prices to unsuspecting buyers; for the Ontario farmer bearing in mind the dual-purpose proclivities of the breed to which he had grown accustomed, continued to purchase these fat young bulls to use on his dairy herd, never guessing that he was buying sires that would in all probability lessen the milking propensity of his next generation of cows. This kind of thing went on for one decade after another, the farmer buying these beef-bred bulls on the strength of the breed's past reputation for milking quality, and paying a fancy price for the young bull, because, as an individual, he was of smooth, thick, low-set type, and heavily fleshed. Meantime, the milking propensity in the farm herds steadily decreased, but the farmer, wedded to his old breed, went back to the breeder again and again, ever hoping for better luck next time. So long as he kept coming back, the breeder was gratified, and assured himself complacently that he had been wise in going in for the all-beef type. But all down-grade paths lead to the bottom. Utility is the ultimate arbiter of every bovine fate.

* * *

At last the Canadian farmer awoke to the fact that the modern Shorthorn was not the Shorthorn of old. It no longer answered his purpose. It failed in the udder end, which was to him of far more commercial importance than the back. He gradually forsook his old love and went in for the dairy breeds, and to-day congratulates himself on having made the change, while the Shorthorn breeder rubs his eyes and wonders where his trade has gone. What is to be done about it? There is some little talk of awarding special prizes for dairy Shorthorns at the fairs, but what is the good of that, when there are few or none to exhibit, especially seeing that the dual-purpose strain can never be satisfactorily judged by show-ring standards? Such talk as we have heard

about offering special prizes for milking Shorthorns is like trying to check a whirlwind with a handful of chaff. There is some talk of importing English dairy Shorthorns, either to supply a special trade or to fuse with our present herds, or to do both; but what is the use of that, unless we provide for the systematic perpetuation of the qualities for which we seek these strains? The arbitrament of the show-yard, combined with the irrational system of selection, breeding and management which we have been following would as surely destroy the dual-purpose quality of the new importations as it did of the original stock. Our ideals are wrong. Our system of determining values by the show-ring standard is wrong. Our herd management is wrong. We must change these, and then, by making provision for the systematic registration in a record of performance of the good-milking Shorthorn cows and their progeny, it will be perfectly feasible, working from the foundation we have, reinforced, perhaps, by a few importations of English Shorthorns, to develop within the breed a strain of registered cattle that will be dual-purpose in fact as well as in name; cows that will combine with the cardinal essentials of beef form the deep-milking traits of their ancestors; cows which will pay their way at the pail, and then, drying off in nine or ten months, throw calves that will feed into profitable steers. The existence of such a strain within the breed, recorded, as it would be, in the regular herdbook, as well as in the appendix, would be a marked advantage to the all-beef breeder who was catering to a foreign or special trade in beef bulls, but wished occasionally to restore, in some degree, the milking qualities of his own cows. It is to the direct and great advantage of every Shorthorn breeder, whether he himself wishes to breed dual-purpose cattle or not, to push this record-of-performance scheme so that we may develop a dual-purpose strain in the only feasible way, viz., by selecting with the eye for beef, and by the authenticated milk and butter-fat records for dairy performance.

* * *

Will there be a field for such a dual-purpose cow in this day and age, when the early-maturing idea holds sway? Most assuredly. It is the one really economical way of producing our supply of domestic beef, and it will pay infinitely better than to depend on the all-beef type, even presuming that we had to sell the steers for half a cent a pound less. How anyone can make a profit on high-priced land keeping a cow twelve months to produce a calf to be raised and fattened for beef, is a question that must be answered by devotees of the special-purpose beef-type idea. If America's future beef supply has to be produced by cows of the special beef breeds, they and their calves being pastured and fed on high-priced land, the price of steaks will soar out of all reason, with serious restriction of consumption as a consequence.

* * *

As for the special-purpose dairy cow, she has her place to fill, and will never be ousted from it. She is capable of squaring her own accounts. There are thousands of farmers, however, who prefer not to keep too large a stock of milk cows, and who would gladly content themselves with a somewhat smaller financial return from a breed which, while giving profitable returns at the pail, would yield a by-product in the form of a calf that could be raised and fattened at a fair profit. This is the dual-purpose ideal. It is perfectly feasible, and earnestly demanded by the rank and file of farmers who, though saying little, are thinking a good deal. And, by the way, it is worth noting that the most popular dairy cow in

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

AGENTS FOR THE FARMER'S ADVOCATE AND HOME JOURNAL,
WINNIPEG, MAN.

LONDON (ENGLAND) OFFICE:
W. W. CHAPMAN, Agent, Mowbray House, Norfolk Street,
London, W. C., England.

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2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland and Scotland, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries 12s.; in advance.
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Canada to-day, even where kept for purely dairy purposes, is not the attenuated dairy type, but the cow of more substantial and symmetrical build and hardier constitution. The medium type is more rational, more in harmony with nature's laws, and therefore adapted to the combination of a higher average degree of excellence.

If Shorthorn breeders were to resist the modern demand, what then? The field for their breed would be narrowed and their trade divided among the dairy breeds, on the one hand, and the remaining beef breeds on the other. The bulwark of the cosmopolitan Shorthorn cow has been her dual-purpose function. Sacrifice that, and her special hold on popularity is gone. If our Canadian Shorthorn breeders are wise in their day and age, they will not sacrifice it. They will take immediate steps for the systematic development of the milking quality of their breed, and the means lies ready at their hand in the Record of Performance, such as has been adopted by the dairy-breed societies, and the privileges of which the Dominion Department of Agriculture stands ready and willing to extend to the Shorthorn Breeders' Association.

COMMON-SENSE MANAGEMENT VS. TUBERCULIN

Every little while some person comes along with an expensive scheme to eradicate bovine tuberculosis wholesale, by stamping out, at one fell swoop, or by one prolonged attack, all the animals affected with tuberculosis and all the tubercle bacilli. Their effort is ill-conceived, first, because impossible, and secondly, because, if nature is headed off in one way of culling the weaklings and rebelling against unnatural treatment, she will only find another, probably still more drastic. The varieties of germ life are legion, and they have a faculty of getting in their work wherever a seed-bed is provided in the form of weak constitutions or vitiated functions. The

rational way to cope with animal tuberculosis is to remove or avoid the causes. Here is a comprehensive recipe "The Farmer's Advocate" would suggest: Avoid breeding from weak-constituted animals, especially those in whose systems disease has made serious inroads. Avoid inbreeding and close line-breeding. Excellence of type fixed in this way is attended with the seeds of ultimate trouble in sterility and disease. Do not overstock any farm with any one kind of animals. The farm with sheep, hogs, cattle, horses and poultry is less liable to serious loss by disease than the farm stocked with any one kind only. Study sanitation in the housing of live stock, both pure-bred and grade. Poultrymen have revolutionized their ideas of housing, and breeders of other stock must do the same. Sunlight, dryness, and plenty of fresh air, without drafts, must be sought in stable-construction, while a certain amount of open-air exercise should be allowed all breeding animals at will, without compelling them to shudder, hump-backed, for hours in a bleak barnyard exposure. The field of rape to which the cattle may go on nice autumn and early-winter days, the old-fashioned straw-stack, or a noonday feed of hay in a protected shed, are ideal means of exercising stock rationally. The great principle in this is to give the animal a pleasurable incentive to exercise, and an open-air feed is the best means we know of to this end.

Our prayer is for more common sense in the breeding, housing, exercising and general management of live stock.

THE AGRICULTURAL ARISTOCRACY.

The best proof of the value of a paper to its readers is the amount of time they spend in reading it, and the results obtained by advertisers who use its columns.

The results secured by our advertisers of all lines, from poultry and live stock to farm implements and general merchandise, are a splendid tribute to the standing of "The Farmer's Advocate" among the better class of Canadian agriculturists. Live-stock advertisers by the dozen have assured us that no other medium in Canada compares with it in results. A prominent Holstein breeder not long since informed us that he got twenty replies from "The Farmer's Advocate" for one from the other medium he had used (a paper with more or less circulation all over Canada). Only this fall, the wife of a leading Ayrshire breeder, who has his announcement running regularly in several papers, assured us that every request for stock they received, that specified any paper at all, invariably referred to "The Farmer's Advocate," none other being even mentioned. In commercial advertising, it is much the same story. The manager of a prominent firm of Canadian incubator manufacturers told us lately that they got more inquiries through "The Farmer's Advocate" than through any other paper in which they advertised, and the percentage of business resulting from the inquiries was decidedly better than in the case of any other medium.

Yet another phase of the matter is illustrated by the experience of an enterprising Ontario manufacturer of miscellaneous farm implements and contrivances. Although this particular man got a larger number of inquiries from a certain other paper of wide circulation in which he was carrying the same space as in ours, he found, when he came to foot up the amount of his sales, that the patrons with whom he got in touch through "The Farmer's Advocate" were far the more liberal purchasers, buying largely of the more expensive lines of machinery, and bought more dollars' worth of goods than the patrons with whom he got in touch through the competing medium. Consequently, "The Farmer's Advocate" proved the more profitable paper for him to use. And this is the general verdict. It is a fact that counts with business men. Incidentally, it is a highly-gratifying tribute to the character of our subscribers as a class. Those who take "The Farmer's Advocate" are in good company, the agricultural aristocracy, so to speak.

OUR MARITIME LETTER.

THE RELATION OF DOGS TO THE FALLING-OFF IN SHEEP-KEEPING.

A vexed question in these Maritime Provinces is certainly that with regard to the ravages caused by dogs to our sheep flocks. Without doubt, there has been a great falling off in sheep down in these sea divisions, as well as all over older Canada. A week or so ago we adverted to the general causes to which this is attributable, causes which are everywhere verified, as well as with us here. Frankly, we were not disposed to take the dog argument seriously at first, but facts are gradually coming to light which must convince any fair-minded man that there is much in it, and that protection should be afforded to the industry, if it is to recover its lost prestige and extend as we would have it, as an element making as much for the agricultural supremacy of our country as any other we know of. The information collected on this Island shows clearly that, within late years especially, the dog menace has been really serious. This very day, two of our best farmers have testified to great loss to their flocks from this source. "Despite all research and the offer of rewards, we are unable to do more than suspect whose curs did the damage," said one of them to us; and this seems to be the general result. It would appear that dogs, naturally gregarious, like their wolf progenitors, assemble for the attack in the night, and so stealthy are they that it is hard to persuade any man that the innocent canine on the hearthstone next morning was the depredator of the night previous in his neighbor's paddocks.

The press of this Eastern country and its public departments have taken a hand in determining how far the people are really desirous of placing the sheep before the dog in the domestic economy. A voting contest—Dog vs. Sheep—has been in progress for some time, and now comes Principal Cumming, of Truro Agricultural College, with a return on the matter which will be a means to the multiplication of the Nova Scotia flocks—a consummation he has very much at heart. Mr. Cumming, as Secretary of Agriculture, sent out forms to all the parts of the Province where sheep are raised, with these two questions to be answered:

1. Give your opinion as to what extent dogs are accountable for the relatively small number of sheep kept?

2. What is your opinion of the "Pearson Bill," brought before the House last session?

It may be stated, in explanation of question No. 2, that the Pearson Bill contemplated the imposing a tax of \$2 on all male dogs and \$3 on females, with power to destroy strays, as a means of ridding the community of unowned or unclaimed dogs; and also, of reducing the number kept by parties with extraordinary predilections for this sort of animal. No doubt the Bill will be re-introduced at the coming session of Parliament.

Of the 124 farmers selected, without regard to any other consideration except the securing of an honest vote, 87 express themselves with regard to the Pearson Bill, 64 in favor of it unconditionally, 6 partially favoring it, and 17 opposing it unreservedly. Some 37 made no reply with regard to the tax, but, of this number, 16 consider dogs are more or less accountable for depreciation in sheep flocks. On the other hand, 21 exempt dogs from all blame. It will thus be seen that by a large majority the dog stands convicted by this extensive poll.

"The above 124 correspondents," writes Secretary Cumming, "were not especially selected to pass an opinion on this question; they are the regular correspondents on crops, and represent all shades of politics. It would seem that one might safely consider their conclusions as representative of the country at large. There will probably always be some opposed to any legislation which, in aiming to protect sheep, does so at the expense of dogs."

In his return, the Secretary gives the names and replies of his correspondents. We can only take half a dozen of them at random:

A. A. Morrison, Richmond Co., C. B.—More than the usual number of sheep were killed by dogs in this district, the loss falling entirely on the sheep owners. We favor (a) the dog tax, (b)

every district to collect its own tax, (c) fund thus raised available to prosecute owners and harborers of bad dogs, and to pay for sheep killed; (d) any dog seen chasing sheep to be shot without notice.

C. J. Cook, Colchester Co.—A great many sheep have been killed by dogs this season. Unless something is done to control dogs quickly, the farmer may as well give up sheep-raising.

W. W. Black, Cumberland Co.—Dogs affect the sheep-raising here to quite an extent.

Hugh Fraser, Hants Co.—I think dogs are to blame for decrease in sheep. The Government should quit playing with this matter and put a double tax on dogs. Then we will have more sheep.

W. F. Newcombe, King's Co.—Dogs have been the cause of farmers giving up sheep-keeping in this district. I favor a tax.

R. J. Messenger, Annapolis Co.—Dogs are accountable for 75 per cent. of the decrease. There is not a farmer here who will not endorse the Act.

It is thus impossible to avoid the conclusion that something should be done, and done speedily, by the governing bodies to safeguard the sheep industry of the country from the attacks of dogs. We can certainly get along better without dogs than without sheep, if there is no alternative. But, properly regulated, we should be able to enjoy the benefits of both animals thoroughly.

A. E. BURKE.

HORSES.

DISTINCTION BETWEEN CLYDESDALES AND SHIRES.

One of the questions that never will down is the hypothetical difference between a Clydesdale and a Shire. It came up last month in the lecture-room of the Ontario Winter Fair, at the conclusion of Mr. John Gardhouse's address on the selection of a stallion and proper type in mating. The inquirer said that he lived near St. Thomas, Ont., to which region there has been a very heavy importation of Shire horses, and he found himself unable to distinguish between the Clydesdales and the Shires. "This is not the first time that question has been brought up in this hall," said Mr. Gardhouse, diplomatically adding, "I might not be able to answer the question, but I will say that there is not very much difference in the best kind of either breed. I have heard it said, and I believe it is correct, that many years ago, probably before my time, there was practically one kind of draft horse in the Old Country, and the difference at the present time is just what little difference they may have made in breeding them in Scotland and in England."

The answer, so far as it goes, is perfectly correct. There are no points possessed by either breed which are disqualifications in the other. In color, both exhibit all variations from black to gray, bay being the commonest shade. In conformation, there are no sharply-defined distinctions. A good point in a Clydesdale is a good point in a Shire, and there are numerous individuals of each breed that might be easily mistaken for the other. On the whole, however, it may be safely claimed that the Shires average somewhat heavier in scale and are more massive in body and heavy in muscling, especially of forearm and gaskin. The Clydesdale breeders, on the other hand, have paid more especial attention to quality of bone, and to quality and set of underpinning. The most approved size and shape of foot, quality of hoof, slope and length of pastern, hard, flat-boned, tendonous legs, and free action, are more commonly met with in the Scotch breed. In a word, the Shire, as a breed, is the better embodiment of draft-horse scale, while, of all heavy breeds, the Clydesdale epitomizes quality.

PREVENTING HORSES FROM PAWING IN THEIR STALLS.

Many horses have the habit of stamping and pawing in their stalls. A good way to correct the habit is to strap to the leg, just above the knee, a short piece of fairly-heavy chain, about three or four links. When pawing begins, the chain swings free, and, after a rap or two from it on the cannon bone, the horse learns to keep his feet on the floor. This simple appliance is said to be an effectual cure for the habit. It possesses, at all events, the merit of simplicity, and may be tested easily.—[Farmer's Advocate & Home Journal, Winnipeg.

SELECTING AND MATING A DRAFT STALLION.

[Address by John Gardhouse, at the Ontario Winter Fair, 1907.]

It is very important always to select a good sire, and, in selecting the sire, it is very important to know the mare. You should know just what kind of an animal you have, and just what kind of a horse would be suitable to mate her with. As a farmer, and speaking largely to farmers, I believe that the farm is the proper place to raise horses in this country, because you must have the land for them to run on and develop their muscle. I will, therefore, confine my remarks more particularly to the heavy class of horses.

We get no one horse that is perfect. There are some defects in every animal, and it is necessary that any defects in the mare be made up in the selection of the sire. Be sure that the sire is exceptionally strong in any weak points the mare may have. It is important to stick to one breed or another; don't cross breeds. When we were out on the Ontario Commission, we ran across animals bred from pretty nearly every breed of horses in the Province of Ontario, probably crosses of Shire, Percheron and Clydesdale, and then we had farmers who thought they could get first-class horses by breeding to light horses, so as to get good steppers on the road; therefore, we would have, say, a mixture of all kinds in one animal, or an animal that was very little good for anything. If you have a Clydesdale mare, breed her to a Clydesdale horse; if you have a Cleveland Bay or a Standard-bred, or a roadster, stick to that type if you want to get the best results. Look over your horse carefully, and get the best possible one you can. There are too many poor ones in the country at present. The Hon. Mr. Monteith said, in his opening remarks, that we had nearly three-quarters of a million horses in the Province; and if you could raise the standard of these horses so that they would be worth from five to ten dollars apiece more, it would be worth while. Have you ever stopped for a moment to think that it costs no more time to look after a good horse than a poor one? It only requires one stall in your stable to keep a good horse. You have to have just as good feed and just as much of it to feed a poor horse as you do to feed a good one, and in some cases a little more. To get the best results out of stock-raising, you first require to have the animals, and then give them the best care and attention. Put a poorly-bred horse in a good stable, and give him the best care, and you will only have a poor horse.

When I am going to select a sire, I first look at the head of the animal. I like to get one with a good broad forehead, bright, intelligent eye, and nicely-set ear. I believe that a horse is a very intelligent animal, and that he can be taught nearly anything, and I have sometimes seen men handling horses which I thought knew more than the men handling them. Therefore, I say, get a horse with a nice, bright, intelligent eye and a broad forehead, and a nicely-set ear, and you are apt to have a horse that has some brains, and he can be taught something. Not only that, but I like a horse that has an open jaw, not meaty and thick in flesh, nice clean-cut throat, to insure good breathing power, and a nicely-set neck, well blended into the shoulder. Get all the flesh on the shoulder that you can. I don't want to see a narrow, thin neck going into a broad-set shoulder. You need not be at all afraid in selecting

a horse that there will be no place for the collar to rest on; you will always find a stopping-place somewhere. If the neck is thick and well planted into the shoulder, you are likely to have a good covering of muscle over the shoulder, and if the horse gets a little thin in condition, he is not so apt to get sore shoulders. Then, he should have a deep chest, with the legs well set back under the body. I don't want a horse with the legs set out on each corner; it will make him appear a broad horse, and he will be broad between the front legs; but if you have a horse with legs set out on each corner, what are you likely to have? A horse with a hollow chest and weak fore-flank, two things we want to avoid in breeding animals at all times, because they denote a weak constitution, and that is a great detriment to breeding stock of any kind. The legs should be well set back under the body, a fair width apart. I am not advocating a narrow horse; we want all the chest width we can get. He should be well muscled down on the inside of the leg, and a fair length from the elbow to the knee; a broad, flat knee; as much of the knee to the outside of the leg as you can reasonably get. The bone should be as large as you can get it with the right quality. It is an important thing in draft horses to get the right quality of bone. Get all the bone you can in draft horses, but don't sacrifice quality in order to get quantity. You will notice the same thing in draft horses that you notice in a man's hands. You will find some men that can do any sort of hard labor, and get their hands as rough and dirty as possible, and they can come in and wash them, and they will hardly have a crack or break, whereas the hands of another man doing the same work will become rough, sore and chafed; and we have the same thing exactly in horses. A horse with hard, flinty bone, covered with a nice skin and with a good quality of hair, will not likely have any trouble in the way of scratches or anything of that kind. A horse should have nice, springy pasterns, of medium length, and hard, flinty foot, of good material. I don't advocate a great big foot; I think a medium-sized foot will wear a little better, and is not quite so apt to get down on the heel or flat-footed. I like a horse with the withers carrying far back. The back should be short and strong, and well muscled; get the ribs springing out well from the backbone, and as long as possible, with a nice arch. It is a difficult matter to get the same spring of rib that we like to find, and that depth of rib, in the same animal, but aim to have as much of both as you can. If you want a man exceptionally strong, you should get a man that is built with strong muscles down his back and over his hips; as a rule, you will find he is a pretty strong man, and you will find the same thing in a horse. I have heard some men say, "I want a good dinner-basket." So we do, but that is not all. You can have enough barrel to carry a good feed, with a good deep fore-rib to provide lots of room for lung power, and, as a rule, you will find a strong horse with a good constitution, and he will travel well and wear well.

Coming back to the hook bones, I remember we used to have them very much more square and flat. I don't advocate that; I want a horse with a nice smooth hook-bone that will cover well with muscle and flesh—the same thing that we look for in Shorthorn cattle. We want the quarters fairly long, well-laid down in the thighs, and well-muscled down in the inside of the leg, and as broad as you can possibly get them on



Off for the Hills.

the outside; strong in the stifle, and with a good broad, clean hock.

Standing by the side of a horse, select an animal with a nicely-set leg, and with the hock broad, clean and hard. Looking at the front of a horse, you want a hock that is broad and clean, that is the kind of a hock that will wear and stand all kinds of heavy work, no matter whether you have to back with heavy loads or draw forward.

Another important thing is to know that you have a horse which is a good walker—a horse that will pick up his legs fair and square, and set them down fair and square, moving every joint; not a horse that will move his limbs with no knee or hock action. If these defects are in the sire, they are very likely to be in the colt. Many of you have noticed horses which, when they are walking away from you, will throw their feet out sideways, and others, when they are being led towards you, will step over. That is something we do not want; I prefer a horse that will pick his feet up straight and set them down straight. I would select a horse every time that stepped over, if I had to have one or the other, because you will find he will climb a hill better than a horse that keeps his legs too far away from his body.

IMPORTED HORSES AND BOYS.

Editor "The Farmer's Advocate":

There has been much discussion about licensing stallions. So far as the licensing is concerned it is all right, but will that make the stock any better, when licenses can be secured for scrub stallions? I know imported registered stallions that produce a lot of what I and others call little scrubs, and, again, I know of horses born and raised in Canada that get a lot of good big, sound, salable horses. I do not see the benefit of a horse being registered if he does not produce good stock. The same as to imported horses. Does it make a horse any better to come across the big pond?

I think the same way about men. I would not give one Canadian boy for half a dozen that come across the water. There were some three hundred who came to this district last spring, and not half a dozen in the whole bunch were worth their board. They are lying around town now looking for someone to take care of them.

SUBSCRIBER.

[Note.—The licensing proposition aims to cut out the inferior pure-bred, as well as the poor grade, and to debar all hereditarily unsound horses from being travelled. Believing that, as a general proposition, the pure-bred horse is more prepotent and a better stock-getter than the grade or mongrel, it is desired to encourage the use of pure-breds and registration in a reliable studbook as the only guarantee of pure breeding. Recognizing, however, that about one-third of the stallions in use in the Province of Ontario are unregistered, and that some of these horses are good stock-getters, it is proposed to license such for a period of three years, or longer, in a special class called Class 2. As for the immigrant youths, while "The Farmer's Advocate" is not in favor of any special effort to fill up our country with immigrants, yet, considering that all of us came originally from one or another European country, it behooves us to be as gracious as possible in passing judgment upon them, even though quite a few do fail to measure up to the standard of young Canadian manhood.—Editor.]

The last figures to hand show that we have 672,781 horses in the Province of Ontario, having a value of seventy-four million dollars. The amount reported as sold is \$7,419,000.

LIVE STOCK.

A CONVENIENT CATTLE-FEEDING RACK.

Editor "The Farmer's Advocate":

I am sending you a sketch of feed rack we have used for ten or twelve years with perfect satisfaction for convenience and durability. It is not very expensive, and will soon save the price of itself in feeding. I have been well pleased with "The Farmer's Advocate" during the past year, and wish you a Happy and Prosperous New Year.

Following are the specifications: A (2 pieces)—2 in. x 10 in. x 16 ft. long—runners. B (6 pieces)—1 in. x 12 in. x 14 ft. long—side and bottom boards for grain troughs. C (6 pieces)—2 in. x 4 in. x 3 ft. 8 in. long—cross pieces. E (2)—Iron ring in end cross pieces to draw by. D (8 pieces)—2 in. x 4 in. x 5 ft. long—upright pieces for frame. F (2 pieces)—2 in. x 4 in. x 14 ft. long—for plates on uprights. G (4 pieces)—1 in. x 12 in. x 3 ft. 8 in. long—for end boards. H (6 pieces)—1 in. x 6 in. x 4 ft. long—upright end boards. I (28 pieces)—1 in. x 6 in. x 5 1/2 ft. long—for upright slats for hay manger.

The two center boards are stood in this shape A to nail the upright slats on and to form a trough.

Kent Co., Ont.

A. E. BROWN.

THE BEEF COMMISSION REPORT.

The commissioners appointed last spring to investigate and report to the Governments of Manitoba and Alberta upon all matters having to do with the purchase and sale, wholesale and retail, of cattle, sheep and hogs, in the two Provinces named, submitted on December 26th to the Lieutenant-Governor-in-Council of Alberta, their findings; also their recommendations for the improvement of the cattle and meat industry in that Province. The present report concerns itself with Alberta only. Later, a separate report will be made to the Manitoban Government.

The commissioners were Alex. Middleton, Coleridge, Alta., and Alex. Campbell, Argyle, Man., with H. A. Craig, Edmonton, secretary. Sittings were held in Alberta at Medicine Hat, Lethbridge, Cardston, MacLeod, High River, Calgary, Gleichen, Innisfail, Red Deer, Wetaskiwin, Lacombe, Erskine, Edmonton, Vegreville and Vermilion; latterly in various centers in Manitoba. At practically every sitting, the whole farming and ranching community complained that the live-stock industry was not on a paying basis; that the ranchers and producers were not receiving sufficient remuneration for their labor and investment. It was to ascertain the cause of this general complaint, and to investigate the charges made by ranchers and small shippers, that the railway companies discriminated against them in freight rates, and that the wholesale buyers refused to handle their stock at any but ruinous prices, that the commission applied itself.

The findings indicate that the railways, particularly the C. P. R., favor in various ways, the large shipper in preference to the small producer forwarding his own stock. The charge that there is a discrimination in freight rates was not proven, but, by refusing or professing to be unable to furnish the small shipper with stock cars, by delaying his shipment in transit, and by giving to a certain large shipping concern unlimited control of the Winnipeg stock-yards, it is claimed the railway company practically compels the small shipper to sell his stock to the larger interests, which have, in a measure, monopolistic control of the whole live-stock industry. As a remedy for this condition of affairs, the commissioners recommend that the action of the railroads be brought to the attention of the Railway Commission, and that, for Alberta, a special live-stock commissioner be appointed, whose chief business would be to attend to the marketing of Alberta cattle.

THE COMBINE AMONG BUYERS.

The charge, repeatedly made by farmers and ranchers, that a combine existed among buyers, was probed to the bottom; at least as close to the bottom as the commissioners, with their limited powers, could reach. While a good deal of circumstantial evidence was given by producers that there was an agreement among cattle buyers in the allotting of districts for operation, that one could not trespass upon the territory of another, and hence that no real competition existed, no information was elicited to substantiate the charge. At least, those charged with implication gave an emphatic denial to the statement. There is a lack of competition in the cattle business of this country, and the reason given by the commissioners for this, aside from the alleged combine among buyers, is that the cattle-shipping business being an extensive one, only men familiar with existing conditions, men with facilities of their own for feeding and handling all along the line, and with agents in the Old Country thoroughly familiar with conditions there, can hope to manage the business with profit. As there are only one or two firms in this country equipped in this way for the business, it is not difficult to understand the lack of competition in the industry.

THE MUTTON TRADE.

With respect to the sheep trade, it might be said that in Alberta, for a number of years, the sheep industry has been on the decline. As a remedy, the commission advise the Government to undertake feeding experiments, in the hope of demonstrating to the farmers that there is profit in this branch quite as good as ranchers formerly

enjoyed, before grain-growing encroached on their ranges and drove the business out of existence. They recommend the introduction of close-wooled breeds, particularly Shropshires and Oxfords. As neither of these are to be found in numbers and quality at present in the West, the farmers are recommended to procure stock in Ontario, where both breeds may be procured now at reasonable prices.

THE PORK INDUSTRY.

In pork production, the most absolute dissatisfaction existed among producers. Prices at one end would be sufficiently high to encourage farmers to go extensively into the industry, but, about the time a large number were ready for market, prices dropped below the cost of production. For the past ten years this condition of affairs has repeated itself several times, until farmers, though anxious to engage in the business, cannot afford the venture on account of the uncertainty of the market. At the same time, hundreds of thousands of pounds of bacon are imported annually from the East and the United States. As a remedy, the commission suggests that the Government establish a packing plant somewhere between Calgary and Edmonton, and, if it be successful, assist in erecting others in various parts of the Province. A summary of the commission's recommendations is here given.

THE COMMISSION'S RECOMMENDATIONS.

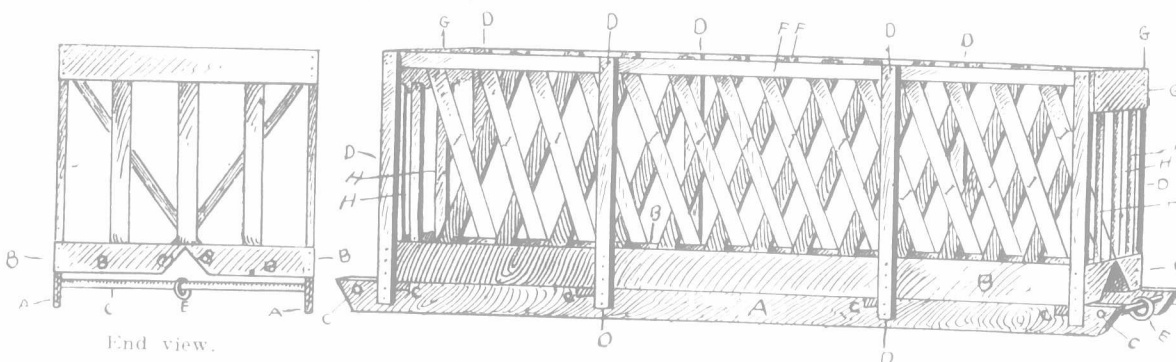
Sheep Industry.—That the Government undertake sheep-feeding experiments in connection with cattle-feeding experiments; that the Government bring in an importation of pure-bred sheep and distribute them in small lots throughout the Province.

Pork Industry.—That the Government assist in the erection of one pork-packing plant, to be located between Calgary and Edmonton, and that they take over the entire management of the concern.

Beef Industry.—That the Government establish three cattle-feeding experiment stations, distributing them properly throughout the Province, and conduct such experiments as will demonstrate the feasibility of the cattle-feeding business; that we do not deem it wise that the Government take any active steps in the matter of a canning plant until the two plants now in the course of erection are in operation and results therefrom determined; that we do not find any combine in restraint of trade in the retail butchers' trade; that legislation be enacted which will protect dumb animals from unnecessary cruelty in the slaughter-house, and that it be made compulsory for all animals to be shot in the head; that the Railway Commission be asked to compel the C. P. R. Company to run a weekly, scheduled stock train, this train to have the right of way after passenger trains; that its rate of speed be at least 20 miles an hour, not including the time cattle are unloaded for feeding; that it be made compulsory for the shipper to unload his cattle once every 42 hours, and, further, that it be made unlawful for any company to carry stock longer than 42 hours without seeing that it is unloaded; that all complaints against the C. P. R. be taken up with the Railway Commission, and, further, that copies of the excerpts from the evidence, which have been forwarded to the C. P. R. offices in Winnipeg, be forwarded to the Railway Commission, and that they be asked to remedy the several grievances which are therein set forth; that the time which cattle may be held in the Old Country before slaughtering be increased to one month.

LIVE-STOCK COMMISSIONER.

That the Government appoint a live-stock commissioner, whose chief business it would be to attend to the marketing of Alberta export cattle, and that he be paid a regular salary by the Government, and that the Government impose a uniform tax on all shippers, according to the number of animals shipped by the said commissioner; that the investigation into the chilled-meat trade has not been sufficient to warrant us making any recommendations, and that we respectfully ask your consideration upon the advisability of further investigation into this matter; that we have not found that there exists or has existed any combination in restraint of or affecting trade in



A Cattle-feeding Rack.

This rack will afford feeding room for 16 or 18 good-sized cattle, and may be drawn around wherever wanted.

cattle, sheep, hogs, or any meats, or any or all of them, in the Province or elsewhere, such as would infringe upon the provisions of the Criminal Code of Canada; that stock-yards are not conducted in a systematic manner, and we would therefore recommend that all stock-yards be managed by the railway companies; that the cattle should be bought and sold without shrink; that the brand-inspection system now in vogue is worthless, and we therefore recommend that all brand inspectors be dispensed with, and that the shipper of stock be asked to furnish the transportation company with an affidavit as to the number of animals in his shipment, together with the sex and brand, and that the owner or his agent furnish an affidavit of a similar nature, unless it can be proven that the shipper had authority from the owner of the animals to do so; that the present hide-inspection law be more rigidly enforced.

CONCLUSION.

We regret to have to state that there were many questions in connection with the meat trade which should have been investigated at points further east and in the whole country. A knowledge of the conditions in Montreal, the difficulty of securing space, the marking and sorting of cattle, a knowledge of conditions on the ocean voyage, treatment of stock in the Old Country, killing and marketing, comparison of our stock with that sent from other countries, and various other problems, are all matters which would have aided us very materially in arriving at a finding.

As it is, we believe we have been obliged to stop at the place where investigation was the most necessary. Had we been able to trace the Alberta steer from the range right to the consumer in the Old Country, and at the same time investigate in thorough detail the chilled-meat system, and familiarize ourselves with various questions, the details of which we are largely ignorant, we would have been able to arrive at a finding sufficiently superior to the one now completed as to much more than justify the additional expenditure.

All of which is respectfully submitted.

(Signed)
ALEX. MIDDLETON, Chairman.
ALEX. M. CAMPBELL, Chairman.

STANDARD RATIONS AND SOME PRACTICABLE RATIONS.

With the composition and feeding peculiarities of feeds known, the preparation of a ration for any given purpose or any particular class of stock is a fairly simple matter.

As previously mentioned, what are known as standard rations for different classes of live stock have been arrived at by chemical analysis, the study of actual rations fed and examination into the requirements of the animal body under question. These standard rations as enunciated give the amount of dry matter necessary per diem, the amount of digestible protein, and the amount of digestible carbohydrates and fat that should be contained therein, and the proportion that should exist between the protein and carbohydrates; or, in other words, the nutritive ratio that the ration should show.

The standards known as the Wolf-Lehmann are the ones most commonly used, and are as follows, in part:

PER DAY AND 1,000 LBS. LIVE WEIGHT OF ANIMAL.

Class.	Dry Matter.	Digestible Carbo-hydrates			Nutritive Ratio.
		Pro-tein.	and Fat.	Total.	
Horse, heavily worked	23.0	2.3	14.3	16.6	1 : 6.2
Steers, preliminary feeding..	27.0	2.5	16.1	18.6	1 : 6.4
Steers, main feeding	26.0	3.0	16.4	19.4	1 : 5.5
Milch cows, full milk	24.0	2.5	13.4	15.9	1 : 5.4
Sheep, maintenance	22.0	1.5	12.0	13.5	1 : 8.0
Swine, fattening	36.0	5.0	27.5	32.5	1 : 5.5
Milch cows in full milk, Wisconsin Standard	24.5	2.2	14.9	17.1	1 : 6.8

Very seldom, indeed, does the ration fed by the average farmer closely approach the standard indicated above. Generally speaking, it falls short in the protein part. Sometimes, also, in the total digestible content. Some feeders, on the other hand, surpass the requirements of the standard. In either case, some part of the food is wasted. An improperly-balanced ration does not permit of all the digestible nutrients therein being advantageously utilized, even if digested. Not infrequently, however, badly-balanced rations, although theoretically wasteful, are really more economical than a properly-balanced ration would be for a given farmer. Most roughage on the farm, with the exception of legume hay, is quite wide in nutritive ratio. To attempt to balance up this roughage by means of expensive protein-rich meals would very often

mean a loss if maintenance rations were being fed. For cows in milk, however, or for fattening stock, the ration must approach the standard fairly closely if satisfactory results are desired.

A few rations as fed on the Experimental Farm here, with the content thereof as to dry matter, protein and carbohydrates, are discussed below.

FOR HORSES.

Beginning with work horses, it may be said, roughly speaking, that the regular ration is about as follows for a 1,600-pound horse at heavy work:—

Hay, mostly timothy	18 lbs.
Oats, whole	12 lbs.
Bran	6 lbs.

This shows 31.62 lbs. dry matter; 2.34 lbs. digestible protein, and 17.90 lbs. digestible carbohydrates and fat, with a nutritive ratio of 1 : 7.6. This falls short of the standard, but has proven very satisfactory here.

Where work has been fairly heavy, but not exhaustingly so, it has been found possible to decrease the oat part of the ration and increase the bran to the extent of feeding 2-3 of the concentrate as bran and 1-3 oats. Where very heavy work was being done, such a heavy bran ration has proven too laxative.

Clover hay, if well made, is superior to timothy, but must be fed more sparingly. The substitution of oat straw for 1-3 the hay will improve the ration in some respects, and usually cheapen it.

A good ration for idle or half-idle horses is as follows (1,600-lb. horse):



Allison.

Pure-bred Shorthorn steer; calved Sept. 2nd, 1905. First and grand champion, Ontario Winter Fair, 1907. Exhibited by John Brown & Sons, Galt, Ont.

Clover Hay	10 lbs.
Oat Straw	15 lbs.
Bran	6 lbs. or less.
Oats	3 lbs. or less.

The addition of a few roots, as carrots or sugar beets, will improve the rations described, and probably render them even more wholesome.

BEEF CATTLE.

If the standard rations fail to make good in one class of stock more than another, it is in the early feeding period for beef cattle. Probably no class of stock so well exemplifies the importance of the "filling-up process" as does the steer on first going into winter quarters. That this be done with a ration coming anywhere near the standard ration requirements does not seem to be at all necessary. To illustrate, one of the best first-month rations for a 1,000-lb. steer that I have ever seen fed was made up as follows:

Corn Ensilage	40 lbs.
Turnips	40 lbs.
Clover Hay.....	5 lbs.

This shows 16.25 lbs. dry matter, 1.0 lb. protein, and 10.26 lbs. carbohydrates and fat, with a nutritive ratio of 1 : 10.8. In not one single respect does this ration come up to the Wolf-Lehmann standard for preliminary steer feeding, yet it has proven quite as effective as and very much cheaper than the standard ration, showing that composition is not the sole important point, and probably not even the most important. As another example of a good starting ration for a 1,000-lb. steer, and one that has proven satisfactory, observe the following:

Turnips	100 lbs.
Oat Straw, ad lib., say.....	15 lbs.

Showing a composition as follows:—22.6 lbs. dry matter, 1.18 lbs. protein, and 13.86 lbs. carbohydrates and fat, with a nutritive ratio of 1 : 11.7.

Both the above rations owe their success to the

possession of a quality, the importance of which cannot be too highly emphasized—SUCCULENCE.

The addition of a suitable meal mixture to either of the above (or to similar rations), in moderate quantities, will insure cheap and rapid fattening.

Suitable meal mixtures might be made up as follows: (a) equal parts bran, oats, barley and peas; (b) bran and gluten meal, equal parts; (c) corn and bran, equal parts; (d) peas, oats and barley, equal parts; (e) bran and corn, equal parts; (f) bran, corn and oil-cake meal, equal parts; or, probably best of all for a six-months feeding period, a progressive ration made up and fed as follows, per day, per 1,000-lb. steer:

First two weeks, no meal; second two weeks, 1½ lbs. bran; third two weeks, 1½ lbs. bran, 1 lb. (d) or (e) or (f); fourth two weeks, 3 lbs. of one of the above described meal mixtures; fifth two weeks, 4 lbs.; sixth two weeks, 5 lbs.; seventh two weeks, 7 lbs.; eighth two weeks, 8 lbs.; ninth two weeks, 8 lbs. mixture, 1 lb. oil-cake meal; tenth two weeks, 9 lbs. mixture, 1 lb. oil-cake meal; eleventh and twelfth two-week periods, 2 to 3 lbs. oil-cake meal and all the meal mixture they will stand.

The roughage will, of course, have to be reduced as the meal increases.

DAIRY COWS.

So far as roughage is concerned, the remarks which apply to steers are equally applicable to dairy cattle. Where cows are in full milk, it is essential, however, that a ration fairly rich in protein be fed; although, generally speaking, the ration made rich in protein by

the use of expensive protein-rich feeds is not economical. It is safe to say that in bran, oats, peas, barley, corn and oil meal, at normal prices, we have the best meal feeds that can be found for milk production. A meal mixture made up of equal parts by weight of bran, oats, peas and barley is, to the writer's certain knowledge, very hard to improve upon. When peas are too expensive, the substitution of oil meal or gluten, or even of bran, will prove satisfactory.

The qualities indispensable in the dairy-cow ration are succulence, bulkiness, palatability, wholesomeness, and, lastly, quality. By quality is meant protein richness.

The roughage feeds suitable are corn, clover, alfalfa, or mixed ensilage, roots, oat and pea hay, clover hay, alfalfa hay, straw in moderate quantities.

A good ration is as follows for 1,000-lb. cow giving 40 lbs. milk:

Corn Ensilage	80 lbs.
Mangels	20 lbs.
Clover Hay	6 lbs.
Meal (say oats, peas, barley and bran)....	9 lbs.

The quantity of milk should serve as a guide to the quantity of meal. One pound meal for each 4 lbs. milk produced is considered to be a safe guide. A lighter meal allowance would, with most cows, be more profitable.

J. H. GRISDALE.

Central Experimental Farm, Ottawa.

LIKES TO KEEP IN TOUCH WITH CANADIAN AGRICULTURE.

Editor "The Farmer's Advocate":

Enclosed find check for renewal of your good paper. We appreciate hearing from you people, as we consider you better feeders, and you are more careful with your stock. Our great fault here is that we undertake too much. I operate twenty-one hundred acres, practically all under cultivation. Last year we raised twenty-five hundred hogs. And, by the way, I would like to know why you people do not raise the Poland-China. There must be some reason for it. Wishing you an increased circulation for the year 1908.

HENRY FUNK.

Missouri, U. S.

[Note.—The swine industry of Canada has been developed with a view to supplying the British market with fancy Wiltshire bacon, for the production of which our packers require a hog of between 160 and 200 lbs. in weight, with a moderately long, smooth side, and but a very moderate proportion of fat in the carcass. For the production of such pork the Yorkshire, Tamworth, Berkshire and Chester White (of the special type developed by Canadian breeders), with the various crosses of these breeds, fill the bill best.—Editor.]

FOREWORD FOR 1908 TO CANADIAN BREEDERS OF SHORTHORNS.

Editor "The Farmer's Advocate":

Let me draw the attention of breeders or intending breeders of Shorthorns to a few matters.

1. The annual meeting is to be held in Toronto, February 14th, after, instead of just before the National Live-stock Association gathering, February 5th and 6th, at Ottawa. At this annual meeting there is much to be done; first and foremost, the adoption of a new constitution, which I hope the members will insist on being as short and simple as possible.

It has been argued, with many cogent reasons, that the annual meeting of this Association should be held in December, at or about the time of the Guelph Winter Show, but the executive held that the date of the annual meeting could not be changed, except after discussion, and by vote of an annual meeting, which it is hoped will come to pass, and the change be incorporated in the new constitution. It will be remembered that the live-stock associations of Manitoba, Saskatchewan and Alberta have already approved the idea. What are the advantages of the suggested change? (a) A larger representation of men from East and West, who would (b) be enabled to profit, in addition, by a visit to the Ontario Fat-stock Show; (c) the larger number present would mean increased business for the Ontario Shorthorn breeder, inasmuch as there would be more visitors to the herds of that Province. True, business might not be done during the fat-stock-show period in December, but the way would be prepared for repeated visits, because, as is well known when making important selections, one or more visits are often needed to decide on a purchase; hence, a Western breeder, instead of hustling home without buying, would have a longer period to stay, because he could afford to, having come on the winter excursion tickets on sale in December, good for ninety days, at a cost of \$40 to \$50, instead of \$60 to \$75.

It is to the advantage of Shorthorn breeders that more men should be shown the possibilities of the breed at fat-stock shows, hence the advisability of the society doing all that lies within its power to stimulate and foster that interest. As it is now, the annual meeting is a dull assembly to the back-benchers, perhaps evincing to them the earmarks of a cut-and-dried, no-discussion policy, an election of a few directors, a prosy address, and a few amens from the old boys, who perhaps may be stung by the youthful impertinence of younger members to state how they had spent money and time in the old days without recompense, forgetting that they were only following out the command, "Cast thy bread upon the waters, etc."

Are there any subjects worthy of consideration and thought by the Shorthorn breeders of Canada to be taken up at the annual meeting? Certainly.

As already mentioned, first, the time of the annual meetings in the future, and it will not be amiss to state that other Canadian breed societies (Hereford, Leicester, etc.) hold their annual meetings at the time suggested for the Dominion Shorthorn and Clydesdale Societies to meet. In the United States, all the big breed societies hold their meetings during the week of the International at Chicago, and, as they have continued to do so for years; it must be considered the best time to do so. Secondly, there are several other questions, such, for instance, as development and extension of markets for Shorthorn breeders, and, by drawing attention to this question, it is not meant for the breeders or breed society to go after those will-o'-the-wisp of markets in Mexico, Japan, Argentina, or on Mars, but the development of home markets. The home market cannot be developed by breeders standing up and solemnly asserting that there is only one breed and that is the Shorthorn, and that, therefore, all farmers should buy Shorthorn bulls; but more effort and brains must be expended on developing a market for the men whose cattle are not in the show class. Heretofore, all the moneys expended have been towards helping along the owners of show stock, either in the breeding or fat classes—a policy all right in itself, but not sufficient for the success of the breed. The great market object of the society should be to help the average breeder dispose of all his bulls at paying prices.

Heretofore, any exertions on behalf of the ordinary breeders of pure-bred bulls have been those put forth by the Provincial live-stock associations, whose sales have only been rendered possible by liberal subventions from the Dominion Department of Agriculture. It is up to the wealthy (comparatively speaking) breed society to do more along these lines; and, while dealing with that question, it might be money well spent for the breed society to have a competent representative at these Provincial sales, with power to purchase and castrate the cull bulls offered, making a bid sufficient to prevent them being taken back home, either to perpetuate mediocrity in a neighborhood, or, if unsold, to disgust with the breed the unsuccessful breeder and would-be ven-

dor. If this were done, the bulls, when recovered, might be sold by the society, thus rendering the outlay small, to feed into useful steers. It only takes the change of one letter to make a bull into a cull, but, if more letters are changed, as the result of a little work with the castrating knife and emasculator, the bull might be made into a steer with a future.

Thirdly, another method might be tried (the suggestion is not original with the writer), and that is the distribution of some of the money allotted for prizes by the association over wider areas, by making grants to selected shows, where there would be competition, in each Province. The doctrine has been laid down in the past that the prize money should go to one show in each Province—a principle correct in its original conception, yet violated in 1907 by the directors of the Shorthorn Association in the case of Manitoba, whether right or wrong, need not be discussed here. Such shows, however, as Edmonton, Saskatoon, Prince Albert, Arcola, Killarney, Neepawa, Medicine Hat, which minister to half a continent full of markets yet barely sampled for bulls, should receive grants of, say, \$50 or \$100 each on the usual conditions, viz., sufficient competition, and the contribution of at least an equal amount to the prize-list by the agricultural society receiving the grant. What have the Shorthorn breeders to say on this suggestion? Discussion is in order. As already stated, the smaller breeders need great encouragement to purchase high-class bulls, which can only be given them by finding them a market, stable and constant, for the male progeny of their herds, which, if accomplished, will mean the improvement of the ordinary horned stock of the country, and gradually increasing demands on the leading herds of the breed. Should it be held that the Association has not sufficient funds to carry out the schemes mentioned, and at the same time maintain the very liberal grants now made to the larger shows and winter fairs, would it not be well to reduce those grants, in order to carry out the larger policy, as outlined here? Other matters of perhaps minor importance will be mentioned in subsequent articles. Meanwhile, let the breeders consider the suggestions and speak their minds through "The Farmer's Advocate," or at the annual meeting of the D. S. H. B. A., at Toronto, or through both.

HOME CROFT.

THE FARM.

THE CURVATURE STRENGTHENS THE WIND-MILL FAN.

Editor "The Farmer's Advocate":

We are glad to reply to the enquiry of Mr. Wm. Jaffrey, of York Co., N.B., in your issue of December 19th, regarding the reason for the curvature of wind-mill fans. The primary reason is that this curvature affords the easiest, cheapest and most satisfactory method of strengthening the fan, for when curved it cannot be bent back at the outer end, unless subjected to an altogether excessive pressure, and to attain the same result with a flat fan would mean either much heavier metal or an elaborate system of bracing, which would require an undesirable addition both to weight and cost.

The question as to whether any power is lost by this arrangement is open to considerable argument. It is obvious that the wind does not strike any fan, flat or curved, at the same angle at the windward edge as it does at the leeward edge. That portion of the fan which is nearer the windward edge deflects the currents of air that strike it, and instead of their travelling in their original direction, they move toward the leeward edge of the fan at an angle corresponding, approximately, with the angle of the face of the fan. This deflection is, of course, resisted by the particles of air that are opposite the leeward edge of the fan, and it is from the resistance of the whole current to this varying deflection that the power that drives the mill is derived. It is, therefore, plain that the particles of air do not strike the fan at the same angle at the leeward edge as they do at the windward edge, and the curving of the fan is a step in the direction of equalizing this angle throughout the whole width of the fan as nearly as it is possible.

As the extent of the deflection, however, varies with the force and velocity of the wind and with the resistance offered by the wheel, it is doubtful if this solution can be considered as anything better than a rough approximation. It is reasonable to assume, however, that there is slightly more efficiency with a curved fan than there would be with a flat one, and the marked advantages in construction of the curved fan have made its adoption practically universal.

MONTEITH-NIXON, Limited.

THE CHRISTMAS NUMBER CLEARLY AN EXTRA.

Allow me to congratulate you on the steady improvement in "The Farmer's Advocate," and especially your Christmas number. This is certainly an extra, as "The Farmer's Advocate" is well worth the subscription price without it.

Huron Co., Ont.

G. A. DEADMAN.

AGITATION FOR BETTER ROADS.

Editor "The Farmer's Advocate":

It may seem a little unseasonable just now to agitate for better roads, but the time will soon be here that arrangements will have to be made to look after the roads for another season, and it is well that this matter should receive early and careful attention from those who have this work in hand. It is with a view that these lines may fall under the notice of such that I have been prompted to pen them. I think we are all agreed that the question of good roads has during the past few years been receiving considerably increased attention, and justly so, and I think the time is here that much more attention should be given to our highways. We cannot expect that all our roads will be at once or in the near future made good stone roads, which are possibly the best or only really good roads at all seasons of the year. There are many more leading roads that should be stoned, and by united effort much could be accomplished along this line during the next ten years. I wish for the present to confine my remarks principally to the improvement of our earth roads, which must of necessity be the roads most of us will have to travel yet for some years.

I am certain from my own use and observation, by the timely and frequent use of that simply-constructed split-log drag, they could be kept in very much better condition for traffic during the greater part of the year, at very little additional expense. I, like many others, had little faith in the new-fangled road leveller which "The Farmer's Advocate" introduced last spring, but the more I used it, and learned the various ways of working it, the more I realized its advantages and possibilities. I am satisfied its use the past season throughout the Province has taught many an object lesson. In many instances its use was not started early enough, nor was it used as frequently as it should have been to have realized the best results. I am expecting another year very many more drags will be in use, and that our earth roads will generally be kept in much better condition.

I trust our municipal councils will take this matter in hand early another year, and make some arrangements whereby our roads will receive proper attention, at least in respect to keeping them dragged at the proper time and as often as required. The results of the use of the drag should be carefully noticed. You not only get the benefit of its use during the summer by keeping a smooth, even surface for traffic, but you are, by every round you make, grading the road, and at the same time keeping the traffic in the center of the road, where it should be, thus making the road firm and compact. The custom usually adopted is to carry the earth in considerable quantities every few years to the center of the road, and leaving it there, usually in such a condition that traffic manages to avoid it as long as possible by finding a better road nearer the gutter. When the rains set in and you are forced to the center of the road, there you are, wallowing in the mud and mire, while the road worked with the drag is quite hard and firm.

I do not wish to be understood that I am condemning the road machines. They are a necessity; they are our great road builders. I do, however, believe that after a road is once fairly graded, then it can be kept in good condition with very little expense by a judicious use of the drag.

In my opinion, one of the most important things to consider in roadmaking, along with grading, and one that is sadly neglected, is tile drainage on one or both sides of the road. I may in a future article take up the importance of this matter in connection with the building of a model stone road, and it is just as important that our earth roads should be tiled.

By using the drag I became interested in roads; studied the building of roads; noticed how the best roads were built; then went to work and put the knowledge gained into practice, by building a model private stone road. When you consider the saving of time and the wear and tear and worry on man and beast (and I might add wagon), and the pleasure in driving over a really good road, who can any longer refuse to agitate for better roads?

Lincoln Co., Ont.

W. B. RITTENHOUSE.

HOW TO GET QUICK RETURNS FROM THE MANURE.

Editor "The Farmer's Advocate":

Enclosed find \$1.50, to pay my renewal for 1908. I must say that I appreciate your efforts to make "The Farmer's Advocate" a most helpful and practical journal. In the feeding season we generally make about 400 loads of manure. Now, the problem with me is how to get the quickest and best returns from this manure. Very generally our winters here give us rather more snow than the manure-spreader takes kindly to, and the spreading of sleighs has a great many disadvantages.

In 1907 about 250 loads was left in yard (which is free from leaching) all summer, and was applied to stubble ground after gang plowing. But as I stated, I want to get quick returns. I should like to know if it would be profitable in spring to delay seeding, say seven or eight days, to get manure out before land is worked other than harrowed.

Perhaps some of your readers who have conditions such as we have could solve the problem.

Simcoe Co., Ont.

T. G. ALLAN.

SWEET-CORN CULTURE.

Editor "The Farmer's Advocate":

Of late years, the growing of sweet corn for canning purposes has grown to immense proportions in Ontario, and hundreds of tons are now grown annually to supply the numerous factories engaged in this business, and perhaps a few words on the most profitable varieties, culture and seed selection will not be amiss.

To begin with, I will take up the question of varieties first. The standard ones grown for canning purposes are Stowell's Evergreen, Early Crosby, and Old Colony. There has also been a variety introduced of late years called the Early Evergreen, which is claimed to be about two weeks earlier than Stowell's Evergreen. We have had experience with all of these varieties, and have proven to our own satisfaction that the Old Colony is the best variety for the farmer in any part of the corn-growing districts, except, perhaps, the Niagara Peninsula. It is a corn which, planted at the same time as the Early Crosby, will produce ears twice as large, and as many of them. It is as good a cropper as the Evergreen, and three weeks earlier. This I know by planting the two varieties at the same time.

As to culture, we prefer a clover sod, fall-plowed; in fact, we like to have the land fall-plowed, anyway. If it is not possible to put your corn on a clover sod, why, almost any field will do, if it receives a good coating of manure. It will be an advantage to apply it in the winter, as that will give the spring rains a chance to wash the best of the manure into the soil, and will leave it in a shape that will make it possible to incorporate it with the soil with a cultivator, thus saving the labor of plowing a second time. The more you work the soil before you plant, the less you will have to do afterwards, and the finer the seed-bed, the better the corn will come up, and this is important. As soon as the weather becomes warm, after May 15th, in an ordinary season, the corn should be planted. We plant in hills four feet apart each way, but any distance you choose will do, if it is not under three feet; if it is, the corn is not apt to do as well. This last year some have planted their corn in drills, as for ensilage, and say that, considering the increase in stalks, and their being finer, thus being eaten up cleaner by cattle, they think it pays better than hill-planting. It will also save time, but requires a good deal more seed. Now, as to hand-planters, we use a rotary disk planter, and consider it the best, and I think we have tried them all. As soon as the corn is high enough, start the 2-horse cultivator. Have one or two men with hoes go along to remove all clods, and plant in missed hills. Keep the cultivator going, and one hoeing will be sufficient, unless your ground is very weedy.

Now I will take up the seed-selection side of the question. In the first place, let me say that, whatever seed you use, always test its germinating qualities before you plant; it will save much sorrow, and perhaps a crop. We, of late years, have learned to save our own seed, and we have proved it superior to the seed supplied by the factories at a good big price. Until a few years ago, it was not thought that sweet-corn seed could be saved successfully in a district as far North as Prince Edward County; we know now that it can be, and is. Our plan of saving may not be the best, but it suits us. We pick out the best piece in the field, go through it and remove all the ears that are worth anything for canning and do not come up to our standard for seed selection. We make it a point to select as much as possible from stalks having two ears on a stalk. This corn we leave on the stalks as long as there is no danger of it getting touched with frost. As soon as we think it unwise to leave it out longer, we pick it, and, if unable to husk it at once, we spread it out on the barn floor very thinly. As soon as possible, we husk it, leaving a few husks on, tie two ears together and hang them over a pole, taking care that the ears do not touch each other. This is important. This is some trouble, but once you have saved your seed, you will find it more than pays.

Prince Edward Co., Ont. A. S. W.

SILO TIMBER AND PAINTING.

Editor "The Farmer's Advocate":

Which is the better wood for a stave silo, pine or cypress? Would it be well to oil the dressed inside surface of such a silo, or would it be better still to paint the outside as well? Would raw linseed oil be the best? Which is the best way to put a roof on a stave silo, with a view to having the roof keep the planks in true circle?

Wellington Co., Ont. A. E. M.

[Note.—In order that readers who have had experience on any or all of these points may share in the more blessed privilege of giving out useful information, we invite correspondence in reply to the foregoing enquiries.—Editor.]

A SILO THE BEST MORTGAGE-LIFTER.

Editor "The Farmer's Advocate":

I have used a silo for the last fourteen years, and have had them constructed in different ways. The first one was built in the barn, and was 12 x 16 ft. x 24 ft. high, double-boarded, with tar paper between, but it was not very satisfactory. Then I had it lathed and plastered, after which it worked better, but some silage always spoiled around the outside. I built another outside, with cement, ten feet high, and staves sixteen feet high on top of the cement. I found then that the ensilage kept better in the cement part than it did in the wooden part. Then I took the wooden part away and built twenty feet of cement on top of the old one. It is now thirty feet high, and 17½ feet diameter inside. The wall is ten inches thick for the bottom ten feet, and then gradually tapers to six inches at the top. I mixed it one of cement to eight of gravel, and built it with steel rings made for the purpose; then I plastered it on the inside. The silage keeps good, right to the outside.

It will take from ten to twelve cords of gravel and about 35 bbls. of cement, which cost \$78, and five men six days to build. The foreman, \$2.50 per day, and the rest \$1.50 per day, would mean fifty-one dollars, and ten dollars for the use of the rings, and eight dollars for plastering, which would be \$132.00, besides boarding the men and drawing the gravel. There is no roof on it. I find it keeps better without a roof.

For corn, I plant Early Leaming three parts, and one part Southern Sweet. I find it makes a good mixture, and makes excellent feed for milch cows or fat cattle. When I fill the silo I like to cut the corn about two days before filling, as it handles a good deal easier and makes fully as good ensilage. We fill with an ensilage cutter, driven by a threshing engine, and use low trucks for hauling the corn. It takes four teams if the corn is near to the silo. I keep three men in the field to help fill and one to help unload, with two in the silo, one feeding and the engineer, which makes twelve in all. It takes from a day and a quarter to a day and a half to fill it. A silo of that size will hold about 125 to 130 tons. I consider the building of a silo is the best investment a farmer can make, and if he adds a herd of good dairy cows he has the best mortgage-lifter he can find.

Elgin Co., Ont.

PRODUCER AND CONSUMER.

The producer cannot get along very well without the consumer; consequently, he must expect that the consumer will have something to say as to what quality of goods shall be offered to him. Anyone producing dairy products, or other foods, no doubt has a right to produce unclean or unwholesome food on his own premises, so long as he consumes it himself; but when it is offered for sale, it must conform, to a reasonable extent, to the laws of pure-food production.

PATRON'S RESPONSIBILITY AS TO FLAVOR.

1. I wish to speak more particularly of the necessity of co-operation between the patron—the man who produces the milk or cream—and the manufacturer or maker, who converts this raw material into marketable cheese or butter.

2. The producer is responsible, to a great extent, for the result of the finished product. Nearly one-half of the quality depends upon the flavor or taste or smell, and this flavor is largely dependent on the care and handling of the milk or cream before it reaches the factory.

3. The producer does not understand the technical principles underlying the manufacturing of cheese, and therefore does not realize the effects of undesirable flavors in milk which is to be made into dairy products. So many patrons seem to think that when the milk is received at the factory their responsibility ends. They have never made into cheese tainted, gassy, or over-ripe milk, and cannot realize the enormous loss arising from this source.

UNIFORMITY.

The co-operative cheese or butter factory should show its greatest benefits in the uniformity of the product. The butter or cheese made by a hundred different milk producers would be of a hundred different kinds, put up in as many different styles, and worth as many different prices. It would have a hundred different flavors, textures and colors. But if we take these hundred different lots of cream, mix them, and allow them to be made up by one experienced maker, then the hundred different flavors, textures and colors

will be blended into one; one style of package is used. The price immediately goes up, because the product is uniform, and the one quality can be obtained in larger quantities.

But we must not forget that, in mixing these different lots of milk or cream, while the uniformity will be secured all right, the real quality of the cheese or butter must depend on the individual condition of the different lots of milk or cream. One overripe or tainted lot will, when mixed with the others, bring the standard of the whole production down to a level with this poor lot.

THE MAKER.

Again, no man has a right to be connected in this chain of co-operation as a cheese or butter maker unless he thoroughly understands his business,

and is willing to make an honest effort, to fulfil his part of the contract, in making the most and best possible out of the raw material placed in his hands. If he is not clean and tidy, and his factory kept in a proper condition, he has no right to expect the benefits arising from co-operative dairying.

THE FACTORY MUST BE WELL PATRONIZED.

Again, the factory should be well patronized by the patrons; for, the greater the product, the less expense for operating, and the greater the net returns to the farmers. The more concentrated the milk or cream routes, the less the cost of gathering cream or milk.

SMALL FACTORIES.

To my mind, one of the greatest mistakes of our dairy system to-day is the small factory. Small factories must necessarily mean cheapness all along the line in order to profitably run such a business—cheap maker, cheap building, cheap equipment. This must have a certain influence on the producers, and lead to a lack of stability and effort on the part of those who produce the milk, and on the man who makes it up.

We almost invariably find that in the larger factories the cheese are of a better and more uniform quality; that the business is on a sound basis, and such improvements as are required are readily secured. The patrons may argue that,



Evergreen March 3896.

Holstein cow; born Aug. 24th, 1902. Champion over all breeds competing in two days' dairy test at Ontario Winter Fair, Guelph, Dec., 1907. Owned by G. W. Clemons, St. George, Ont.

THE DAIRY.

THE CO-OPERATIVE CHAIN IN DAIRYING.

From an address by Frank Hearn, Chief Dairy Instructor in Western Ontario, at the Ontario Winter Fair, December, 1907.

CO-OPERATION.

We might ask, What is co-operation? And then, What is co-operation in the dairy business? Co-operation is the joining together for mutual benefits, and consists of a union of effort, the fruit of which shall be divided among the participants. Co-operation in dairying, then, should consist of the united efforts of all engaged directly or indirectly in the business to make such a business profitable, and, in order to do so, each individual must be willing to assume his share of responsibility. It is by co-operation that Denmark has built up her great dairy interest.

Co-operation Pays.—How much it will pay depends upon a number of influences, and the faithfulness of those who co-operate. As soon as people begin to see that the more thoroughly each individual is educated in the great principles of united effort, the larger will be their profits.

the greater the competition among the factories, the larger the returns. This I do not think will bear out in the majority of cases. The expense of keeping up factories should, if properly done, be as great for the small factory as for the large one; and the cost of making, if properly done, must be greater, while the product is very often of such an inferior quality that much less price must be taken, or else the price of all the cheese made everywhere must be lowered, in order to make up for the losses sustained by the buyers of inferior cheese. Patrons will say that the expense of drawing milk long distances is too great. This, I know, is one of the problems of the business at the present time; but if a better quality of cows were kept, and more attention paid to feeding and producing, it would not be necessary to cover a very large territory in order to get a good load of milk, and even if the patrons wished to draw the milk themselves, a larger factory could be maintained where a small one is now operating. We must remember that, in manufacturing cheese, it is only after a certain amount has been made that any profit can be assured to either the cheesemakers or, if a joint-stock company, the shareholders, and that the patrons themselves cannot get as good returns as they would if factories were run on a larger scale.

PRICE OF CHEESE AT SMALL FACTORIES.

Many, of course, will say that the cheese from the small factory sells for as much as from a large factory. This may be true to a certain extent, but I believe that a lot of poor cheese is made in some of the small factories; and, this being true, it stands to reason that the price of large lots of fine cheese are affected by throwing quantities of inferior cheese on the market. The report of the official referee at Montreal this year bears out this statement to some extent. He says that 23 per cent. of the lots of cheese seen by him, under finest, contained less than 30 boxes each. Forty-three per cent. of the lots contained less than 40 boxes; 83 per cent. of the lots contained less than 70 boxes; 93 per cent. of the lots contained less than 100 boxes, and only 6.5 per cent. lots of cheese seen by him were lots of over 100 boxes that were classed under finest. Now, these lots of cheese must represent shipments, of not less than a week's cheese, and it seems to me that somebody must have had to lose the cuts for these cheese. If the maker lost it, he can't stay in the business; if the patrons lost it, does it pay to have small factories? No doubt numbers of other lots of cheese were passed by the buyers, that, although not perfect, still were accepted. It certainly seems that, so far as the small factory is concerned, it will pay milk producers to co-operate in cutting out some of the small factories for the improvement of the trade.

RUSTY CANS.

Any patron of a cheese factory who persists in storing or drawing milk in a rusty can, or using any dairy utensils that are rusty, or in such a condition that they are impossible to keep clean, is not co-operating in any true sense with his neighboring patrons or with his cheesemaker. Rusty cans are the source of all kinds of trouble in the dairy business. The cracks and crevices are impossible to reach with any ordinary methods of cleaning, with the result that they are a prolific source of bacterial contamination of the milk. For the small cost of new cans, it will not pay for a few patrons to injure the product of the others in this matter of rusty cans. But it will pay to have entire co-operation on the part of the patrons along this line, and, when requested by either the cheesemaker or the instructor to get new cans, to do so, for they are undoubtedly in the best position to know when cans are unfit for use. Throughout Western Ontario, 1,688 new cans were bought in 1907 to replace rusty ones.

COOLING MILK.

It is or should be well known, that all milk to be made into dairy products should be produced in the most cleanly way, strained, cooled at once after milking, into clean cans—this to be done for the benefit of all concerned, that the finest dairy products may be made, and consequently the highest price obtained. If there are any patrons who fail to make this necessary effort, they are not co-operating with their brother patrons who do these things, and therefore they have no right to expect an equal share of the profits. It is not fair or just that any patron of a factory should make no effort to produce the very best milk or cream, expecting his neighbors will carry him along with their milk, which has been properly handled.

Now, such being the case, do we find every patron of a factory so conducting his business that he is contributing his share towards the common welfare of the enterprise? If 75 patrons out of a hundred produce sweet, clean milk, and the other 25 do not, these 25 are certainly not doing their duty towards the other 75, and are not co-operating in any true sense.

(To be concluded.)

A CREAMERY METHOD FOR THE DETERMINATION OF WATER IN BUTTER.

Of methods of determining moisture in dairy products there are just now quite a few. The latest is from the very aggressive Wisconsin Station. The author (Bulletin 154, Wisconsin Agr. Exp. Station) refers to the outset to the importance of knowing how much water the butter of each churning may contain. It is important, in order that the buttermaker shall not exceed the legal limit of 16 per cent. water in butter, and also in order not to make butter which is too dry, as this has a tendency to diminish the churn yield.

Butter is a mechanical mixture of butter-fat, water, salt and curd, in the proportion of about 18½ per cent. water, 82½ per cent. butter-fat, 3 per cent. salt, and one per cent. curd. A buttermaker cannot reasonably expect to make butter of exactly the same composition each time he churns, even though the cream is of the same richness, the temperature and time of churning the same, the temperature of the wash water uniform, and the butter is given the same amount of working each time. The finished product will differ somewhat in the amounts of these various constituents it contains from time to time.

The author points out the difficulty of getting a fair sample of butter, and says when the butter is fresh it has the water most evenly distributed. Salt "draws" the moisture into larger drops of brine, which may be pressed out when the butter is cut or sampled. The extent to which brine leaks from the butter depends, to some extent, on the amount of both salt and water present therein, and the hardness of the butter-fat.

There is no appreciable difference in the per cent. of water in the top, middle and bottom portions of the 60-pound tubs of butter. Ten grains of butter taken directly from a trier gave, approximately, the same results as fifty grains taken from the same tub when the butter contained no great amount of loose brine.

The moisture is expelled from the sample of 10 grains of butter in about one-half hour, by heating the sample to 240° to 270° F. in a high-pressure steam oven. With a steam pressure of 60 lbs. a temperature of 280° F. was obtained. By employing the boiler pressure ordinarily used in a creamery, a temperature of 240° to 280° F. may easily be obtained.

Special precautions:

1. The weighing scale must be easily sensitive to .05 grains if 50 grains of butter are tested; and to .01 grains if 10 grains are taken.
2. The scales must be properly adjusted, kept in a clean, dry place, and protected from drafts of air while in use.
3. The drying pans should be from 4 to 5 inches in diameter when 50 grains of butter are tested.
4. The clean, empty drying pans should be heated just before weighing, in order to completely dry them.
5. The butter should be heated until it reaches a constant weight; a second heating and weighing being always recommended.
6. The hot pans should be placed on a clean piece of tin or a porcelain plate when taken from the oven to cool.
7. Never weigh the pans while hot, nor after standing an hour or more outside the oven, as they take up moisture from the air.

The conclusion reached is: The results of duplicate analyses by the method here described agree as closely as do those obtained by the usual official chemical method.

Under factors that influence the water content of butter, the author mentions that dry butter can be obtained by keeping cream and butter cold, by churning to small granules, by washing the butter very little, and by giving it plenty of time to drain.

Butter of a high moisture content can be obtained by churning longer at a high temperature until the granules are large, and by churning the butter in the wash water.

Water sticks to soft butter, but it is easily pressed out of cold, hard butter.

We should like to warn Canadian buttermakers of the danger of exceeding the legal limit of 16 per cent. water, by adopting hydraulic methods of making butter. H. H. D.

THE PRACTICAL USE OF STARTERS.

Bulletin 246, Michigan Station, deals with the preparation, propagation and application of "starters" for butter and cheese making. We much prefer the term "culture" to "starter." A "starter" is that which causes something to start. The "starter" may be good, bad or indifferent, but it would still be a "starter." In dairy work, we need, in this connection, something to improve the product, hence we prefer to use the word "culture," which comes from a word meaning to "till." The Anglo-Saxon word "till" means to make fit or good, which is much nearer the idea we wish to express.

The author defines starters as belonging to two general classes, natural and commercial. Natural are those originating at home, usually by selecting and setting aside a quantity of carefully-drawn milk until loppered. Buttermilk, whole milk, sour cream, and whey, are sometimes used in this capacity. A starter produced in this way may contain several species of micro-organisms (small plants). Thus, it is not difficult to understand why a starter produced by natural souring may develop taint or become gassy.

The commercial starter is generally developed from a single micro-organism, and is built up as a pure culture or a known mixed culture. Though the different brands differ more or less as to activity, as well as flavor imparted to butter or cheese, yet, from the very fact that these are pure cultures, uniform growth and acid production may be expected. This being the case, a commercial starter is kept free from contaminations, and, developed under the same conditions, may be used for an indefinite time and produce an unvarying product. It follows that a commercial starter will give more constant results than the natural.

In order to destroy the micro-organisms present in the milk, etc., to be cultured, it must be sterilized or pasteurized. The former destroys all the bacteria, while the latter kills most of them. A temperature of 185 degrees F., followed by rapid cooling, is recommended for pasteurization, which kills 95 to 99 per cent. of the bacteria present. A pure culture added to this pasteurized milk, and allowed to sour, gives a pure culture of desirable bacteria.

The authors recommend a steam sterilizer in the creamery, for sterilizing bottles, milk, etc., and state that such a sterilizer may be made from a common copper wash boiler, or of a box constructed of wood and galvanized iron. The illustration given in the bulletin shows a vessel with a perforated and also a false bottom, under which latter is a steam pipe for heating. There is also a siphon overflow for water. The glass bottles for the culture rest on the false bottom. After sterilizing the bottles, they are filled about two-thirds full of milk, and the mouths filled with a dry, firm cotton plug. The contents are then heated to 210 degrees F. for 30 to 40 minutes, for four consecutive days, which will sterilize small quantities of milk. The cotton plug should not be removed after the first heating, except to introduce the pure culture. The pure culture should be put into the sterile milk very carefully, so as to avoid contamination. For transferring the starter, a vial with wire handle, or a small amount of cotton wound firmly about a wire, is needed. In any case, it must be something easily sterilized.

The bulletin concludes: "The method of carrying mother starters in glass jars has been given a thorough trial in practical work in the College creamery, in comparison with the method commonly employed, which is to inoculate a starter each day from the one prepared the preceding day. The new method has the following advantages:

"The starter can be kept pure for a much longer period, thus saving one-half or more of the cost of pure cultures.

"The milk is always ready for inoculation, and the mother starter can be transferred each day, when in the best condition, and kept vigorous.

"In case a starter is not needed every day, the mother starter can be carried along conveniently without the trouble of sterilizing milk.

"We find it no great task to sterilize the bottles of milk once or twice a month, and the little extra labor thus occasioned is more than offset by the convenience and sureness of the new method." H. H. D.

POULTRY.

GUESSING CONTESTS NOT PROFITABLE.

The use of trap-nests for some years materially strengthens my belief that they are not used nearly as much as they should be. Every farmer should have a line of trap-nests installed, which could be used as ordinary ones during the seasons when they are not required as traps. They would be useful in the hatching season, by all means. But more than that, they have a place. Often a hen will lay an abnormal egg—off in color, thin shelled, unsightly shape, or, perhaps, too small for marketing. It may be a freak of nature, or possibly the condition of the hen. If a person could bring into operation traps for a couple of days, such hens could readily be detected and the hatchet used.

The most profitable use of trap-nests, however, is when they are operated for the whole year. Of course, only a limited number of persons can undertake this work. It takes time and faithful, untiring patience. By those using them steadily, some wonderful revelations are found. Some hens make a great showing for a couple of months, and then give up the race; whereas they will have some mate in the pen, not conspicuous for looks, but being of sound constitution, and steadily working away for the full twelve months, makes them all take a back seat in the year's record, and turns out to be a champion. Yes, many the hen that would be first selected for the breeding pen (so far as shape and markings are concerned) is found to be nothing more than a boarder or robber, and not paying for her housing, let alone for the food she consumes. Poultry-keepers should make note of this in securing male birds for

breeding purposes. Buying those from flocks selected only from appearances, with no record kept of the performance of the individuals, is, to say the least, a great game of chance. It may be the selected bird will be from the least profitable hen in the flock. And like produces like.

I find the male bird has a wonderful influence over the pullets he sires in regard to egg production. His get will lay eggs very much like the hens of his strain in color, shape and size.

The writer happens to know a man who claims to have lost over \$50.00 in a year's eggs from 75 pullets he raised from a male bird bred from hens said to be persistent layers but not trap-nested. He says that if those hens, as a flock, were what they were represented, his bird must have come from the poorest hen in the flock. He claims that his yield for the year was easily three dozen eggs per pullet short of that given by their mothers during their first year. That is pretty good evidence as to the damage done by purchases at random. We have failures and disappointments enough when we do our best, and should not allow ourselves to be caught napping.

If we breed from the hens which make the money, we will raise pullets which will in turn make money also, providing the male bird was the right sort. The only means we have of knowing is by the use of the trap-nests. We can guess at it without them, but guessing contests in the hen pen are not profitable.

J. R. H.
Wentworth Co., Ont.

FEEDING POULTRY.

Editor "The Farmer's Advocate":

Feed your hens the right way, and they will make you from two to four dollars per hen each year in eggs alone.

There is much said in poultry journals of the necessity of hens being made to scratch to maintain health. By the ordinary method of feeding, two or three times a day, there is no doubt whatever but by this method the hen becomes excessively hungry, and by force of habit she becomes a gourmandizer. To protect herself against these periodical hungers she overloads her crop, and as the food soon passes through her system the digestive organs are overtaxed, but at the same time she gets hungry for the next meal. The hen's system becoming out of order by man's methods, he then tries to overcome his faults by making the hen overwork herself to get rid of this excess of food. With sufficient food furnished to hens at all times by the box method, the hens would have no occasion to scramble after food as a lot of schoolboys would for a handful of coppers thrown among a crowd of them. It may look unreasonable, but it seems to be a positive fact that hens do consume less grain, have better health, and give a greater egg yield when they are continuously fed by the box method than they do under ordinary methods usually employed on poultry plans. It is natural for the hen to pick, pick, pick, all day long, and when a self-acting food box is so arranged that the hen cannot waste the food by scratching it about in filth (as is often common), her appetite is always appeased, she is contented and happy, healthy, and an egg producer. I give the hen credit for having sufficient sense to know when to eat and what to eat. I believe the Creator of the Universe endowed hens with sufficient instinct to care for themselves. Can the leopard change his spots? If so, man may change the hen to his way of feeding, but sometime, perhaps, he will discover that the hen was right after all. Do not forget that it is a very hard day's work for a hen to produce one egg; therefore, she needs a liberal supply of food at all times for her to do her best.

WHAT AND HOW TO FEED.

Every morning scatter one pint of wheat in the litter to every fifteen hens. Keep in the hopper feed boxes all the time a mixture of the following: whole grain, two bushels of oats, one bushel of corn, half a bushel of barley and half a bushel of buckwheat, all mixed together. At noon feed mangels or cabbage, and the evening meal as follows: One bushel of corn, two bushels of oats, ground together; add to this one hundred pounds of bran, well mixed, moisten with hot water, or, better, milk, and feed what the fowls will eat up clean in fifteen minutes. Feed green-cut bone or beef scraps three times a week, $\frac{1}{2}$ oz. for each hen (it can be mixed into the evening feed), and also all table waste. One evening in each week give a feed of parched whole corn, warm but not hot, instead of the mash; also, three evenings in the week add to the mash two handfuls of linseed meal for every 40 hens. If this method of feeding does not produce plenty of eggs, then you have not egg-producing birds. I have but one remedy for poultry diseases, and that is the hatchet. How about this, reader? Is it a case of considerable surgical work at the start (with the hatchet), resulting in the production of none but vigorous, thrifty, healthy fowls? The writer has precious little faith in doctoring poultry, and, as a rule, the time, labor and money spent in doctoring poultry of average value is that much wasted. To use mild remedies for slight ills is all right, but be careful. It is with fowls as with people. Study how to keep in health, that is the better plan. Many and many a fowl is used as a breeder, and is valued highly, that would be far more profitable to the owner dead and well buried.

A. DOUPE.

Middlesex Co., Ont.

THE COLONY HOUSE.

AN ECONOMICAL AND EFFECTIVE PLAN OF HOUSING POULTRY.

The address on "Colony Houses," by F. C. Elford, Manager of the Poultry Department of Macdonald College, at the Ontario Winter Fair, serves to emphasize yet again the principle repeatedly enunciated through "The Farmer's Advocate," that the trend of the times is toward simplicity in the housing and care of all kinds of stock, from poultry to cattle. The colony house for poultry is simplicity itself, and the results obtained by Mr. Elford on the College Farm at Ste. Anne de Bellevue are striking testimony to its effectiveness, not only as a means of housing young market poultry, but the laying flock as well. An illustrated description of the colony houses on the Macdonald College Farm appeared in "The Farmer's Advocate" of October 24th, 1907, but the importance and comparative novelty of the subject may warrant some repetition.

WHAT IS A COLONY HOUSE?

Mr. Elford defines a colony house as one where the fowls contained all live together as one family. It may be of many sizes and shapes. The advantages claimed for it are cheapness and effectiveness. It is cheap because of its construction, and because little or no fencing is required to divide the several pens of fowls. On the Macdonald College Farm they have two sizes of colony houses, one for 25 birds, and one for 50. The 25-hen house is 8 x 12 feet. The floor rests on two runners, which may be flattened rails or poles, or, preferably, squared cedar of 6 x 8-inch dimension. These runners are placed two feet under each side of the house, and extend a foot at each end. The siding is one thickness of inch sheathing of planed, tongued-and-grooved pine; any rough lumber will do if battened. The east end, and two feet of the east end of each side is double-boarded, to protect the roosts,



Count Mysie.

Young Shorthorn bull from dairy-type dam, in the herd of A. W. Smith, Maple Lodge, Ont. See Gossip, page 63.

which are in this end. The house requires to build it, 1,100 feet of lumber, and two squares of roofing paper. A handy farmer, who can do the work himself, could place one on his farm for about \$25, or one dollar per head of poultry accommodated. The cost of many of the long, continuous houses formerly advocated was \$3, \$7 and \$8, and occasionally \$10, per hen, which is too much capital to expect a hen to pay the interest on, and at the same time make good a sinking fund.

THE COLONY HOUSE IS CHEAP AND SIMPLE.

The cheaper the poultry house, the better, so long as it is effective. The colony house is cheap and simple. Not only its construction but its internal fixtures are simple. The floor is of wood, for the sake of convenience. The roosts are hinged to the east wall, and a curtain is provided, to be let down in front of the birds on the coldest nights. There is no dropping-board. The dropping-board entails a great deal of work, and in winter time, especially, is very unsightly. Instead, the litter under the roosts is cleaned out once a week in summer, and once a month in winter, and fresh litter placed in it. The reason it is not necessary to clean the pens oftener in winter is that the droppings all freeze quickly, and the pen appears to be quite dry and sanitary. Where the winters are more open, more frequent attention would be demanded. Six nests are placed at the left of the door, which is at the end opposite the roosts. There is a hopper for dry feed that holds a sack of bran, which the hens eat readily, and another smaller hopper for grit, beef scrap and oyster shell. A six-inch board on edge under the nests encloses the material for a dust bath. All the fixtures are movable.

Now, as to fences: in the case of the old style of continuous house, with yards fenced off for

each pen, these cost probably half as much as the house. The colony house may be hauled out in summer to a field or orchard, or anywhere it may be accommodated. If there are a large number on the farm, a little fencing may be required, but comparatively little.

ECONOMICAL FROM A FEED STANDPOINT.

The colony-house system is economical from a feed standpoint. Not that the fowls will eat less than an equal number otherwise housed, but they have a better chance to forage. Since their building, which is closed up at night to exclude prowlers, may be moved readily in the morning to a stubble field, pasture field, cornfield or orchard, or wherever grain is going to waste, they have a good chance to consume what would otherwise be waste, and therefore require so much less merchantable feed.

ADAPTED TO A LABOR-SAVING METHOD OF FEEDING.

Again, as to labor, the colony-house plan lends itself to a system of feeding that requires a minimum of work. The grain and other feed may be fed by filling the hoppers once a week. While the hopper-feeding system is not a success under all conditions, it can be made a success in colony houses where the fowls have free range and exercise.

ECONOMIZES POULTRY FERTILIZER.

Then, as to fertilizer, by using the colony house, we distribute the fertilizer over the fields where it is needed, instead of having it accumulating to saturate the ground about the buildings. According to experiments, the fertilizing value of the droppings of one hen during a year is from 30 to 50 cents, which is an item worth saving.

ADVANTAGES OF PORTABILITY.

The question now comes, is it effective? Does it fulfill the requirements and meet all the conditions of successful poultry-keeping? Here are some of the advantages: In the spring, one can give the birds sunshine by running the house into a bright, sunshiny spot, or onto the driest site available. In the summer it can be moved into an orchard, or any other shade. If no such shade is available, put a block under the corners. One way or another, Mr. Elford finds it easy to keep the hens comfortable in warm weather.

GIVES GOOD RESULTS IN WINTER.

How about the winter? As soon as the frost or snow comes, hitch on and bring the houses up near the buildings for convenience and shelter. Bank them up a little with snow, or, if there is no snow, throw some litter from the pens around them. At Macdonald College, the winters are cold—28 to 30 degrees below zero for days at a time, with a strong east wind besides, yet there was not a day last winter when their hens were not comfortable and laying eggs, and there were only three or four days during the winter when the houses were not opened up. The hens didn't freeze; under ordinary conditions, a healthy hen can't freeze. They had the temperature down to 18 degrees below zero in the house at night, and not a comb was frosted. They had, however, only the utility breeds, and didn't know how some of the larger-combed varieties might do.

THE STRAW LOFT SECURES DRYNESS AND VENTILATION.

The houses were always dry inside, without frost. Mr. Elford says he has never been able to write his name on the wall. The house is well ventilated. Overhead is a loft filled with straw, and a little door opens into the gable end above. This little door is always open when the larger door below, or else the window, cannot be opened, and most of the time even then. The straw acts as a filter to admit the fresh and let out the foul air, without causing perceptible drafts. The straw, moreover, tends to absorb moisture, which is gradually evaporated and carried off.

RESULTS IN EGG PRODUCTION.

The proof of the henhouse is in the eggs. They had 230 hens last winter at the Macdonald College Farm. Some of them were good, and some of them very ordinary layers. In eleven months they laid 28,314 eggs, or an average of 122½ each. But in the four winter months, December, January, February and March, the 231 hens laid 10,347 eggs, and in the other seven months, 17,967 eggs, or a larger average during the winter months than throughout the rest of the year, which shows that the houses answered pretty well for the winter months, and must have been comfortable. To put it another way, the receipts from eggs during the eleven months were \$887.66, of which \$431.12 were made up during the four winter months, and \$456.54 during the remaining seven; or, taking it from the standpoint of net revenue, the figures for the 11 months were \$582.74, of which \$320.24 was made up in the four winter months, and only \$262.50 during the remaining seven. That is to say, the hens gave a larger total net revenue during the four winter months than during the other seven.

VIGOR AND FERTILITY.

Now, as to fertility, the hens were maintained

in such vigorous condition that, when the eggs were incubated in the spring, the lowest percentage of fertile eggs in any hatch was 85 per cent., and it ran up as high as 100 per cent., with an average of 92 per cent. Of the eggs set, 50 per cent. were hatched, and of the chicks hatched, 88 to 90 per cent. were raised.

WATERED WITH SNOW.

Next, as to "refreshments." It being difficult if not impracticable to keep water before them in the houses, maintained, as they were, at such a low temperature, the hens got none all winter, but had to drink (or eat) snow instead. It seemed to agree with them, for when water was first given the egg yield fell off, though this was probably due to the fact that they drank too much and became chilled.

A SIMPLE SYSTEM OF WINTER FEEDING.

The system of feeding was as simple as the houses. In one of the hoppers, wheat bran was kept always before them; in another, grit, meat scrap and oyster-shells. About an hour before going to roost, each pen of 25 hens was given a feed of about three quarts of grain, from which they filled their crops, and scratched out the rest next day. The quantity of the grain feed was regulated by how closely the hens picked up the previous day's supply. When, by kicking about in the litter, an odd grain was discovered here and there, it was assumed that the previous feed had been about right. The object was to avoid overfeeding, while giving the hens enough to scratch for to prevent them from getting discouraged.

MAKING EGGS INTO POWDER.

Reference was recently made in a commercial report from J. S. Larke, of Australia, to the process of desiccating eggs, said to have been devised at Melbourne, whereby shell and moisture could be removed, and the yolk and albumen converted into a powder, and so preserved for food. It was intimated that the process would likely make its appearance in Canada. As a matter of fact, something of the kind was actually tried at Stratford, Ont., several years ago, and, we are advised, turned out an utter failure. Nothing has been done since in that connection, and the building, which was specially fitted up for the purpose, was latterly converted into a laundry.

APIARY.

DRAWBACKS TO CO-OPERATION IN MARKETING HONEY.

Editor "The Farmer's Advocate":

It is only by request that I state my views on this subject. I hesitate doing so, lest someone may say that I have an "axe to grind" in discouraging such. On the contrary, however, could it be made a success, it would not only be of benefit to the producers, but to others, who, as myself, make a business of buying and selling honey. I need not now state what advantage there would be to the latter; it will be time enough for that when those who are advocating it can show that it would be practicable. So far as I have heard or read, nothing definite has been given as to the working plan, only citing what has been obtained by other co-operative associations, more particularly in connection with the apple industry. Apples and honey are two different things, and co-operation in the sale of the latter is quite another problem, and the writer is of the opinion that it will never be made a success. With apples, outside markets are practically supplied only in carload lots. Co-operation enables every producer, by combining together, to supply, and reap the benefit accruing from this. It would be an exceptional thing to reap any benefit from the sale of honey in this way. There are, I suppose, not only in Canada, but across the line, as many carload producers as there are carload buyers. In unlooked-for places, you will find merchants who buy apples only in carload lots, whereas, with honey, I have known merchants, in much larger places, who prefer buying what they require from their wholesaler, rather than have a shipment of even one hundred pounds direct, because the demand is small. With honey, the carload producer does not require the help of an association to sell his honey, and to the smaller producer there would be a loss in freight if shipped to some central point for distribution. If we take apples, again, as an example, as those who are advocating co-operation do, it is an easy matter to grade them, and when packed by an association according to Government standards, it is a decided advantage to the merchant to buy from such an association; and, as a consequence, better prices are obtained, and every member of such an association is benefited in proportion to what he supplies. It would be impossible to have a satisfactory grading of extracted honey. I do not mean of the kinds of honey, but rather the quality, when gathered from the same source. Those who are familiar with

honey know that there is a great difference in it, even when gathered from the same flowers—from the miserable, unripe stuff, to that which has been fully ripened in the hives before extracting, and a producer of the latter would hesitate in including his along with some, which, while perhaps it could not be classified with the better, would be much inferior to the best. A prospective buyer should have a sample of what he is getting from a co-operative association of honey producers, and, for obvious reasons, they would be in a worse position to sell from such than would a private individual. One great gain that accrues from co-operation in selling apples is that a buyer can, if he so wishes, have a carload of any particular variety. From what has been said about selling honey in carload lots, there would be no gain in this way from co-operation in the sale of it. It is an easy matter, this co-operation in the sale of apples. The consumer is waiting for them, the merchant is on the lookout for them, and a co-operative association have them, or know that they will or will not have them. Not so with honey; "any old time" will do for it, unless for that in the comb. The production of honey is so uncertain, and, what a producer will have to spare after supplying the home market is likewise, as I have found from experience in buying it; so that a co-operative association would not be of much value some seasons. I do not think any co-operative association could do more for beekeepers than is being done by those of our number who get reports from beekeepers, and then, from these, estimate the value of it, or, rather, what it should sell for. A co-operative association for the sale of honey should be able to supply it in any size package or container required. This would mean a suitable building with facilities for bottling. This is a business in itself, and the man who would be competent to take charge would be hard to get, for the simple reason there are so few of them that would be free to take a position of this kind. As I said before, the sale of honey would largely be in small lots, therefore collections could hardly be made on delivery, as when selling a carload of apples. This would mean the keeping of books, with the consequent proportion of loss from bad debts. R. F. Holtermann hit the nail well on the head when he said, "The co-operative company practically become middlemen, and had to meet expenses and risks of business men." In the face of such, the majority of beekeepers would prefer, I think, to sell their own product and take their own risks. If "The Farmer's Advocate" can suggest any way of bringing the buyer of honey in touch with those who have it to sell, and who do not take "The Farmer's Advocate" or any other journal on honey-production, it will be doing more for the beekeepers of this country than any co-operative association can possibly do. If I am correctly informed, I paid as much as three cents per pound more the past season than some sold their honey for, and then had to let orders go unfilled.

Huron Co., Ont.

G. A. DEADMAN.

CONCERTED EFFORT ESSENTIAL TO SUCCESS.

Editor "The Farmer's Advocate":

The co-operative marketing of honey would be as desirable for the best interest of the honey producer, and likewise for the consumer, as has been the case with the co-operative handling of fruit, and why should this be doubted, simply because the one has passed the experimental stage and has proven a success, while the other remains untested. Could the Department of Agriculture aid in enforcing some rules of grading and marking at central points that would become standard, the way would at once be opened for an unlimited growing trade with the Northwest, which would change our present conditions as greatly as that which has taken place in the fruit interests. You may ask why beekeepers do not work together along these lines. One reason is that but few are looking forward to any change from old methods, and those who do are not situated closely together that they may take advantage of it, and they are men who have worked up satisfactory arrangements for selling their own crops, yet feel the necessity and are willing to aid in improving the general condition.

Middlesex Co., Ont.

F. J. MILLER.

MUCH FOR LITTLE.

We beg to acknowledge, with many thanks, the beautiful Bible sent as a premium for obtaining two new subscribers. It is really surprising how you can send such gifts for so little. We find the paper a real treasure in our home, and could not well get on without its valuable helps. A happy and prosperous New Year to "The Farmer's Advocate and Home Magazine" staff.

Perth Co., Ont.

J. S. PATTERSON.

Get after the new names. As long as the supply lasts a copy of the 1907 Christmas number goes free to every new subscriber. There are still some on hand, but the stock is being rapidly reduced. First come, first served.

GARDEN & ORCHARD.

NOVA SCOTIA OFFERS 10c. BOUNTY FOR NESTS OF BROWN-TAIL MOTHS.

At the Nova Scotia Fruit-growers' Convention, Prof. M. Cumming, Provincial Secretary for Agriculture, announced that his Department would, from December 20th, until June 1st, 1908, pay a bounty of ten cents (10c.) for every nest of the brown-tail moth containing caterpillars which are picked and subsequently destroyed, either by the Nova Scotia Agricultural College authorities, or by the several men whose names are mentioned below. It is recommended that any who find nests of these caterpillars should put them away securely in a box of some kind, and, when they have gathered together a sufficient number, forward them, by express or mail, in a secure box, to the Agricultural College at Truro, or to Mr. Morten, Principal Academy, Digby; H. G. Payne, Granville Ferry; F. C. Johnson, Bridgetown; R. J. Messenger, Bridgetown; G. H. Vroom, Middleton; S. C. Parker, Berwick; C. Percy Foote, Lakeville; R. W. Starr, Wolfville. These men are authorized to examine specimens, after which to destroy them, and send report to the Agricultural College, Truro. In addition to the bounties, the Department will pay the expenses of either mailing or expressing the brown-tail moth nests to any of the above gentlemen, or to the College at Truro. It is understood that this bounty will not be permanently continued. It is merely a temporary measure, decided upon in order, if possible, to insure a complete eradication of this pest from the Province, and will be discontinued after the present season.

The hearty co-operation of school teachers and citizens of all classes, in its efforts to destroy the brown-tailed moth nests, is asked on behalf of the Department of Agriculture by M. Cumming, Secretary for Agriculture, Truro, N. S.

PLANTING AN APPLE ORCHARD.

By Linus Woolverton, Grimsby, Ont.

A correspondent writes: I contemplate next spring setting out a considerable sized apple orchard, and would be most grateful for any practical suggestions that you would be good enough to favor me with. Some points upon which I desire information are the following:

1. What varieties of winter apples would you recommend?
2. What is the quickest means of getting a bearing orchard?
3. If by grafting, what stock would you recommend?
4. What distance apart would you recommend?
5. Would you recommend fillers? If so, what varieties? I propose planting my orchard in the County of York. The soil is clay loam, in some places with a gravel bottom, in others it will require drainage.

In the central part of Western Ontario, between the Georgian Bay and lakes Ontario and Huron, a good apple orchard, of well-chosen varieties, properly pruned and carefully cultivated, is, without doubt, one of the best assets of the farm. In planting an orchard, the selection of varieties is of the first importance. Many of our old apple orchards, planted by our grandfathers with an eye to home markets and home uses, were of so many varieties that it is impossible to make up a car lot of any one kind for export; indeed, it often happens that a large portion of the packages have to be filled out by using two kinds, all of which materially lessens the selling prices. The ideal orchard should either in itself, or in combination with neighboring orchards, have enough trees of each variety to enable the shipper to make up a whole car lot of a single kind; or, at most, of two kinds at one time.

While winter varieties are, perhaps, the most desirable, especially where sales are made to travelling buyers, yet for an independent grower who can make his own shipments, and give attention to varieties in their proper season, it is well to begin the end of August or early in September with Duchess and Alexander, which may now be forwarded to distant markets in cold storage, and bring good prices if carefully packed in bushel boxes.

Then about the middle or toward the end of September the progressive apple-grower would harvest and ship two very choice varieties, the best of their season, the Blenheim and the Gravenstein. Strange to say, neither of these has been widely grown in Ontario, but the writer has grown enough of both to enable him to speak with confidence concerning their merits, and to consider the trees both hardy and productive. The Blenheim is one of the few British apples that succeed in Canada. It is a perfect apple, subject to scarcely any kind of blemish, and attaining a rich orange color in the package, which renders

it very attractive to the buyer. It is a longer keeper than the Gravenstein. The latter is the apple which has given a great name to the Annapolis Valley of Nova Scotia, because of the productiveness of the tree, the beauty and excellent quality of the fruit. Now, the writer has found this variety to succeed equally well in Ontario, and had our grandfathers known or planted Gravensteins in the early part of the 19th century, instead of Colvert, Rambo, Fall Pippin, Blue Pearmain, Keswick Codlin, Holland Pippin, Ribston, Gloria Mundi, etc., there would not be such a prejudice against Ontario-grown fall apples.

Of the winter varieties proper, I cannot advise planting many kinds. Early in October I would have the Greening and Baldwin—those old standard kinds, which have never yet been surpassed for main crop. It is best to work on only one variety at a time; this is best both for picker and for packer. The Greening ripens early in October, and begins dropping with the high winds, so that no time should be lost with it, and it is not later before the Baldwin attains its full red color and begins to fall. This latter is about the best shipping apple we grow, because it does not bruise easily, and its color attracts buyers. These two varieties should, therefore, in my opinion, constitute the main crop.

Next in importance comes our famous Northern Spy, or Spy, as we now call it, in our endeavor to shorten titles. It is the finest apple we grow, whether for domestic or commercial purposes. Selected samples, wrapped and packed in bushel boxes, will sell for top prices as fancy stock, and are especially in favor in the Chicago market. Unfortunately, the planter needs much patience to wait fifteen or more years for the fruit before the tree begins to yield a crop of any consequence. This variety holds well to the tree, and, therefore, may be the last one harvested.

I could easily enlarge the list, with the addition of several very desirable kinds, such as King, Golden Russet, Fallwater, Hubbardston, Seek, Ben Davis, Wealthy, McIntosh, Stark, etc., but except under special conditions I cannot advise such enlargement.

As to the quickest means of getting an orchard, of course top-grafting good varieties upon bearing trees would be the answer, but in default of a vigorous bearing orchard, I would advise planting well-selected, vigorous young trees. By going in person to some responsible nursery, and making an agreement for trees three years old from the graft, straight, with plenteous fibrous roots, carefully dug; and by planting these, if possible, the same day in which they are dug, without time for the rootlets to become dried, every one should

grow as unchecked as if never taken out of the ground.

Constant cultivation and suitable manuring and pruning should bring these trees into bearing within eight or ten years.

As to distance apart: If on rich, sandy loam, with moist subsoil, I would plant 40 feet each way; but on clay loam, such as my correspondent describes, I would plant 35 feet each way. In the Niagara district, if we plant apples at all, we use peach trees as fillers; but in York Co., north of Toronto, Dwarf pears would be useful in giving early returns for the ground occupied. A good list of kinds for such a purpose would be Gifford, Clapp's Favorite, Louise, and Duchess.

In addition to the pears, in order to fill out the whole of the ground, I would recommend planting bush fruits, especially red currants, gooseberries and raspberries. The cultivation of these will also cultivate the apple trees. I do not recommend planting strawberries in an orchard, for if left to yield more than one crop they are as detrimental to tree growth as sod.

For further information regarding varieties, their season, their commercial value, their quality and adaptability, I would refer my correspondent to "The Fruits of Ontario," published by the Department of Agriculture, Toronto.

Fruit-growers' Convention at the Pacific Coast.

On December 4th, 5th and 6th, the fruit-growers of Oregon, Washington, Idaho, Utah and British Columbia assembled in the City of Vancouver to discuss various questions of momentous interest to the fruit-growing community of this section of America. Right royally did the citizens of the Coast town extend the glad hand to their American brothers, and kind words and courtly speech, worthy of more knightly times, made everybody feel completely at home. To the credit of our southern neighbors, be it said, that in this they were not behind the men of the northern zone, and President E. L. Smith, of Hood River, Oregon, proved an adept chairman, an eloquent speaker, and an experienced fruit-grower. It was the fifteenth annual convention, and the first time it has been held in Canada.

One feature alone seemed slightly jarring to the outside visitor: The local press reports of the event were trifling, grotesque and absurd. If a speaker paid a flowery compliment to the great Province of British Columbia, it was retold in hysterics, dashes, and a profusion of "double-column heads," but the salient, educational features of the convention fell upon deaf ears, as far as Vancouver papers were concerned.

Among the speakers of the first day, Mr. J. R. Anderson took up the question of environment and selection. He pointed out the fact that plants, as well as animals, are creatures of environment, and that the natural habitat of a plant is not always the region where it makes the most perfect development. He showed where the fruits of Eastern and Western America differed. The fruit will grow larger in the West. Apples become more elongated, and the speaker expressed the idea that the West was gradually evolving certain distinct types of fruit.

One thing he wished to emphasize in particular. It does not necessarily follow that, because a particular variety did well in the East, that it would do equally as well in the West. There was also a marked difference in varieties in the same State, or in different localities. Plants would adapt themselves to environment, but often at the sacrifice of quality. Growers should exercise caution in selecting varieties that had a commercial value in their particular locality. Mr. Anderson quoted an Oregon expert as authority for the statement that in many sections of that State 75 per cent. of the trees would be destroyed or top-worked to some other variety before ten years' time.

This is something for British Columbia fruit-growers to watch. Get an orchard, by all means, but get one that will have a commercial value in the days to come. There should be no need for a fresh start ten years hence.

Sharp controversy arose over the much-veiled question of transportation. E. A. Sheppard, of Hood River, Oregon, gave a thoughtful paper on the subject. He pointed out, what many growers seem to ignore, that transportation begins when the apple leaves the tree. Many people protest against the rough handling given the fruit by the railway companies, when they are careless themselves. Apples should be laid in the boxes with care. The boxes should not be piled one on top of the other in the field. A spring wagon should be used in moving all fruit, especially the small fruits, to the station. Cherries, and more especially strawberries, should never be handled when wet. Fruit should, if possible, be placed in cold-storage, or at least given a blast of cold air before being placed in the cars. He considered that the greatest grievance against the railway companies was scarcity of cars, and the failure

to deliver cars on time. The rate was a third consideration.

The discussion was warm. Many protested against the slip-slash style of the average trunk-smasher in the handling of small fruits.

There is sound sense in this protest. Small fruit should be handled carefully. There is little use of the strawberry-grower of the Kootenay or the Okanagan taking especial care in the packing of a crate of strawberries for his prairie customer if what he does is undone by the railway officials. And the truth of the matter is, it takes very little more time to exercise some carefulness.

One thing brought prominently to the front was the success of the apple-growers in the little valley of the Hood River, Oregon. By co-operation, the fruit-growers down there have established a name for themselves that is the envy of the fruit-growing world. Formerly, they sold their apples at 80 cents a box; now they get an average of \$1.40. This has been accomplished by uniformity of packing and co-operative selling. Such an increase of price may not sound pleasant for the consumer of the glorious fruit in our prairie towns, but, after all, it's the value that counts, and a straight, uniform, certain-to-be-good box of apples is worth more money to any purchaser.

Some of the British Columbia fruit-growers have recently taken to the planting of walnut trees as a commercial proposition. To these, the address of Colonel Dosch held many interesting features. The Colonel related his own experiences as an experimental grower of nuts. He had been at it twenty years. Nut trees must have a fairly rich soil. They are gross feeders, and there must be no hardpan. He had found that Franquette, Mayette and Chaberte were the most profitable varieties. Walnut trees begin bearing in five or six years, and reach full fruiting period at twelve years. The walnut is a tree for posterity. It has few insect enemies, and is yearly receiving increased attention in the Province of British Columbia.

Prof. W. S. Thornber, of Pullman, Washington, spoke briefly on peach culture. He pointed out the fact that increased transportation facilities, the introduction of new and better fruits, and the greater skill of the modern peach-grower, was eliminating the danger of overproduction which at one time seemed to threaten the industry. There might be difference of opinion as to varieties, but he favored the yellow Freestone and the white Freestone. Thinning the fruit is very important, as peaches make a much better crop when grown from four to six inches apart.

The Northwest States of the Union and the favored land of British Columbia have their insect pests. Mr. Cockle, of Kaslo, discussed the question of insect-life. He pointed out the fact that insects seemed to be leaving their native habitat and forsaking their old "grub stake" for the sake of the apple orchard of the fruit-grower. This necessitated constant watchfulness. The codling moth could only be overcome by persistent spraying with the ever-faithful Bordeaux mixture. The peach borer had to be dug out, though lime whitewash was a good preventive. Mr. Cockle closed his address by urging young men to "go West and grow fruit."

In a bright address, F. R. Stewart, of Vancouver, traced the development of the fruit industry from that serious escapade of Adam down to the enactment of the "Fruit Marks Act." He pointed out the possibilities of the foreign market, and noted the poor shipping accommodation on our steamship lines. He thought the rail-

ways had not kept pace with the development of the industry, by supplying improved facilities. There had been, he thought, a very marked improvement in packing since the Fruit Marks Act.

All credit is due from this association to the indefatigable secretary, Mr. Maxwell Smith. He it was who stirred up the agitation for a fruit exhibit at the convention, and the success of this feature of the show shows that the idea was appreciated. The medals—some of them valued at \$100—were well worth competing for, and, though the exhibit was not large, the sample was certainly creditable. The following is the prize list. The standing of B. C. fruit, in competition with the leading fruit sections of the Northwestern States, redounds to the credit of the Province:

- First Class.—\$100 gold medal for best five boxes of apples, J. D. Honsberger, Grand Forks, B. C.
- Silver Medal, \$50.—A. I. Mason, Hood River, Oregon.
- Bronze Medal.—T. G. Earl, Lytton, B. C.
- Second Class.—Best general display, \$100 gold medal, Kelowna Fruit-growers' Association.
- Second Prize.—Honsberger & Roope, Grand Forks, B. C.
- Third.—Chelan County Horticultural Association, Wenatchee, Washington.
- Class Three.—Best box commercial apples:
 - First.—A. I. Mason, Hood River, Oregon (Yellow Newton Pippins).
 - Second.—E. A. Sheppard, Hood River (Spitz-enbergs).

Next year the convention meets in Portland.

A TRIBUTE TO THE APPLE.

A very interesting feature in connection with the contest for one of the medals arose. A prize was offered for the best box of commercial apples, and each contestant was allowed to speak for 7 minutes in favor of his entry. A large crowd was in attendance. The addresses ran along the scale from good to indifferent when the climax of the evening was touched by A. J. Mason, of Hood River, Oregon, who won the prize. The variety of apples was the Newton Pippin. The speech was as follows:

Mr. Chairman, Honorable Judges, Ladies and Gentlemen:

It gives me pleasure to stand before you tonight and defend a client who has so many friends and no enemies. No attorney ever stood before the bar of justice and defended a more noble cause.

Let us now examine my Yellow Newton client, and ascertain just where we should place it.

As to size, I have selected this size—80 apples to the box—because it is a normal one, and meets the greatest demand in our market at home and abroad.

As to color, 'tis true that each of these apples is possessed with golden cheeks and adorned with crimson blush, but that blush was designed by Him who knows the goodness, purity and perfection in all things; these blushes may be a little more rosy to-night on account of this exciting occasion.

As to quality, this should be subdivided into two parts: first, as to taste, and, second, as to the keeping of the fruit. In considering taste, we find that it has been pronounced perfect by the highest authority in the world, the United States Pomological Society. As to keeping quality, it has no superior. It is no uncommon occurrence to serve strawberries and Yellow Newtons on the same banquet table.

The growers can sell them at picking time or

in the following June. As to pack, almost all packs show for themselves. But I must call your attention to this pack, relative to the size of the apple and the size of the box. Most any person can pack a straight three or four tier pack, but to place this size apple into your legalized box in an attractive manner is a work of art. You will observe the end apples are low enough to prevent bruising, while the center ones form a true curve to receive the spring of the cover.

As to uniformity, these are as near uniform as the human eye can detect.

As to blemishes, why, sirs, there are no blemishes; they are just as perfect at the bottom as they are at the top, and just as perfect in the middle as either top or bottom.

Now, honorable judges, I desire to impress upon your minds what other people think of these apples. What does the grower think of them? He knows that they are his best money-maker. One of my neighbors sold this season \$1,800 worth of Newton apples from one acre of ground. The tree bears regularly in districts adapted to its growth, and its fruit sells readily. The wholesaler loves them because he runs no chance of them falling down either in price or keeping quality. The retailer buys them because his customers are constantly boring him to death if he does not keep them for sale.

The customer buys them because he knows that they possess all those qualities desired by the most delicate taste.

Now, honorable judges, there is the reason why this box possesses superiority here to-night, which may be a little hard for you to understand. Yet, if you will search the records of all the large commission houses on both continents, and ascertain whence comes the highest-priced apples, said price being based upon their extreme perfection, their high flavor and unrivalled keeping quality, you will receive the one universal answer, "From Hood River, Oregon."

There is something in our soil, in our climate, and in our system of placing them upon the market, that adds value to every box of apples, and this box is one of them.

The Yellow Newton is very juicy and tender, and is mellow, yet crisp. It has a sub-acid flavor. It is, sour, yet sweet, and it is at home in the kitchen and in the parlor. The majority of people regard it as the most delicious apple found in any market. Her Majesty Queen Victoria, for many years before her death, gave it first honors on her table, and I must not forget to tell you that the little valley that produced this box of apples furnished a large portion of those apples. Your humble servant has for many years past assisted in satisfying His Majesty King Edward with this same variety of apples. The best markets of the world are always asking for Yellow Newtons, without fear of successful contradiction; they lead all others in the export trade. And why all this? Simply because the consumers of the old as well as the new world have long since learned its many good qualities.

Honorable judges, I am not defending a new and untried variety of apples. It has been on the market for several generations, and the child has learned to list its fine qualities with the same enthusiasm as his grandfather. All I ask is to give to my client that which it deserves. If you are still in doubt as to which is the best apple, not only for to-night, but for the world, go with me into all the markets, and there you will be convinced. Every market in Germany, France and England, and the whole of Europe, are to-day paying more for the Yellow Newton apples than for any other apples. In conclusion, I want you to remember that, wherever you find an Englishman, either in England, Canada or America, ask him what apple he likes best of all, and he will tell you, unless he is a competitor here to-night, that it is the Yellow Newton. And now, honorable judges, on behalf of my client, we are not desiring to beg any honors. We stand on our own merits. If defeated in this contest, new history will be made for my Yellow Newton client. We know that your verdict will be the voice of your conscience, and we feel satisfied to rest our case with you.

WHAT ARE WE DOING TO HELP THE FRUIT-GROWING INDUSTRY?

Editor "The Farmer's Advocate":

The past ten years, has been a period in which radical changes have taken place in the different branches of agriculture. Haphazard methods have given place to systematized effort, and, as a result, in many instances, a better and more uniform product is now put on the market; consequently, markets have extended, and the increased demand for such articles has created a livelier interest among these engaged in the profession of agriculture.

In commercial fruit-growing these changes have been none the less noticeable. Scarcely ten years ago the prevalent idea was that one had but to get a piece of suitable land, plant the trees, give them a moderate amount of cultivation, and usually a limited amount of pruning, and that was all that was necessary to insure success. True, in many instances, good crops of good fruit were sometimes grown, in certain seasons, under certain conditions a bountiful harvest resulted, and in

such seasons the net price obtained for our fruit left very little margin of profit, as the market centers became flooded with fruit of a very inferior size and quality, and the law of supply and demand regulated the price.

Year by year fungous and insect pests came, the accepted opinion that "Spraying doesn't pay" was changed to "Does spraying pay?" and later, "Can I afford not to spray?" With the advent of the San Jose scale the orchardist saw that his business was in great peril; many were positive they could not successfully combat this insect, and nothing but ruin was in store for them; but was it overproduction which made the markets unprofitable?

Many of us can remember the first attempts at extending the markets, by the earlier experimental shipments of fruits, other than winter apples, to the Old Country and also to the Northwest. On the whole, the attempt was not a financial success, but to some the dark cloud had a silver lining—some small parts of the different shipments sold at a fair figure. Many attempts were made by individual growers to get others to co-operate, and better the existing conditions, but the time was not yet. Year by year the scale infestations extended, neglected orchards died one by one, young trees replaced them in some instances, but these succumbed in time. Spraying in some instances proved partly effective, and a few of the orchards survived, and to many appeared the dawn of a brighter era. These who did not believe in treating their trees came one by one to doubt the wisdom of their belief; some attempted to treat their trees by finding out from those who had been successful in keeping the scale in check, and from this starting point we find the question of better methods of cultivation, the best methods of pruning the trees, co-operation in buying spraying materials, spraying machinery, central boiling stations for the cheaper and better preparation of spraying mixtures; co-operation in the buying of fruit packages, fertilizers, etc.; co-operation in the selling of fruit in car lots, f.o.b.; all of which tended towards the production of a better grade of fruit and the better marketing of the product. Still further, we have the establishment of central packing-houses, where a uniform pack can be put up in a much more attractive style at a greatly reduced cost, and each year we are shipping successfully fruit, chiefly grapes, as far as Vancouver, and cars of mixed fruits to Edmonton, Winnipeg, and all large centers in the West; and instead of hearing the cry of overproduction, we are turning our attention to the question of what varieties we can grow which are best suited to the markets; what varieties are best suited to supply the great canning industry, which is partially attempting to supply the demands of the Greater Canada.

These changed conditions have materially added to the cost of caring for an orchard. It is necessary to tear out or graft all unprofitable trees and varieties, and to make the most out of every tree it is essential that the soil be in proper condition as to drainage; that it, the soil, contain sufficient plant food; that the foliage be kept healthy, and that wood growth be not permitted at the expense of fruiting power; the sterility of some varieties of fruit, and the advantage of having certain varieties to pollinize other varieties—these are only a very few of the problems that confront us.

Then, we ask, what is the Ontario Government doing to help commercial fruit-growing? It is true the Department has taken a lively interest in the scale question, and has supplied a helping hand, and, as a reward for their labors, we have a suitable and cheap remedy, which, if properly applied, will keep the scale under control. It has also fostered the co-operative movement. The Department is spending annually considerable sums of money for variety testing of fruits and vegetables. It has sent out numerous varieties of fruits all over the Province, and will, in time, have a few reports as to how certain varieties succeed in certain localities; but what is the Department doing to help those whose trees were winter-killed? Many of them suspect that death has resulted from insect or fungous disease, or some other cause. Were there certain varieties more subject to winter-killing than others? If so, what were they? Were the trees which were winter-killed situated in a lower spot in an undrained orchard? Was there a greater loss by winter-killing in the part of the orchard which had clean cultivation up to the close of the growing season? Was the wood on the trees which were winter-killed properly ripened before frost? Would a cover crop planted in midsummer on the orchard and allowed to grow a good top before frost aid in maturing the wood, and also hold the snow, as well as assisting in itself to lessen the effect of root injury by frost? Were the trees which were affected by insect and fungous diseases during the previous growing season more subject to winter-killing. These are questions which come up annually in all parts of this Province, and if the Horticultural Department of our Government institutions were in closer touch with the fruit-growing industry, these questions should have been settled long ago. We do not expect them to be settled by any exhaustive experiments at an experimental farm, but by the summing up of existing conditions where such things happen.

To my mind, we are too prone to condemn a certain locality as ill adapted to fruit-growing on account of its geographical situation, whereas if we had the same cultural conditions in another district, we might not have been much more successful. Like our American cousin who when asked, "Why don't you grow fruit on your farm?" replied, "The soil is not adapted for

it." "But how is it that your neighbor not two miles away grows fruit?" "Well, yes, he does." "Well, why can't you; did you ever try it?" "Well, yes, I did—twice." "What is the matter that the trees did not grow; did they start?" "Oh, yes, they started, but they died off gradually soon after." "What killed them?" "Well, I don't know; I suppose the sheep chewing off the outside bark helped." Lincoln Co., Ont. GEO. A. ROBERTSON.

THE FARM BULLETIN.

USE OUR WANT AND FOR SALE ADVERTISING COLUMNS.

Judging by some of the correspondence that reaches our desk, certain of our readers do not believe that we always mean just what we say. Every few days we receive questions from people who have forgotten to sign their names, or who are not on our subscription list, or who enclose a stamp for reply by letter, whereas it is expressly stated in our standing announcement, which appears every week on the second page of reading matter, that when in certain cases urgent replies by mail are required, \$1.00 must be enclosed. If replies to all kinds of enquiries were attempted by mail, the burden would swamp us, ordinary business letters reaching the thousand every week. Answers are published at very considerable outlay, on the theory that they will benefit readers generally.

Then another form of thoughtless imposition is in asking us to serve as a free-advertising medium. Some time since a letter was published, asking where hickory saplings could be secured. In an editorial note appended, we invited replies through our "Want and For Sale" advertising columns, where, at the three-cents-a-word rate, a small advertisement could have been inserted for 40 or 50 cents. It was also stated that confidential replies would not be forwarded. Notwithstanding this explicit announcement, we have already received several notes from people who could furnish such saplings, but none of them saw fit to act on our suggestion. The letters have, consequently, been discarded. For the convenience of our readers, and as a means of making the paper more useful, we maintain this special advertising column. The rates are ridiculously low, and the least anyone could do towards getting in touch with prospective purchasers would be to enclose a small announcement along with the price calculated, according to the rule at the head of the columns. We must stand by our rules. A business that made rules only to break them would soon go to the wall. We are doing the best we can for our readers, and only ask that they be fair with us.

ANOTHER FARMER ON THE HOG QUESTION.

Editor "The Farmer's Advocate":

In looking over the issue of December 26th, I came across the statement of J. C. T.'s views on the hog question. I certainly think his views are all right, from a farmer's standpoint. I am a farmer, and have raised yearly for the past five or six years from 40 to 50 hogs, but I don't think I would have raised as many if I had followed the Experimental Farm's way of raising them. I have not the backing they have down there. I have to raise and feed them as best I can in my own quiet way. I don't doubt that if I had the run of the Government storehouse, and dairy I could have raised them with more profit, as "money makes the mare go." I have not had skim milk at my disposal to feed my young pigs; they have had to take things as they come, just as my other stock has. I could not afford to keep a man around specially to look after hogs. I certainly would have given my small hogs away last summer if I had known that the prices that are being paid now were to be, as I consider that we are losing money every day we feed them. If I could keep my hogs for a year longer, as in the case of cattle, horses and sheep, it would throw a different light on the subject; but we cannot, we have to sell them just when they are from 180 to 250 lbs. in weight or we cannot sell them at all, and if the prices are low we have to stand it—not the Government. The packers have the bull by the nose; they can lead us which way they like; they well know when the glut is going to come. Of course, the Experimental Farm does some good work, but in the hog question I think they are somewhat misleading, to the farmer's point of view. You know, Mr. Editor, that the past year or two has been a hard time for the farmers to obtain help, and the stock has had to rough it, as well as the farmer and farm—the farmer has had to paddle his own canoe. We farmers cannot raise hogs and care for them as we should and like to; therefore, without extra good prices we are better never to have anything to do with them. We certainly are running a big risk to buy grain at present prices, and the majority of farmers around here have only two-thirds of the grain that they have had other years, and you know, Mr. Editor, that hogs take the clear thing every time. You cannot feed them on straw or hay as you can the other stock, and

carry them on for next year's crop. I think any farmer that would buy shorts at \$26 and bran at \$25, as has been the price around here this fall, is beside himself, seeing the price of hogs. Mr. J. C. T. certainly has a better farmer's view than Prof. Day, and I think speaks more from experience than experiment. If the farmers could put their heads together more, as the packers do, we would have better prices, there would be no gluts, and the packers and Prof. D. would not dictate. We could then live and let live, and would not feel like giving away our hogs for 5c. The farmer knows his own business best, and I think if Prof. Day was an average farmer instead of what he is, he would be apt to be led away with the panic, as he calls it. Where does Prof. D. make his living, from the farm or the farmer? Experiments are all right in their place, but are no use on the average farm, as "time is money."
J. G.
Huron Co., Ont.

WHY HE LIKES THE OLD F. A.

Editor "The Farmer's Advocate":

Bein' an old man an' about to renew my subscription to yer paper, I jist thought I'd give ye a few reasons why I subscribe fur "The Farmer's Advocate."

1st, good print. Now, good print means a great deal to an old feller like me. I hate a paper I've got to foller the line with my nose to get the good out of it (that is, if there is any). Ye might have good hands runnin' yer machine, an' keepin' it filed up. A man might read it Sundays an' not vex his self finding out what it's got ter say. That's one reason.

Now, fer the 2nd reason. I'll sot it down in big letters—TRUTH. Say, that is the word, the giant among all words, an' I have red yer paper sence '71, an' I can't say I ever se'd any thing else in it. Say, I am an old man an' I haint easy fooled on what folks has ter say. Ye never miss lead a feller. Fer instance, when a man dies, "The Farmer's Advocate" allers says so. It don't say he's past away. Passin' away, friend, an' dien, is 2 different things. A man may go to the Northwest; he passes away but he haint dead—theo I suppose he might as well be. I don't like this foolin' around about death. Death is sure to come to a feller, jist as sure as tatter bugs in June, an' Paris green won't save him, an' I am glad "The Farmer's Advocate" haint got the passin' away systum of notefication when a man dies.

Reason No. 3: I heerd the preacher say onst he could allers tell a man by the company he keeps. "The Farmer's Advocate" keeps company with the greatest folks on earth, like Prof. Dean, Prof. Day, Mr. Clemons, Laura Rose, Miss McMurchie an' Geo. Rice, who is the father of Canadian cowmology. In speekin' of Miss Rose, I would like to tell ye an incident that happened. She was wonst makin' butter under a big beech tree at a country fair. I was their, me an' Martha (that's ma wife). Ye see, I have drank a heap of buttermilk in my time, an' I pretend to be a judge, an' I says to the young gal: "Miss Rose, won't that water yer putin' in that churn spile the buttermilk?" Then she gin me a look, an' she says: "Sir, it is not buttermilk I am makeing." Martha laughed, an' to this day she allers says when I am a huntin' up buttermilk: "Old man, it haint buttermilk I am makeing." But the gals an' old wemmen got a good lesson that day from Miss Rose, an' so did I.

Geo. Rice, he's another chum o' yours. He won't act as judge o' cows at fairs. Lots don't know the reason, but I can tell. He knows that much about a cow that he knows exactly what he don't know, an' that's where most fellers lack judge.

Geo. has gon' in ter Ayrshires, but jist fer experment sake. So fur as I am concerned, I haint much again Ayrshires, only there heigh protective policy—there horns are allers pointin' to a feller's eye (but he chased Mr. Clemons close enough at the Winter Fair). I was scart he might get there. Folks ask me what de ye like Holsteins fer, an' I allers say, cas they give the most milk—there's no other reason fer lovin' a cow that I know of. Now, befor I insart my dollar an' half, I intend dedicatin' an' inscribin' to Geo. Rice, his Ayr, and successors forever, these three riddels:

Geo., why is a Holstein cow like a wheelbar? Caus there's no tellin' how fur they'll go if you shove 'um.

Geo., why is a Holstein cow like a true sport? Caus she never gets so full she can't mind her own business.

Geo., why is a Holstein cow like a preacher? Caus she often wears a black coat an' white tie, an' is allers fond o' good stuff to eat.

Now, Sir, I must insart my dollar an' half. Martha says 'twould suit me better to buy overalls with it. But, says I, can't I buy overalls with eggs? Haint we gitten the paper fer half what it's worth, an' what more de ye want?
OLD FARMER.

A SATISFIED SUBSCRIBER AND CORRESPONDENT.

I thank you very much for article sent, and am more than repaid. Your treatment of me has ever been liberal and kind, and I appreciate it very much. My girls are quite interested in the paper, and make inquiries as "Did the 'Advocate' come?" would much believe it was a favorite. With best wishes.
H. T. HAYES.
King's Co., N. B.

CANADIAN JERSEY CATTLE CLUB.

The eighth annual meeting of the Canadian Jersey Cattle Club was held in the Walker House, Toronto, Monday, December 30th. The attendance was one of the largest in the history of the Club. One striking feature was the large number of young men present, and all deeply interested in the proceedings, and displaying an enthusiasm for the breed that shows a determination to keep the Jersey cow at the head of the procession for years to come.

In the absence of the President, Mr. B. O. Bull, Vice-President, presided. The Secretary, R. Reid, Berlin, presented a very interesting report, which he prefaced by a few remarks, stating that the Canadian Club has had to contend against many difficulties, owing to the fact that the majority of the Jersey breeders in Canada are allied with the parent organization—the great American Jersey Cattle Club of New York—the wealthiest and most influential live-stock organization on the continent. The Secretary appealed to all Jersey breeders in Canada to loyally support our own Canadian Herdbook, as its requirements for registration are exactly the same as that of the A. J. C. C. The National Live-stock Record Board, under the Dept. of Agriculture, Ottawa, has given eminent satisfaction in the handling of the Herdbook for the Club.

The Treasurer's statement showed a balance on hand, November 30th, 1907, of \$408.30; registrations from Jan. 1st to Nov. 30th, 316; transfers from Jan. 1st to Nov. 30th, 27; fees received for registrations, \$274.

Mr. J. Brant, Accountant of the National Live-stock Records, Ottawa, and Mr. Robert Miller, Chairman of the Record Committee, were present, and addressed the meeting, which deepened the confidence of the breeders in the manner in which the Department is carrying out the wishes of the various live-stock associations.

It was decided that cattle registered in the English Jersey Herdbook must trace in unbroken lines to the Island of Jersey before being admitted to the Canadian records. Also, where sire and dam are registered in A. J. C. C., we demand a certificate of transfer where there has been a change of ownership.



Geo. A. Brodie, Bethesda, Ont.

President Ontario Experimental Union, 1908.

A communication was read from H. S. Pipes, Amherst, N.S., stating that a branch of the Club had been formed in Halifax, composed of breeders from the Maritime Provinces. Mr. Pipes was commended for his interest in the Club, and a vote of thanks tendered him by the meeting. The desire was expressed that a similar association be formed in the West.

The Secretary was voted \$50 for his services for 1907. Mr. John A. Perree, Secretary of the Island Herdbook, was made the Club's agent on the Island.

Officers for 1908: President, R. J. Fleming, Vice-President, For Ontario, D. O. Bull and D. Duncan; Quebec, H. W. Edwards; Maritime Provinces, H. S. Pipes; Western Provinces, W. V. Edwards; British Columbia, H. W. Bevan. Sec.-Treas., R. Reid, Berlin. Board of Directors—F. L. Green, T. Porter, R. W. Hodson, S. J. Lyons, R. Tufts. Representatives on Fair Boards—Toronto, D. O. Bull; Ottawa, P. Clark; London, B. Lawson; Winnipeg, W. V. Edwards; Calgary, John Turner; Halifax, H. S. Pipes. Judges—Toronto, J. E. Dodge, Narbeth, Penn.; Ottawa, S. J. Lyons; Winnipeg and Brandon, H. G. Clark; London, H. A. Dolson; Calgary, J. L. Clark; Halifax and St. John, H. G. Clark. Delegates to the National Live-stock Convention—R. Reid and L. J. C. Bull. Representatives on the National Dairy Show Com.—S. Wicks, L. J. C. Bull and D. Duncan.

The meeting appointed Fleming to represent the Club at the next meeting of the directors of the A. J. C. C., to endeavor to get that body to recognize the Canadian herd register, so that our breeders will not be compelled to register in both books.

The meeting then adjourned, and was entertained at dinner by the President and Mr. W. P. Bull.

PRINCE EDWARD ISLAND NOTES.

The first few days of December started in very winter-like. About a foot of snow fell, and the gale at the same time piled it all up in banks, road breaking was the order of the day, and it looked as though winter had come to stay. Most of us packed away our wagons for the winter, as we thought, but the weather took a mild change, and day after day the snow kept wasting until the 12th, when teams could be seen plowing all day, and it gave "Peter Tumble-down" a chance to get the balance of his root crop saved in second-class condition, but the following day it was hard and fast again.

Prices have acted somewhat strange this fall. Pork started in at 8½c. dressed for best quality, and in a few weeks it had dropped just 2 cents per pound for the same grade of pork, but at present writing 7 cents can be paid for a real choice carcass, weighing from 125 to 200 pounds. We don't hear anything about over-fats this fall. A farmer need not worry about being cut one-half or a cent per pound on a very fat hog. The trouble this year seems to be all the other way. With oats at 50 cents a bushel, and the prospect of potatoes being very high in the spring, too many farmers killed and marketed their hogs in a very unsalable condition. Pork that is too lean and thin to fry itself should be returned by the packer to the man who slaughtered it. There is no encouragement for the man who sells a good fat hog here to-day. How different with the beef buyer? A butcher comes to your barn, looks over your stalled cattle, and it is seldom he is willing to pay the same price per pound for all the animals. He pays according to quality every time, but it is not so with pork, at least here on P. E. I., and very often the man with the poorest article is the one who wants the long price. It is unfortunate, however, for those who have held their hogs and fed them a lot of high-priced feed, and now are compelled to take a lower price. There is not too much money in pork this fall at 8c., and 9c. would have been more in proportion to the price of the feed they ate.

This has been a banner year in the dairy industry; prices of both cheese and butter have been very high—cheese, 12c. to 18c., and butter started at 24c. and run up to nearly the 30c. mark. Many of the factories are paying the patrons off for the summer's milk, at a little over a dollar per hundred. This is, indeed, a handsome price for milk, besides having the by-product to feed to calves and hogs. Some people are heard continuously crying down the cow, and the slavish work of milking, and after all there is nothing which pays better on the farm than dairying. Apples are very scarce, and very high in price. Our merchants are obliged to pay for imported Gravensteins, Baldwins, Spies and Pippins, No. 1 quality, \$4.75 per barrel, and hard to get at any price.

The merchants have this year done a larger Xmas. trade than for many years, one firm alone having cash sales on one day of \$8,000.00, besides a credit sale of nearly twice that amount. The good sleighing a week before Christmas made business of all kinds very brisk, and with open navigation still at Summerside, it is indeed a great thing for Prince County. The produce dealers have been able to fill all orders by the short-haul, instead of having to ship around by Georgetown and Pictou.

The different Farmers' Institutes are now holding meetings again, which will be kept up during the winter months. The farmers look forward to those meetings, and very interesting meetings are held, discussing together the best and most profitable methods of tilling the soil, of stock-raising and dairying. Co-operation among farmers throughout Canada has brought up the present high standard of seeds of all kinds. And in this P. E. I. holds first rank.

The seed fair held in Summerside last March was not surpassed anywhere in Canada. The fair this winter in Summerside will surpass that of last year. A number of our Island boys are taking advantage of the short course at the Truro Agricultural College. The weather is as mild as summer; wagons are running, no ice in the Straits, and the summer steamers still making regular trips.
C. C. C.

FORTHCOMING EVENTS.

- Jan. 15th and 16th—Western Ontario Dairymen's Association, Woodstock.
- Jan. 20th to 24th—Eastern Ontario Fat-stock and Poultry Show, Ottawa.
- Jan. 28th to 30th—Nova Scotia Farmers' convention at Antigonishe.
- Feb. 4th—Annual meeting Dominion Shorthorn Association, in Toronto.
- Feb. 12th to 14th—Ontario Horse-breeders' Show, Toronto.
- Prince Edward Island Dairymen's Convention, Charlottetown, February 20th.
- May 4th to 9th—Canadian National Horse Show, Toronto.

Last call for the Horsemen's Experience Competition, announced in our issue of December 5th. Entries close January 15th; prizes, \$15, \$10, and \$5, respectively. Look up the conditions and send in your experience. Prize or no prize, it will do you good, and interest thousands of fellow farmers as well. In this matter it is far more blessed to give than to receive.

Despatches from Rochester, Minnesota, last week announced the death of Dr. J. F. Smale, assistant general manager of the William Davies Co., the well-known Canadian firm of pork packers.

SEED-GRAIN EXHIBITS AT AGRICULTURAL SHOWS.

Editor "The Farmer's Advocate":

The grain exhibit in connection with the agricultural shows was intended to stimulate the production of high-class seed grain. That it has not accomplished all for which its promoters hoped must be clear to nearly everyone who examines into the real situation. The prizes awarded for grain exhibits has already been inviting, and not so good as the importance of this part of an exhibition really demands. The Winter Fair and the Canadian Seed-growers' Association, by the prizes they are offering, are setting a pace for better things. As a result, at the Provincial Winter Fair at Guelph recently there was a battle royal between a good many grain exhibitors from various parts of the Province. But what is often true of exhibits at the local fairs was also noticeable at the Winter Fair, and that is, that some exhibits have not only done service for a number of fairs in one year, but have done service for a number of years in succession. A judge may not be absolutely sure that the grain he suspects is old seed, and the exhibitor of whom an affidavit might be requested is not usually present, yet appearances would indicate that it was old seed. Any judge who has judged seed for three or more years in succession at an exhibition knows the truth whereof I speak. There was evidence at the Winter Fair of the presence of old seed, from the dull color of some of it, and from the application of a little oil to brighten things up. There was evidence too, in a few exhibits, that the top of the exhibit was not a true criterion of the quality of the bottom. Certainly some very good cleaning would be necessary in order that what the seed represented in the bin for sale would be up to the standard of the exhibit. It is some of these things that have been allowed to go by default that have discouraged many a well-intentioned exhibitor who does not believe in taking the trouble to pound all the ends off the oat hulls, or even hand-pick his exhibit to make the seed pure, and to make it uniform and weigh up well.

As all exhibits at the fall shows and seed fairs are judged from the standpoint of their utility for seeding purposes, and as each exhibit at the winter fairs and seed fairs is supposed to be representative of a certain amount in the bin, too much care can scarcely be taken to make a good fanning-mill selection, by screening out dirt, foul seeds and small seeds, so that the seed to be

sown will not only be pure, but plump, and, if possible, well matured. If these precautions are taken there will be fewer disappointments in the crops grown on our Ontario farms. The results of Prof. Zavitz, of the O. A. C., go to show that in most of the cereal crops almost a third more may be obtained in the use of such seed as I have described. To hand-select the plants, as is required in the practice of members of the C. S.-G. Association should give even better results. It will pay to try.

T. G. RAYNOR.

ABERDEEN - ANGUS BREEDERS MEET.

The seventh annual meeting of the Aberdeen-Angus Breeders' Society of Canada was held at the Commercial Hotel, Guelph, December 11th, 1907, Mr. Jas. Bowman, President, in the chair. The following members were present: S. Young (Vice-President), J. W. Burt (Secretary), Jas. Sharp, Jas. McLeod, David N. Dods, John Varcoe, A. McKinnon, P. A. Thomson, Jas. Binnie, Jas. Coke, John Lowe, T. B. Broadfoot, A. S. Forster, G. H. Whyte, A. W. McEwing, R. Murdoch, and others.

The minutes of the last meeting were read and confirmed. On motion by Mr. Sharp, seconded by Mr. McKinnon, Mr. Varcoe and Mr. Young were appointed auditors. The books being audited, showed a balance on hand from last year of \$31.64, and a present balance on hand of \$36.64. On motion the report was adopted.

The following officers were then elected: President, John Varcoe; Vice-President, S. Young. Directors—Messrs. A. McKinnon, Jas. Sharp, Mr. Davis, and John Lowe.

"The Farmer's Advocate" is as essential to the success of the agriculturist as a good wife." I read the foregoing sentence to the mistress of the household, and she objected, to the extent that I should qualify it by "almost as essential," etc. A. L. C. Oxford Co., Ont.

His Excellency the Lieutenant-Governor of Manitoba has donated a Provincial challenge cup for plowing, to be annually competed for, and open to all members of agricultural societies and institutes in the Province of Manitoba.

PROGRAMME, NATIONAL LIVE-STOCK CONVENTION.

OTTAWA, FEBRUARY 5, 6, 7, 1908.

"British Columbia as a market for pure-bred stock," by Dr. S. F. Tolmie, Dominion Live-stock Branch, Victoria, B. C.

"The Live-stock Industry in Quebec," by Dr. J. A. Couture, Secretary Quebec Live-stock Association, Quebec. Discussion led by Hon. N. Garneau, President Quebec Stock-breeders' Association, Quebec.

"The Live-stock Industry in the Maritime Provinces," by Prof. Cumming, B.S.A., Principal Agricultural College, Truro, N. S. Discussion led by Theodore Ross, Secretary of Agriculture, Charlottetown, P.E.I.

"The Future of the Ranching Country and of the Live-stock Industry in the Prairie Provinces," by R. G. Matthews, Secretary Western Stock-growers' Association, Macleod, Alta. Discussion led by Robert Sinton, President Live-stock Association, Regina, Saskatchewan.

"The Best Means of Retaining for Canadian Breeders the Canadian Market for Pure-bred Stock," by John Gardhouse, Highfield, Ont. Discussion led by F. M. Logan, B.S.A., Secretary Live-stock Association, Victoria, B.C.

"Regulations Governing the Admission to Canada of Pure-bred Stock." Discussion led by Robert Miller, Stouffville, Ont.

"Our Export Trade." (a) "Pure-bred Stock," by Hon. W. C. Edwards, Ottawa. Discussion led by Hon. John Dryden, Toronto. (b) "Commercial Live-stock." Discussion led by Thos. McMillan, Seaforth, Ont. (c) "Dressed Meat."

"The Transportation Companies and the Live-stock Industry." (a) "Commercial Live Stock," by H. C. McMullen, Live-stock Agent, Canadian Pacific Railway Co., Calgary, Alta. (b) "Pure-bred Live Stock," by Geo. H. Greig, Dominion Live-stock Branch, Winnipeg, Man.

"The Health of Canadian Live Stock and its Preservation," by Dr. A. G. Hopkins, Health of Animals Branch, Ottawa.

"The Scottish Premium System of Hiring Stallions," by John Graham, Carberry, Man. Discussion led by Robert Ness, Howick, Que.

QUESTIONS AND ANSWERS. Miscellaneous.

HENS AILING.

1. A large number of my hens are dying from something like rheumatism. They get so they can walk only a few steps at one time, till they have to sit down. This keeps getting worse for perhaps one or two weeks, when they can't walk at all, and, of course, soon die. All summer I have been losing odd ones, but since they have been confined to the house nearly all the time, the number has greatly increased, till today I have about a half a dozen laid up. They are well fed on good barley twice in the day, and ground oats and barley made into a mash at noon. They have also plenty of sand, roots, coal ashes, and good water to drink. I had hold of one to-day that was just taking the complaint, and she is in good condition, and I think laying, and seems all right every other way.

2. I also have one or two with a hard growth on their tongue, which hinders their breathing so much that they keep their mouth open nearly all the time to breathe, and now and then seem to choke. H. S. P.

Ans.—1. The fowls in this case have been victims of, and are suffering from one or more of the numerous affections of the liver. All the trouble has been brought about by long-continued over-feeding of a diet with too little variation and want of exercise. The trouble was made more acute when the birds were shut up. As nothing is said as to the variety or age of the fowls, much is left to conjecture; but, whether pullets or hens, they have not been correctly treated. Mark you! it is much easier to manage pullets than hens, particularly if the latter are old. Pulletts will stand treatment such as outlined by your correspondent much longer, without showing ill consequences, than older birds. What the remedy? If the hens are old, the best thing they can do is to die off. Treatment is seldom successful. If pullets, reduce and radically change the food. Cut out the barley, or very much lessen it. Give more green food. Variety in rations is more important than anything else. Kill off the old hens, and manage the remaining ones as shown in Bulletin 54, on the care and

management of poultry, which is sent with pleasure and without cost.

2. The latter ailment is probably "pip," due to the digestive organs being out of order. Avoid tearing off the dry, hard part of the tongue, which is frequently done, and is both unnecessary and cruel. A simple treatment is the frequent application of a solution of 15 or 20 drops of boracic acid in a tablespoonful of water. The hard growth will probably come off. When coming off, moisten the tongue with a drop or two of glycerine. Pip is frequently a sign of bronchitis, pneumonia, catarrh, etc. Examine carefully. Or, the heavy breathing may be caused by canker, in which case the boracic acid will be timely.

A lot of trouble this, is it not? Would it not be far better to prevent disease by proper housing and treatment; in other words, a thorough knowledge of poultry keeping? In the case of disease kept fowls there is no disease. Disease is a consequence. There should be no disease. A. G. GILBERT.

RAILWAY POSITIONS.

To whom should I apply for a business position with the G. T. P. Railroad, or the Temiskaming and N. O. R. R.?

Ans.—Chas. M. Hays, General Manager, G. T. P., Montreal, and Chairman, Temiskaming and Northern Ontario Railway Commission, Toronto, Ont.

WORK ON BOOKKEEPING.

I shall be glad if you will let me know whether I can obtain "The Simple Method of Bookkeeping for Farmers, Market Gardeners, etc.," by K. W. Kersey, Lecturer in Bookkeeping at the South-eastern Agricultural College, W. of E., Kent, in Canada? If so, give the book-seller's name. SUBSCRIBER.

Ans.—We do not think the book is on the market in Canada, but you can secure a copy through this office, at 50c.

PLANK-FRAME BARN.

Am thinking of building a plank-frame barn 40 x 60 feet, and would like instructions as to size and material of scantlings, quantities; also, if spruce timber would answer the purpose.

1. What has been the experience of your readers with them?
2. Is there a book on the subject?
3. Would a 11 inch concrete wall carry such a barn? J. E.

Ans.—1. Will our readers reply to this question?

2. Yes; "Plank-frame Barns"; price, 55 cents; order through this office.

3. Yes.

GOSSIP.

Some high-class Holstein bull calves are being offered at very reasonable figures in this issue. See advertisement of Mr. W. A. Bryant, Cairngorm, Ont.

Messrs. Lloyd-Jones Bros., Burford, Ont., write: "In your account of the winnings at Chicago, you give Mr. Campbell second prize on ewe lamb, whereas we won second. We also won two fifth prizes on shearing ram and ewe, American bred."

MILK AND BEEF.

In discussing the question of breeding for the combination of the two great qualities of milk and beef, a writer in an English exchange says: "There is no reason why these two qualities should not be combined, not only in individual animals, but in a herd. That there is a difficulty we all agree, but now that the Shorthorn is in a transition state is the time to make the attempt and to fix up a type of cattle that will possess both qualities in a marked degree. There are plenty of non-pedigree Shorthorns that give twenty quarts of milk a day, or more, and are at the same time possessed of superior feeding qualities. Some of the Scotch families have good milking properties, and if crossed with animals of Bates blood, which also have good milking qualities, and then crossing the produce with a good-bred Cumberland sire, a really good dual-purpose Shorthorn should be the result, and by breeding on these lines a really good beef-and-milk herd ought to be maintained. If once a few good cows of that type could be bred, and the greatest of care and best of judgment taken and used in the selection of sires, good results must follow. It is most important for the future welfare of the Shorthorn that the milking properties should be studied. Any man who owns a herd of well-descended, good-milking cattle has a most valuable asset. He has two strings to his bow, and is independent of the foreign demand. He has the opportunity

of making a good return from his milk, either by way of buttermaking or milk-selling, and there is a demand for his young bulls from farmers at home; and the home demand must never be lost sight of, for it is far more to be relied upon than the foreign, and should be given the first consideration. We have more good-milking pedigree Shorthorns now than we had formerly, and the prices they realize in a sale, compared with those of the purely-beef type, provided their pedigree is a good one, is very much in their favor.

DOGS CANNOT REASON.

The dog is, no doubt, the most intelligent of our domestic animals, and I yield to none in my affection for him. I can almost eat and sleep with a fine dog winter and summer. But I try not to deceive myself about his intelligence. It seems to me that if the dog had the least spark of wit akin to our own—that is, power of reason—his long association with man would have fanned it into a flame, however small. But, after all these thousands of years of human companionship and love, he has less wit in some respects than his wild brothers, the fox and the wolf. Having been spared the struggle to live that falls to their lot, his cunning and sagacity have deteriorated. The same is true of the horse, which has less intelligence than the wild stallion of the plains, and for the same reason. These animals do not grow wiser as they grow less wild. They do not civilize or develop. We train them into certain ways that make them serviceable to us; we humanize them without adding to their mental capacity. In other words, we cannot cross intelligence upon theirs and make it fruitful in them. The germ will not take.

BOOK REVIEW.

"A Study in Health Science" is the somewhat ambitious title of a well-printed little work, written by M. J. Keane, M. D. (Ontario and Alberta), and published by the Telephone City Publishing Co., of Brantford, Ont. It is a long departure from the old "family-doctor book," which often proved so useful before physicians became plentiful, and lays emphasis upon the part played by the will, rational living and abstinence in the preservation of health.

A Savings Account in the BANK OF TORONTO

is both safe and profitable, and in addition is a very great convenience and help to all who are trying to live on less than their income.

This Bank's large resources ensure safety, and careful attention is given to the business of all customers.

Interest paid on all balances 4 times a year.

The Bank of Toronto
Head Office: Toronto, Canada.

Capital, Rest and Undivided Profits	\$ 4,000,000
Assets	4,650,000
Incorporated	- 1855.

MARKETS.

TORONTO.

LIVE STOCK.

Receipts of live stock at the City and Union Stock-yards markets last week were light. The bulk of the cattle offered were of the half-fat class. Trade was brisk, owing to light deliveries.

Receipts of cattle at the Junction on Monday, Jan. 6th, were 846 cattle, quality fair; made brisk; prices higher. Exporters, \$4.50 to \$4.80; export bulls, \$3.75 to \$4.40; picked butchers', \$4.75 to \$5.05; good butchers', \$3.50 to \$4.65; medium, \$4 to \$4.25; common, \$3.75 to \$4; cows, \$3 to \$3.50; canners, \$1 to \$2; milk cows, \$30 to \$50; calves, \$4 to \$6.50 per head. Sheep, \$3.70 to \$4.10; lambs, \$5 to \$6. Hogs—Selects, \$6; lights and fats, \$5.75.

Exporters.—Last week few were on sale, and few were seemingly wanted. Prices ranged from \$4.50 to \$4.80; export bulls sold at \$3.50 to \$4.25 per cwt.

Butchers.—Choice picked lots of butchers' sold at \$4.75 to \$5; fair to good, \$4.25 to \$4.50; medium, \$4 to \$4.25; common, \$3.50 to \$3.75; cows, \$2.50 to \$3.75; canners, \$1 to \$2 per cwt.

Stockers and Feeders.—Only a few lots of very common, ill-bred stockers were offered, and these sold at \$2 to \$2.85 per cwt.

Milkers and Springers.—A limited number of milkers and springers sold at \$30 to \$60 each; the bulk of the best sold at \$40 to \$50 each.

Veal Calves.—Few calves were on sale. Prices were unchanged at \$3 to \$6 per cwt.

Sheep and Lambs.—Deliveries light. Export sheep sold at \$3.75 to \$4; rams and culls at \$2.75 to \$3.50 per cwt.; lambs, \$4.75 to \$5.60 per cwt.

Hogs.—Deliveries were exceedingly light. Prices firmer at \$5.70 for select, and \$5.45 for lights and fats. The prospects are for higher prices in the near future.

Horses.—Burns & Sheppard report little change in prices. Last week being holiday week, there was little doing, and prices were quoted as follows: Good sound horses, 1,200 to 1,300 lbs., sold at \$125 to \$160; 1,400 to 1,700 lbs., at \$160 to \$200; delivery horses, \$125 to \$185; roadsters, \$125 to \$225; serviceable work horses, \$40 to \$75; carriage pairs, \$250 to \$500.

BREADSTUFFS.

On all the markets during last week there was little doing, and prices were nominal.

Wheat.—No. 2 white, sellers, 96c.; No. 2 red, sellers, 93c.; No. 2, mixed, sellers, 93c., with buyers at 92c.; spring wheat, none on sale; Goose, 85c. Manitoba wheat, No. 1 Northern, \$1.10; feed wheat, 61c. to 62c., at lake ports.

Rye.—No. 2, 78c.

Beans.—83c., outside.

Buckwheat.—62c., outside.

Barley.—No. 1, 70c. to 72c.; No. 2, 68c. to 70c., outside; No. 3, extra, 65c. to 67c.

Oats.—No. 2 white, 44c. to 45c., outside; mixed, 43c. to 44c., outside.

Corn.—No. 3 American yellow, 70c. to 71c., Toronto freights; new No. 3 yellow, 64c. to 65c.

Flour.—Ontario patents, \$3.60 bid for export; Manitoba patents, special brand, \$5.80 to \$6; seconds, \$5.20; strong bakers', \$5.10.

Bran.—\$19 to \$20, in bulk, at points outside.

Shorts.—\$21 to \$22, in bulk, outside.

COUNTRY PRODUCE.

Butter.—Receipts fair, with prices easier. Creamery, rolls, 29c. to 30c.; creamery, boxes, 27c. to 28c.; dairy, pound rolls, 27c. to 28c.; tubs, 25c. to 26c.

Cheese.—Market unchanged at 13c. for large, and 13c. for twins.

Eggs.—New-laid eggs, 29c. to 30c.; cold-storage, 22c. to 23c.

Honey.—Market steady. Extracted, 13c.; combs, dozen sections, \$2.75 to \$3.00.

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

Beans.—\$1.70 to \$1.90 for primes, and \$1.80 to \$1.95 for hand-picked.

Poultry.—Receipts were heavy, with prices about the same: Turkeys, 14c. to 16c.; geese, 10c. to 12c.; ducks, 10c. to 12c.; chickens, 10c. to 12c.; old fowl, 7c. to 8c. per lb.

Hay.—Baled hay, \$17 to \$17.50 for good No. 1 timothy, on track, at Toronto.

Baled Straw.—Market steady at \$9.50 to \$10 per ton, for car lots, on track, at Toronto.

HIDES AND WOOL.

E. T. Carter & Co., 85 East Front Street, wholesale dealers in wool and hides, report prices as follows: Inspected hides, No. 1 cows, steers, 5c.; inspected hides, No. 2 cows, steers, 4c.; country hides, cured, 4c. to 4c.; calf skins, 6c. to 8c.; kips, 6c.; horse hides, No. 1, each, \$2.25; horse hair, per lb., 27c.; tallow, 5c. to 6c.; wool, washed, 19c. to 20c.; wool, unwashed, 10c.; rejects, 14c.; lamb skins, 75c. to 85c.

MONTREAL.

Live Stock.—Prices of live stock on the local market were well maintained last week. Receipts were rather on the light side, owing possibly to unfavorable weather conditions. Demand was very fair, and prices held firm. Choice cattle sold at 5c. to 5c. per lb.; fine at 4c. to 5c.; good at 4c. to 4c.; medium at 3c. to 4c.; common at 3c. to 3c., and inferior down to 2c., tanners being 1c. to 1c. Sheep and lambs were very firm, offerings being limited, and demand good. Export sheep cost about 4c. per lb.; good butchers' stock about 3c. to 4c., and culls down to 3c. Choice lambs sold at 6c. per lb.; good at 5c. to 6c., and common down to 5c. Calves showed little change, fine being as high as \$15 each; good ranging around \$8 to \$10, and common around \$4 to \$5. Hogs, owing to light supplies and good demand, are sold at firm prices, being 6c. for select lots, weighed off cars.

Horses.—Dealers reporting a better demand than for months. During the past few weeks there have been quite a number of horses changing hands, and the stables are fairly well cleared out. The demand is mostly for railway operations between Montreal and Quebec City, and the quality of the animals required is good. The demand for local use is extremely light. No trouble in obtaining all required. Prices steady, as follows: Heavy-draft horses, weighing 1,500 to 1,700 lbs., \$250 to \$300 each; light-draft, 1,400 to 1,500 lbs., \$225 to \$275 each; good blocks, 1,300 to 1,400 lbs., \$200 to \$225; express horses, \$150 to \$225; common plugs, \$50 to \$75, and choice carriage and saddle horses, \$300 to \$500 each.

Dressed Hogs and Provisions.—Dressed hogs have been in very fair demand for several days past, and the present colder weather should assist in activity. Fresh-killed, abattoir-dressed hogs are selling at 8c. to 8c. per lb., and country-dressed at 7c. to 8c. All kinds of cured meats, also, are in brisk demand. Lard steady, 12c. to 12c. per lb. for pure, and 9c. to 9c. for compound.

Poultry.—Supplies short; prices have been firmly held. Sales of turkeys have been reported at considerably more than before Christmas, even; some having been

reported at as high as 16c. per lb., wholesale. A general price has been 15c., and quotations range around that figure, about a cent each way. Geese have been in good demand, and the market on them has stiffened somewhat. Sales as high as 11c. per lb., and from that to a cent, and occasionally two cents, lower. Ducks about the same range as geese. Chickens similar in range, fine stock selling up to 11c., and being in very good demand. Fowl, 6c. to 8c. per lb. On the whole, the poultry market has shown rather more strength than is generally looked for at this time of the year.

Potatoes.—Trade has been dull, the majority of dealers having purchased their supplies some time since. However, some stock has been changing hands; dealers paying 74c. to 76c. per 90 lbs. for good white stock, carloads, on track, and turning these over in the same position at an advance of about 4c., and in broken lots, same position, at an advance of about 10c. They are delivering into store, in broken lots, bagged, at 90c. to 95c. per bag. Demand is only for small lots, grocers making purchases for not more than half the quantities they were formerly willing to take.

Butter.—The market for butter was on the dull side last week, following the holiday trade. Current receipts are quoted at 26c. to 27c. per lb., some of them being rather mottled and short in the grain. Novembers might be quoted at 27c. to 28c., and Octobers at 28c. to 29c., single packages being about 29c.

Cheese.—Market was rather quiet last week, it being no part of the Englishman's idea to distress himself with business matters during the holiday period. Very few bids have been called here during the week, and practically no business put through. Prices steady; 12c. for October white cheese, and 13c. for September whites, colored cheese being in each case worth about 1c. more.

Grain.—The market for oats during last week showed very little interest, and changes have not been violent, though a slight decline was reported; No. 2 Ontario being obtainable at 50c. to 50c. per bushel, in car lots, No. 3 being 48c. to 48c.; No. 4, 47c. to 47c., and rejected, 44c. to 45c. per bushel, in store. No other grain in the market.

Millfeed.—Manitoba millers are quoting the market at a decline of \$1 per ton for both bran and shorts, the former being \$22 per ton, and the latter \$24. Demand, in each case, moderate.

Hay.—The market holds about steady. Dealers are paying \$16.50 to \$17.50 per ton, on track, for No. 1 timothy; \$15 to \$16 for No. 2, and \$13.50 to \$14 for clover mixture.

BUFFALO.

Cattle.—Prime steers, \$5.25 to \$5.60.

Veals.—\$5 to \$9.75.

Hogs.—Heavy and mixed, \$4.80 to \$4.85; Yorkers, \$4.75 to \$4.85; pigs, \$4.70 to \$4.75; roughs, \$4.10 to \$4.80; dairies, \$4.70 to \$4.85.

Sheep and Lambs.—Lambs, \$5 to \$7.65; a few, \$7.75; ewes, \$4.25 to \$4.75; Canada lambs, \$6.65 to \$7.25.

CHICAGO.

Cattle.—Steers, \$3.90 to \$6.25; cows, \$2.75 to \$4.50; heifers, \$2.50 to \$5.25; bulls, \$2.60 to \$4.25; calves, \$3 to \$7; stockers and feeders, \$2.40 to \$4.50.

Hogs.—Choice heavy shipping, \$4.50 to \$5.70; butchers', \$4.60 to \$4.70; light mixed, \$4.35 to \$4.40; choice light, \$4.55 to \$4.60; packing, \$4 to \$4.60; pigs, \$3.50 to \$4.30.

Sheep and Lambs.—Sheep, \$4 to \$5.20; lambs, \$5 to \$7.05; yearlings, \$4 to \$6.15.

BRITISH CATTLE MARKET.

London.—London cables, 10c. to 13c. per lb., dressed weight; refrigerator beef is quoted at 9c. per lb.

An old man had gone to a post office in Mississippi and offered for the mail a letter that was over the weight specified for a single stamp.

"This is too heavy," said the postmaster. "You will have to put another stamp upon it."

The old darkey's eyes widened in astonishment. "Will anudder stamp make it any lighter, boss?" he asked.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.

2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd.—In Veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1 must be enclosed.

Miscellaneous.

CERTIFICATE OF TRANSFER.

I sold a Holstein-Friesian bull, and want to give buyer a transfer. Kindly inform me, through your valuable paper, how to apply for one. G. M.

Ans.—In order to secure a certificate of transfer, it will be necessary for you to obtain a form for application for transfer from the Secretary of the Association, which form he must fill out and return to the Secretary, G. W. Clemons, St. George, Ont., with required fee, when a certificate of transfer will be issued.

DISPOSING OF PIGS.

1. Which is there the most money in, keeping several sows and selling the little pigs, or just keeping one or two sows, and keep the pigs?

2. Would it pay to buy sows just after the pigs are taken off, and sell them just before they farrow again, or after they have pigs? C. W. B.

Ans.—1. It depends a good deal on the price one can get for young pigs. At present prices it would appear to be the better policy to keep the smaller number of sows, and raise their pigs. But, from the fact that breeding sows have been fed off in large numbers this fall, the probability is that hogs will be scarce, and prices higher next summer, and that young pigs, as well as finished hogs, will bring good prices.

2. That will depend upon the price obtainable when the time arrives, and which cannot be foretold with anything like precision.

POWER FOR THE FARM.

1. Which is the best and cheapest power for the farm, for cutting wood, grinding grain, etc.? We think horse power the most satisfactory, as the farmer has to keep horses for other purposes, and then a good steam engine costs a lot of money. We would not like to risk a gasoline engine by what we hear of them, and second-hand horse-powers can be bought cheaply.

2. Which is best for circular sawing machine, to run by belt from jack, or to be geared, and run direct from power without jack? Can you say where to buy the best circular saw for cutting wood for fuel? H. Peterboro Co., Ont.

Ans.—1. This question has so often been discussed in "The Farmer's Advocate" as to suggest the preservation of the files of the paper by our readers, with the half-yearly index of articles; or, as some do, making a scrap-book of answers to important technical questions for future reference. Our subscriber appears to be favorably disposed to horse-power, and it still plays a useful and economical part, but "there are others." If for grinding and pumping alone, wind, with a good mill, is the cheapest power; but for sawing wood, silo-filling and such operations, something more efficient is required, and the comparative cost every one can best figure out for themselves. It is only fair to say, however, that the gasoline engine is steadily gaining in favor as an all-round farm power, as it can be used inside in all sorts of weather, and is no more dangerous than the coal-oil lantern which people use. A reader who has had a lot of experience with gasoline engines, says grinding can be done at a cost of two cents per hundred for the fuel when gasoline is 15 cents per gallon; while the labor is reduced to a minimum. A six- or eight-horse-power size is a useful style for an ordinary farm.

2. If a steam or gasoline engine is used, a jack in sawing is not necessary, but it should be attached with a horse-power. With regard to procuring circular saw, we would suggest writing some of the many power or other firms advertising in "The Farmer's Advocate."



Life, Literature and Education.

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



The Crater of Mount Asama.

ASAMA-YAMA.

The greatest treat of the summer vacation for foreigners in Karnizawa is to climb Mount Asama, one of the largest active volcanoes in Japan. It is a long, hard climb, so our party of fourteen chose a calm moonlight night for the trip. Each with his luncheon, his indispensable water-bottle, and his equally indispensable coats and blankets, assembled at the livery stables at six-thirty, where we were to mount our fiery steeds. Doubtless, if you could see the low shack, no larger than a small cowshed, in which the horses were kept, you would not dignify it by the name of a livery stable; nor would you call the horses steeds, for the poorest farm horses at home would put to shame the ones we had to ride for the first eleven miles of the journey. Each horse, being so vicious and unaccustomed to be guided by a bridle, had his betto or groom. We surely made a notable procession, as, mounted on our clumsy horses, we rode down the main street of the village. Soon, however, our appearance became more ludicrous, for the thunderstorm which had been threatening now broke over us, and our umbrellas came into service. Fortunately, it was soon over, and the moon came out, turning the darkness into a beautiful shimmering light. Accordingly, our spirits rose, and as we passed through the tiny villages we had a cheery "Komban" or "Oyasumi Nasai" for the passer-by. After winding round the base of Mt. Hanare, we began to ascend the foothills, and beautiful they stretched before us, their trees casting long, graceful shadows across our way. After three hours of riding through the rising woodland, we arrived at the foot of Asama Yama.

Here the men made a roaring fire, and we gathered around to rest our limbs, weary with riding, and to eat our luncheon. In preparation for the climb, our coolies tied straw sandals over our shoes, to keep us from slipping, and round our waists were tied long pieces of Japanese

towelling, by which we would be pulled when we came to the steep places. Then, accompanied by the coolies with our baggage and lanterns, we formed into procession again and began the climb. Before we reached the steep places we amused ourselves by listening to the remarkable echoes between Asama and Ko Asama. But soon all talking ceased, and we strained every nerve and muscle to make the ascent. Our rests were very frequent. We usually lay prone on the earth, and during these resting times we viewed God's handiwork, the firmament. High up as we were, above all clouds and mists, we gazed in rapture at the myriads of stars twinkling in Heaven's blue. Chief among these was not Orion, the Pleiades, or any of the ordinary brilliant constellations, but the Daniel comet. The star bright above the others, with its tail stretching far across the sky, was very wonderful.

A faint pink streak in the eastern sky warned us that we must hurry if we would see the crater before the sunrise. Gathering our strength, we made the final effort, and, almost breathless, reached the top, only to be met by an encircling cloud of sulphur fumes that made us even more breathless. Our duty now was to get to the windward side of the crater, to be free from the smoke and the sulphur. Words fail me as I try to describe that awful pit. Looking down we could see the solid bed of red-hot coals, sometimes bursting into flames. We could hear the roaring as of many waters, could see the steam and smoke, could smell the sulphur fumes, and could feel the old mountain quake with each internal movement. Truly a volcano is a hole—but such a hole!—in the ground, and the nebular hypothesis becomes a theory easy to be believed.

The fires of the earth so fascinated us that it was with difficulty we turned away from them. But as we did, what magnificence greeted our eyes. Completely encircling us, for no other mountain rises above them, is a vast ocean of fleecy, billowy clouds. There they lie, motionless, in their perfect beauty. If the foam-crested waves of the ocean could be held motionless they would, in some measure, resemble the clouds, but without that indescribable purity and softness. The glowing sky indicates where the king of day will enter; and from there those gorgeous rays, seen nowhere as perfectly as in Japan, spreading up into the deep blue of the sky, showed us a new reason why Japan is so fittingly called "The Land of the Rising Sun." Slowly and majestically the Royal Master approached, sending before him his heralds—the rays—to gild and make more beautiful the clouds waiting to welcome him. As he appeared above the clouds, we saw the Japanese worshipping, and we were not surprised, for the glory was so magnificent that to one who knew not the Creator, the creation was indeed worthy to be worshipped. The clouds—as though having been dismissed by their master—began silently to vanish from our view, and opened to us the world bathed in the first morning light. In the east, rising above the purple hills that surround it, was sacred Fuji San, its snow-capped peak glistening like a crown of glory in the sunlight. Below us, to the right,

were the smaller hills, Hanare, Prospect Point, and Cathedral Rocks, and in between lay the tiny villages and rice fields. The world was indeed beautiful as it lay before us in the brightness of early morning. Knowing the heat of the midday sun in the valley, we had to hasten our return. With one last look into the crater, one more look over the entrancing landscape, we, not without a struggle, turned and began to descend. The descent fully revealed what the ascent had been. As we crossed to the other side of the mountain over a path, where a misstep would have sent us whirling down a precipice, we realized that our climb had been a dangerous as well as a hard one. Arriving at the foot, we mounted our horses, and though extremely tired, we could not but admire the wooded foothills, the deep ravines, the lava beds in the distance, and the mountain sides, on which, in regular rows, spruce trees had been planted. As we journeyed we passed a master and his wife riding in panniers hung on either side of a horse; a lady being carried in her kago, on the shoulders of two men; a man on horseback; a lady in a jinrikisha; a group of pilgrims walking; in fact, we saw all modes of Japanese travel.

By the roadside in many places were fields of mulberry trees, and in a house near by were women and children cutting the leaves for the silkworm. Here and there, too, would be quaint water wheels used in flooding the rice fields, but, stranger still, and yet more familiar to us, was a sawmill run by water. Stranger, because usually in cutting lumber the logs are propped high at one end, and a man with a clumsy saw stands underneath, and by pulling the saw towards himself saws the boards. We saw the small shrines under clumps of trees, the cemeteries decorated by flowers and colored paper, it being the festival of the dead, and many other quaint touches of Japanese life, which added much pleasure to the journey. Reaching the level country we passed through the floating rice fields, and then through the straggling Japanese villages, greeted by the children as "Ijin San"—the honorable foreigner—or hear the "Goodu Byu" of the lads who are struggling with the English language.

On entering Karnizawa we straightened ourselves in our saddles, determined to make as dignified an entrance as possible. But we were so glad to reach home, to see the famous Japanese hot bath ready for us, to smell the good things our cook had provided for us, and to give ourselves up to slumber, and delightful, never-to-be-forgotten dreams, of the marvellous things we had seen.

Tokio, Japan.

M. L.

PUBLIC SPEAKING.

It has been said by a wide observer of men that the best debaters are usually the best thinkers. It has been observed by another that we never really understand anything that we have heard or read till we have tried to reproduce it in our own words. It is equally true that one of the readiest means of enlivening one's wit and of broadening one's understanding is the free discussion of subjects of genuine interest. Such discussion organizes what one already

knows. It makes one aware of how lamentably inadequate his knowledge is, and spurs him to learn more.

The art of public speaking is one of the noblest of the fine arts. Speaking of this art, Cicero has declared that it is a man's duty to excel in this faculty—a power in which man excels the beast. Public speaking, while it never can take the place of thought, is one of the most efficient helpers to clear and rapid thinking. Many a farmer's son longs for proficiency in this noble art. Quite legitimately, he wishes that he were capable of presenting his views in such a manner that they would not only be clearly understood, but that they would influence the lives and actions of others. One who has this desire need not despair of a fair measure of success, provided he has the mettle that will enable him to pay the price.

In this art one learns to do by doing. Nothing is better for making a start in this direction than the small mutual-improvement society. If a group of young men will agree to meet regularly to discuss topics of real interest, they will be amazed at their progress,—particularly will they be gratified if their discussions have been carried on under the guidance of a judicious, candid and capable critic, in whom all the young men have confidence. For instance, let a real book be the subject of discussion for one evening. For a beginning nothing is better than a good biography, or a good story book. The best results will follow when the book under consideration is discussed under various topics.

Such discussions are better interspersed with debates. In this connection the one thing needful is a subject upon which the debater may do real thinking. Topics of local interest, that are free from the blight of partisanship, and questions of national concern, that are not political, give scope for clear thinking and call for discussion.

The beginner will do well to get it clearly into his mind that no one is a good speaker by a mere happy chance. The men whose utterances have been of any real value have been men who have been clear thinkers first of all, and who have given themselves no end of discipline to find the right words and to secure the right opportunity for giving their thoughts utterance. No one is "a born speaker," any more than the captain of a ship is a born sailor. Like the student of any form of art, the young speaker must not be discouraged by a few failures. Even the leaders in the pulpit, or the bar, or the platform, or the hustings, are not always at their best, and even their finest efforts are frequently followed by a discouraging sense of failure. The young speaker must never be discouraged because he feels nervous before making a start. The absence of this nervousness is more to be dreaded. Even Henry Ward Beecher, a prince among orators, suffered from this initial fear to the end of his days. Further, the young speaker should learn to make his remarks in a given time—in five, ten, or fifteen minutes. Principal Grant used to recommend his students never to preach more than twenty minutes—"with a leaning mercy," he would add—and Josh Billings declared that the public speaker "who couldn't strike in twenty minutes was boring in the

wrong place, or there was something wrong with the auger." The whole matter may be summed up briefly: Have something to say. Say it at the right time, so as to be heard and understood, and as briefly as possible.

O. C.

THE OLD-FASHIONED DEBATING CLUB.

In a comparatively recent issue of this periodical, a writer lamented the absence of the ability to speak in public in rural communities. He pointed out forcibly the disadvantage under which a farmer labors when circumstances compel him to enter the lists of politics, when he frequently stands dumbfounded before opponents of lesser intellectual calibre, because of this disadvantage, the irrefutable logic of his brain refusing to take a convincing utterance. And it was strongly suggested in this timely plea, that the members of a rural section of a Province ally themselves with debating societies, etc.—a very valuable piece of advice, pithily expressed.

It is not necessary to ask what has become of the farmer's gift of oratory, but what has happened to the old-fashioned debating club, at which our fathers threshed out international, national, political and social problems with an effusive zeal that would, at times, have confounded the university savant. In some parts of the Dominion it no longer exists; in others it still survives, as the rendezvous of a few old cronies, who nightly rethrust old hackneyed subjects with the same old hackneyed arguments. In French Canada such a condition is not so very greatly to be regretted, for the habitant is naturally a man of ready speech, though not always gifted with political logic; but with the British-Canadian the case is far different; our public speakers being largely the result of culture and voluntary environment.

The debating society is apparently about to become extinct, and why? Not because of the hackneyed subjects, but because of the prolix and ridiculously absurd arguments for the affirmative, and the equally threadbare reply. A thousand novels have been written with the same old plot, the same old setting, and the same old end, but with their character delineations so powerfully original, yet so tangibly natural that each book appears a plant sprung from widely varying seed. Everything in this world is but a repetition of something that has gone before, or that exists somewhere else. We see a thousand different faces, not two countenances in the world are alike, we are assured, except that we all thank God for our two eyes, mouth, nose and ears. The same pattern, as old as Eden, yet how wonderfully varying from continent to continent! How often have we laughed, how often have we not laughed, at that old debating subject, "Which is the mightier, the pen or the sword?" But can the greatest scoffer of us all logically dismiss the question in ten, fifteen or twenty-five minutes' talk? No, we venture to assert. Just come out of your all-knowing self and consider it, "Which is the mightier, the pen or the sword?"

Granting you picked up the gauntlet in favor of the former, what would you have to contend with from the latter? You must possess not only a wide and valuable knowledge of ancient and modern history, but a keenly-balanced judgment, coupled to a most unprejudiced mind. To support your statements you have almost half of the world's literature behind you—if you are aware of it. Against you are arrayed the campaigns of Hannibal, Cæsar, Marlborough, Napoleon, Grant and Moltke—a subject that is in reality stupendous in its immensity, yet how often laughed down by the unthinking?

In fact, the very reason why such subjects of debate have fallen into disfavor is not because of their being so easily decided upon, in the affirmative or negative, but because they are too vast to be talked about inside of two hours. A debating club

should interest itself in topics of pregnant historical or intensely absorbing present interest. Even if some personal feeling, afterwards condemned by a cooler judgment, enters into a discussion, it but serves the purpose of bringing a spirit of enthusiasm into a man's words, which is better than an apathetic deliberativeness. The old-fashioned debating club is not yet dead. Some day it may take a wonderful spurt of energy, overspread the land with its great educational privileges, and become the fashion—the new fashion, once more. At least the most of us enthusiastically hope so.

WILLIAM J. PITTS.

Rosseau Falls, Ont.

OUR LITERARY SOCIETY.

So many excellent essays have been submitted in Competition No. II. that we have thought best to present them topic by topic, dealing with but one subject in each issue. In the

prisonment of the Actual, and criest bitterly to the gods for a kingdom wherein to rule and create, know this of a truth: the thing thou seekest is already with thee, 'here or nowhere,' couldst thou only see." He who would live must work. There can be no growth or development of body or mind without it. When you cease to work, you cease to live. "The idle are a peculiar kind of dead who cannot be buried."

It is true that there is a proverb, long-current, that "God takes care of the lame and the lazy." But I suspect that it originated in the philosophy of that class of gentry, who, whether clothed in purple and fine linen or decorated with rags, are fond of saying that "the world owes them a living"—an assertion utterly absurd and wholly untrue. It is bad enough to be a "do-nothing," but why add falsehood to shame by claiming assets never possessed?

Endowed as we are with such god-

away, no matter how much it is used. It is terrible to do nothing worthy, to live for nothing worthy, to be nothing worthy. The beginning of all excellency lies in the determination to make the best of oneself, for upon the proper development of your powers of body and mind depends your highest, best success, here and hereafter. You have been given your special work so do. It may be lowly, it may be uncongenial, but if it is for you to do, do it. Do it the best you know how. Whoever consents to less than his thorough best is neither shrewd nor good. It will be found in the long run, and often in the short dash, that there is nothing more practical than a high and relentless ideal.

To do things by halves or thirds, to put only a part of oneself into the given task, whether the tool be a pen or a pick, is to add to the general bulk of unrighteousness. The old sculptor who said of his carvings, whose backs were to be out of all possible inspection, "but the gods will see," touched this matter to the quick.

To accept conventional estimates, to excuse oneself by averages, to let facility cheat thoroughness, to intermit that stern self-censorship which both fidelity and far-sightedness command, is to be always an apprentice, and never a master.

The ultimate and inestimable reward of work well done is the answer of one's own soul in deep approval. Self-respect attends the outlay of one's total energy for worthy ends. The solid soul who writes not alone on a crest, but on his heart, "Ich dien," attains a peace above all earthly dignities. And the Sage of sages speaks yet, as he spake through the seer of Patmos, "I know thy works."

His "well done" will be the recognition and crowning reward of all true men and women.

ANNIE McDIARMID.

Dundas County, Ont.

Essay II.

In these significant words of Carlyle, a great truth is stated. We have here the keynote of a true and useful life.

I would suggest, however, that a qualifying term, expressed or understood, be attached to the word "work." To be effective and truly valuable, work must be performed with skill, must be wisely-directed. Work, as mere work, may be of little or no productive value. It may not even be disciplinary. A man who works mechanically or blindly, is likely to prove a failure.

Sir Joshua Reynolds declared: "Nothing is denied to well-directed labor." Franklin tells us that, "God gives all things to industry." Ruskin observes: "When I hear a young man spoken of as a genius, the first question I ask about him is, always, 'Does he work?'"

Carlyle, himself, was an illustrious exemplar of his philosophy of work. The man who studiously read five hundred volumes as a preparation for writing his "French Revolution," and who—his manuscripts being used to kindle the kitchen fire by the servant of a friend to whom it was loaned—rewrote the whole, was assuredly "a born king of something."

If we note the characteristics of the kings of achievement in any of the walks of life, we find the salient feature to be, not genius, but work; not the mere power to achieve, but the will to do "something," despite all barriers, and to do that something well.

Whether it be to hold an audience enrapt by impassioned eloquence; to charm, to inspire the mind with bright images and noble thoughts; to preside over a railroad, or direct the course of a ship; to "make two blades of grass grow where only one grew before," or guide the destinies of a state; whether it be to dig ditches, to edit a periodical, or to preach sermons, in every sphere, the man who does his work, and does it well, is a "king of something."

Were any argument or evidence needed to prove the greatness of



Mount Asama in an Eruption of Smoke and Steam.

first to hand, one of Carlyle's slogans for the honor of work, A. McDiarmid and W. J. Way have been most successful. Announcements regarding the other topics will appear in later issues of "The Farmer's Advocate."

Topic—"He that can work is a born king of something."

Essay I.

We live in a day when the poet and the philosopher have combined to sound the praise and dignity of labor. Work is the new patent of nobility—it is not a curse, but a benediction; it is not a mark of degradation or of servitude, but an insignia of royalty.

O thou that pinest in the im-

like qualities in embryo, and placed in a world that is fitted to develop the best that is in us to the highest point possible for us to attain in our present stage of being, what a shame it is to make one's life only a bitterness and a curse!

All worlds are workshops, and this of ours is no exception. Heaven is to garner at last the best productions of earth for its great universal exposition. "They shall bring the glory and the honor of the nations into it." But it is only "the glory and the honor" work that goes on exhibit there.

Are you and I now doing anything that "they" will think worthy of preservation? Any energy that is not consecrated energy is thrown

work, or the greatness of the worker, one might traverse the pages of history, covering a century or two, and with the mental eye view "the land of our birth or adoption" in its primeval condition. Then adjust our vision to present-day conditions. View the transformation: "The wilderness made to blossom as the rose," by the labor of man. In place of the forest, we have the smiling and cultivated landscape—the fertile fields, gemmed with homes of refinement and wealth. The wigwam and the rude hut have given place to comfortable abodes, to centers of manufactures and commerce, and seats of learning. Think, also, of the facilities for travel and transportation, and of the means for the transmission of intelligence! The unlettered savage has disappeared, and in his place have come in teeming millions civilized and cultured man.

The noble and herculean work of the men who removed the forests and erected splendid architecture, established governments and the social fabric, should stamp each not only a "king," but also a conqueror and benefactor.

Every man cannot be an Alexander Mackenzie or a Lincoln, a Gladstone or a Carlyle, an Edison or a Marconi, but everyone may be great—may be a king in his own sphere.

Kent Co., Ont.

W. J. WAY.

CONCERNING BACK NUMBERS.

I wonder how many of the readers of "The Farmer's Advocate" take care of their back numbers? Those who have done so in years gone by have most assuredly kept within their reach a veritable treasure-store of helpful information and most interesting reading matter, whilst those who have merely read their papers and then dropped them into the waste-paper basket, trusting to a sometimes treacherous memory to retain what they have read, must often wish they had been less improvident, and had stored their "Advocates" away for future reference.

Well, it is never too late to mend, and there can be no better time to begin the process than at the dawn of a new year, and may this new year, 1908, bring health, happiness and prosperity to every reader of our paper in every corner of our wide Dominion to which it is a welcome weekly visitor.

TWO INCIDENTS AND A QUOTATION.

Two incidents started this train of thought in my mind. The first was the sight of a large, bound volume of "The Farmer's Advocate" for 1901, from which I want to offer some quotations presently; and the second was a true story, which has just come to my ears, of one reader, at least, who placed so high a value upon his paper that he took possession of one whole room in his home (fortunately, a good-sized one) in which to store them. His wife had certain designs of a domestic nature upon that room, but, in accordance with the old axiom, that "possession is nine points of the law," she was told that she simply could not have it. "Because," said her husband, "I keep my 'Farmer's Advocate' there. I have taken them for the last fifteen years," and that fact closed the discussion.

It was my privilege, as a member of the National Council of Women, to be a guest at the Macdonald Institute during the late session of the Women's Institutes Convention, held at Guelph early in December, they (the Women's Institutes) being, we are proud to know, in affiliation with our National Council, to which fact we owed our recognized place upon their programme.

The report of the speeches given by prominent agriculturists, educationists and members of the Women's Institutes of Ontario is well given in the issue of 26th December, and need not be more than referred to now, but they were replete with interest and instruction.

Some of the things said came as

echoes of utterances which have (probably by the speakers themselves) found their way from time to time into the columns of our paper—all of them well worthy of reiteration. For instance, one lady, Dr. Annie Backus, "a devotee of the rural life," made an earnest plea for so brightening the home life on the farm that the boys and girls would not be tempted away from them into the city, where often but a precarious livelihood awaits them, and where the home is exchanged for the discomforts of a crowded boarding-house. Dr. Annie Backus claimed for our girls in the country, that a love of nature should be developed. "For," she urged, "if we love nature—flowers, woods, bird-songs—we can seldom be alone or lonely."

FROM A "FARMER'S ADVOCATE" OF 1901.

And now, turning to the pages of the big volume of "The Farmer's Advocate" for 1901, let me give my promised quotations from a six-year-old message "to the girls," which not only embodies the same thought, but is a beautiful expansion of it. The message, coming, as it did, from the pen of one who was then in the full bloom of her early youth, but who has now passed upwards into the larger room, the fuller life, has a very pathetic significance, and perhaps even a deeper meaning for the girls of to-day, who may now read it. After somewhat humorously alluding to its being the usual fate of the women of the farm to be "Everlastingly trying to solve the problem of making one dollar do the work of five, our young writer, under the signature, "One of the Girls," says:

"But, after all, life on the farm is the same as life in any other sphere; it is what we make it. We can live in the kitchen and work, week in and week out; scold about the men, live amid the small worries, small cares and troubles; turn our backs upon beautifully-tinted sunsets; never listen with open hearts to the story the stars and birds are ever trying to tell us; always think of home as mother's and father's home, never as our home; never, perhaps, even try to brighten that home, but always be striving after the unattainable. Then, we can be as miserable as we deserve to be. . . I shall never forget," she adds, "one spring morning, some few years ago, I was out in my garden, feeling very disconsolate, for the chickens had scratched out my bulbs; the poor hyacinths, with their budding spikes, were lying half buried in the soil, and the little crocuses were completely out of sight. These lost treasures I was doing my best to restore, when Mr. Weld, the founder of 'The Farmer's Advocate,' drove up. I remember so well trying to hide behind a shrub, but he saw me, and asked why I was ashamed of being caught working amongst my flowers. I should be a proud and happy little girl to have such beautiful flowers to work among. Do you think he told me it was no use trying to grow flowers because we had chickens? No, indeed! He went to father, and made him promise to get wire netting for the chicken-yard, and encouraged me to work away in my garden. That morning, too, he showed me the beauty in the little catkins of the birches, and flowers of the maples, which I never forgot. It awakened in me a sense of looking for beauty in the common things of every day, making me love my country home." Continuing in this strain, and speaking from her very heart to those other girls she was addressing, their friend continues: "I hope you will not think this a mere flight of fancy, only to be carried out by the ideal country girl we read of in books, who goes about in summer meadows plucking daisies. No, it is for the real girl, one of those who bake bread, churn, wash dishes, and work every day of their lives amid many discordant notes and jangles, but who can yet become 'kith and kin to every wild-born thing that thrills and blooms,' and

thus may she realize how 'the spiritual, unbidden and unconscious, may yet grow up through the common,' and so, instead of drudgery, may new interests and pleasures be found in the farm-homes of Canada."

These words are but an echo from long ago, but I am glad to have found them in that old volume of "The Farmer's Advocate," and be privileged to pass them on as an inspiration and encouragement to those of our readers who may not yet, as did their dear young writer, "live so closely in touch with nature that even her sun-risings and sun-settings may have a secret to share with them." H. A. B.

Current Events.

Mr. Joseph Oliver has been elected Mayor of Toronto.

Mr. Nosse, Japanese Consul-General to Canada, left Ottawa recently for Japan.

Twenty-one new boats will go into commission on the Great Lakes when navigation opens.

It has been decided to enlist dogs into the French Army, to be trained to search for wounded soldiers, convey nourishment, etc.

A Japanese company has applied for a large tract of irrigable land in Alberta on which to grow sugar beets and locate a Japanese colony.

Manitoba is now the proud possessor of the first complete Government-owned telephone system on the continent. The purchase of the Bell system for the Province cost \$3,300,000.

The Transvaal Government is enforcing the law demanding the registration of all Asiatics in the colony. Two thousand natives of British India in the colony have declined to submit to the regulation.

The agitation for "recovery of rights," which, the Chinese assert, have been alienated from them by foreigners, has spread until the Dowager-Empress has issued an order for the suppression of all public meetings in Peking. This step has probably been taken to suppress the possibility of collision with granted British rights in China.

A new verse, said to be a heretofore missing portion of the Gospel of St. Mark, to follow Chapter XVI.: 14, has been discovered among some bits of ancient vellum bought at Cairo by a Detroit multi-millionaire. The verse has been translated as follows: "And they answered, saying that this age of unrighteousness and unbelief is under the power of Satan, who does not permit the things which are made impure by the (evil) spirits to comprehend the truth of God (and) His power. For this reason 'reveal thy righteousness now,' they said to Christ, and Christ said to them, 'The limit of the years of the power of Satan has been fulfilled, but other terrible things are at hand, and I was delivered unto death on behalf of those who sinned, in order that they may return to the truth and sin no more, to the end that they may inherit the spiritual, indestructible glory of righteousness (which) is in heaven.'"

"I am so happy," she said. "Ever since my engagement to Charlie, the whole world seems different. I do not seem to be in dull, prosaic England, but—"

"Lapland," suggested her little brother, who was doing his geography lesson.

The Quiet Hour.

THE POWER OF PERSONAL INFLUENCE.

By W. G. Jordan.

The only responsibility that a man cannot evade in this life is the one he thinks of least,—his personal influence. Man's conscious influence, when he is on dress-parade, when he is posing to impress those around him, is woefully small. But his unconscious influence, the silent, subtle radiation of his personality, the effect of his words and acts, the trifles he never considers, is tremendous. Every moment of life he is changing to a degree the life of the whole world. Every man has an atmosphere which is affecting every other. So silently and unconsciously is this influence working, that man may forget that it exists.

All the forces of Nature—heat, light, electricity and gravitation—are silent and invisible. We never see them: we only know that they exist by seeing the effects they produce. In all Nature the wonders of the "seen" are dwarfed into insignificance when compared with the majesty and glory of the "unseen." The great sun itself does not supply enough heat and light to sustain animal and vegetable life on the earth. We are dependent for nearly half our light and heat upon the stars, and the greater part of this supply of life-giving energy comes from invisible stars, millions of miles from the earth. In a thousand ways Nature constantly seeks to lead men to a keener and deeper realization of the power and wonder of the invisible. Into the hands of every individual is given a marvellous power for good or for evil—the silent, unconscious, unseen influence of his life. This is simply the constant radiation of what a man really is, not what he pretends to be. Every man, by his mere living, is radiating sympathy, or sorrow, or morbidity, or cynicism, or happiness, or hope, or any of a hundred other qualities. Life is a state of constant radiation and absorption; to exist is to radiate; to exist is to be the recipient of radiations.

There are men and women whose presence seems to radiate sunshine, cheer and optimism. You feel calmed and rested and restored in a moment to a new and stronger faith in humanity. There are others who focus in an instant all your latent distrust, morbidity and rebellion against life. Without knowing why, you chafe and fret in their presence. You lose your bearing on life and its problems. Your moral compass is disturbed and unsatisfactory. It is made untrue in an instant, as the magnetic needle of a ship is deflected when it passes near great mountains of iron ore.

There are men who float down the stream of life like icebergs—cold, reserved, unapproachable and self-contained. In their presence you involuntarily draw your wraps closer around you, as you wonder who left the door open. These refrigerated human beings have a most depressing influence on all those who fall under the spell of their radiated chilliness. But there are other natures, warm, helpful, genial, who are like the Gulf Stream, following their own course, flowing undaunted and undismayed in the ocean of colder waters. Their presence brings warmth and life and the glow of sunshine, the joyous, stimulating breath of spring.

There are men who are like malarious swamps—poisonous, depressing and weakening by their very presence. They make heavy, oppressive and gloomy the atmosphere of their own homes; the sound of the children's play is stilled, the ripples of laughter are frozen by their presence. They go through life as if each day were a new big funeral, and they were always chief mourners. There are other men who seem like the ocean; they are constantly bracing, stimulating, giving new drafts of tonic life and strength by their very presence.

There are men who are insincere in heart, and that insincerity is radiated by their presence. They have a wondrous interest in your welfare—when they need you. They put on a "property" smile so suddenly, when it serves their purpose, that it seems the smile must be connected with some electric button concealed in their clothes. Their voice has

a simulated cordiality that long-training may have made almost natural. But they never play their part absolutely true, the mask will slip down sometimes; their cleverness cannot teach their eyes the look of sterling honesty; they may deceive some people, but they cannot deceive all. There is a subtle power of revelation which makes us say: "Well, I cannot explain how it is, but I know that man is not honest."

Man cannot escape for one moment from this radiation of his character—this constantly weakening or strengthening of others. He cannot evade the responsibility by saying it is an unconscious influence. He can select the qualities that he will permit to be radiated. He can cultivate sweetness, calmness, trust, generosity, truth, justice, loyalty, nobility—make them vitally active in his character—and by these qualities he will constantly affect the world.

Discouragement often comes to honest souls trying to live the best they can, in the thought that they are doing so little good in the world. Trifles unnoted by us may be links in the chain of some great purpose. In 1797, William Godwin wrote *The Inquirer*, a collection of revolutionary essays on morals and politics. This book influenced Thomas Malthus to write his *Essay on Population*, published in 1798. Malthus' book suggested to Charles Darwin a point of view upon which he devoted many years of his life, resulting, in 1859, in the publication of *The Origin of Species*, the most influential book of the nineteenth century, a book that has revolutionized all science. These were but three links of influence extending over sixty years. It might be possible to trace this genealogy of influence back from Godwin, through generation and generation, to the word or act of some shepherd in early Britain, watching his flock upon the hills, living his quiet life, and dying with the thought that he had done nothing to help the world.

Men and women have duties to others—and duties to themselves. In justice to ourselves we should refuse to live in an atmosphere that keeps us from living our best. If the fault be in us, we should master it. If it be the personal influence of others that, like a noxious vapor, kills our best impulses, we should remove from that influence,—if we can possibly move without forsaking duties. If it be wrong to move, then we should take strong doses of moral quinine to counteract the malaria of influence. It is not what those around us do for us that counts; it is what they are to us. We carry our house plants from one window to another to give them the proper heat, light, air and moisture. Should we not be at least as careful of ourselves?

To make our influence felt, we must live our faith, we must practice what we believe. A magnet does not attract iron, as iron. It must first convert the iron into another magnet before it can attract it. It is useless for a parent to try to teach gentleness to her children when she herself is cross and irritable. The child who is told to be truthful, and who hears a parent lie cleverly to escape some little social unpleasantness is not going to cling very zealously to truth. The parent's words say "don't lie," the influence of the parent's life says "do lie."

No man can ever isolate himself to evade this constant power of influence, as no single corpuscle can rebel and escape from the general course of the blood. No individual is so insignificant as to be without influence. The changes in our varying moods are all recorded in the delicate barometers of the lives of others. We should ever let our influence filter through human love and sympathy. We should not merely be an influence; we should be an inspiration. By our very presence we should be a tower of strength to the hungering human souls around us.

I have copied the above chapter from W. G. Jordan's book, "The Majesty of Calmness," feeling sure that, in spite of kind assurances to the contrary, some of our readers must be glad of an occasional variety. I should like to insert the whole book in the *Quiet Hour*—perhaps, another time, I may give you another chapter.

I heartily thank the writer of the following letter for her words of encouragement.

HOPE.

Dear Hope,—I have often intended to let you know what a help the "Quiet Hour" is to me, but kept putting the matter off on account of not knowing to whom I would be writing; but so many of your talks seem to be specially for me, that I wish to thank you for them, and assure you that we are far from being tired of hearing what you have to say. That unconscious influence must have something to do with softening the hard, cross feelings that come at times when work is pushing one every way, and scarcely leaving time to read the "Quiet Hour" without interruption. I know it helps to influence me in the right direction.

C. H. KING.

Children's Corner.

[All letters intended for the Children's Corner must be addressed to Cousin Dorothy, 52 Victor Ave., Toronto.]

THE STORY OF PETER PAN.

(Continued.)

The lost boys who lived in Never-Never Land were in the woods near their home, looking out for Peter Pan. They were afraid to go very far on account of the Pirates. They all had on their big fur coats, and carried their bows and arrows. They were wondering whether he would ever come back, or if he had gone back to his mother, from whom he had run away when he was a baby, because he heard her say to his father that some day he should be sent to school. They were all feeling very much worried at his being so long away, when up rushed a pack of terrible gray wolves.

"Oh, if Peter were only here to show us what to do!" cried one of the boys.

"I'll show you what he'd do!" cried another, and quick as a wink, they all turned their backs to the howling wolves, put down their heads, and looked at them between their legs, which surprised the wolves so much that they all ran away. But just then the Pirates were heard coming through the woods, and the boys were more frightened than ever, and had to hide behind the trees. The Pirates were indeed fierce-looking ruffians, and I expect the boys trembled when they heard them talking in savage voices about their wicked plans to kill poor Peter.

"Ah ha!" muttered the Pirate King. "I will have my revenge for my left hand, which Peter cut off in a hand-to-hand fight. This rascal threw it to a crocodile, who liked it so well that he will not be satisfied till he makes a meal of the rest of me. I am tracked by the voracious beast, and, some day, he may catch me unawares. Fortunately for me the crocodile has also swallowed an alarm clock, which is still ticking inside him, and warns me of his approach. But—that clock may one day run down!"

"I think your enemy lives in this neighborhood, with his followers," said another Pirate, who had a red nose, and a red handkerchief round his head. "Let us capture them all at once, and despatch them."

"Ha!" growled the King, pulling out his sword. "Well said. Let us—"

"Tick-tock, tick-tock!" came the hollow sound of a clock through the woods. Just in time the Pirates fled down another path, before along came a tremendous crocodile, whose jaws opened in a fearful manner. He waddled off down the path after the Pirates, and soon all was quiet again, and the boys came creeping from behind the trees.

"Oh, why doesn't Peter come back!" said one. "Perhaps the Pirates will find him, and what shall we ever do all alone. Peter has always told us what to do."

"Look!" cried a boy in a gray fur coat. "What is that big white bird flying this way?"

"Tinkle, tinkle, tinkle! A lot of little bells seemed to be ringing near by."

"Why, there's Peter's fairy, Tinka!" shouted the boys, joyfully. "She says that is a Wenda-bird, and that Peter wants us to shoot it."

(Now, this was not true, but the fairy, Tinka, was jealous of Wenda, because Peter was bringing her to keep house for him.)

"All right!" said a boy in a brown

fur coat, and he drew his bow, and the arrow went right into poor Wenda, who was flying ahead of Peter. Presently she dropped to the ground, and lay still.

"This is a queer bird," said the boys, and they were all looking at her when up flew Peter.

"Why, what has happened to Wenda?" he cried. "Get up, dear Wenda, and speak to us. We want you to tell us stories, and be a mother to us. We have no mother, you know."

But Wenda did not move, and Peter wept because she must be dead. And then he found the arrow sticking in her, and he was very angry. The boy in the brown fur coat confessed that he had done it, and begged Peter to kill him. But when they had explained about the mischievous fairy Tinka, Peter forgave him, and said he would try what singing would do. So he sang a sweet little song, and presently Wenda opened her eyes, to Peter's great joy.

"What shall we do for you, now?" said he, when she sat up.

"I'd like a little house," said Wenda.

And Peter got the boys to work, and they put up a little red playhouse, with a window and a door, and then Peter and Wenda and John and Michael and all the other boys went inside, and shut the door. The woods got very dark, and you could just see a little light shining through the window. Once a great lion came stalking through the woods, but Peter came out and pulled off his tail, and he ran away. And that is the end of this part of the story, but there is still more to come.

(To be continued.)

THE NEXT DEBATE.

"Have Animals Any Feelings?" Is it necessary to consider their feelings, if they have any?

More About Onondaga.

Dear Cousin Dorothy,—I like to read this column, and wish to help build it up. I live on the bank of the Fairchild's Creek. I will tell you how it got its name. Once, a long time ago, the Indians roamed this part of this Province, and they found a little white baby on the banks of this creek, and they said that it was a fair child, so they called it Fairchild's Creek. Onondaga, the nearest village, used to be an Indian village, as someone said before. There are four churches in it, one school-house, a township hall, two blacksmith shops, and a station. The Grand River runs past the village.



A Young Canadian Farmer.

We have five horses—two colts, a young team and an old horse that is twenty-one years old, and is quite smart yet; he used to pull an old-fashioned engine, and, also, helped draw the separator and tank sometimes. He drew this until not many years ago, and he takes someone to town nearly every Saturday now. I have learned to ride him, and my sisters, who are older than I, drive him. I am sending my picture, with the youngest colt, Jess. I like skating, and I think that all little folks do. We have the creek near, and so do not have much trouble to get to where we want to skate. There is a saw and grist mill on the creek not far from our place, where we may skate "round to the mill." I will close now, wishing Cousin Dorothy and the Cornerites success.

A YOUNG CANADIAN FARMER.

Dear Cousin Dorothy,—I have a pet dog, and her name is Topsy, and a cat, whose name is Fanny (she catches from eight to ten mice a day), and a little black colt, which I lead by the bridle and water her; her name is Trixie; she has a white nose, and she will follow me when I go out in the field. When I come home from school, I feed the hens and ducks. I enjoy reading the *Children's Corner*.

ANGELA HENDERSON.

Crathie, Ont.

Dear Cousin Dorothy,—I have been reading the letters which you have been getting; some of them are very interesting. I live on a farm of one hundred acres, one mile north and a quarter of a mile west of Crampton. We have a dog, named Sport. As I have no one else to play with, I sometimes play with him, and he likes me to play with him, too. I like going to school, and am in the fourth class. I read the letter that Evelyn Willis wrote about "Life in the Sick Children's Hospital," and thought it was a very nice letter.

ABBIE HOLMES (age 12).

Crampton, Ont.

Cat vs. Dog.

Dear Cousin Dorothy,—I have always been a silent reader, but I cannot keep quiet any longer. We have taken "The Farmer's Advocate" for quite a while, and think it is a splendid paper. I am interested in the debate on "Which is the Most Useful, a Dog or a Cat." I really think both are nice, but I guess a dog is the most useful. Cats are very nice at times, but they have a temper as well as anything else. Dogs can be taught to do so many different things which a cat could not do. Well, I must not take up the whole room of the precious Corner. I think that girls can be as useful as boys, and perhaps more so; but I suppose it is natural for me to think that way.

ELAINE.

The dogs seem to have won the day this time. I hope poor Pussie will not be offended. You must pet her all the more to make up.

C. D.

Dear Cousin Dorothy,—This is my second letter to the Corner. As I saw the debate on dogs and cats, I thought I would write a few lines on it. I would rather have a dog than a cat. I think a dog is more useful. A dog can go after the cows; that saves a girl on boy a little. Cats are more of a house animal. They want to go in at every chance they can get. Cats are all right in their place. A dog can be trained to do a great many things that a cat can not; a dog is so much stronger. I think David McAlister is a very cruel boy, don't you, readers? Poor little kittens, I don't see how he could hurt them so. It is dreadful, even the thought of it. I would like a few letters from some of the members about my own age (ten).

MURIEL E. BRYAN.

Thorndale, Ont.

Dear Cousin Dorothy,—I am a little boy, eight years old, and would like to correspond with another little boy about my age, somewhere about Quebec and New Brunswick. My brother takes "The Farmer's Advocate," and thinks it is a pretty nice paper, and I read the *Children's Corner*. I think it is pretty easy to decide whether I would rather have a cat or a dog. I would prefer a dog, because a dog can be taught to do tricks, and a cat can't. A dog can swim, and if you put a cat into the river for it to swim, it will just go to the bottom; and a dog can pull you in a little wagon, and a cat can't, because, when I was three years old, I hitched a big yellow cat up to my little cart, and it ran away and broke the cart; and, when you are not looking, a cat will get into a cream can and drink a lot of cream, and run into the pantry and knock down some dishes. In the summer I help with the harvest, and in the fall I help to take in the roots. I saw in the paper where a little girl was writing, and she said, "that she thought that girls were more careful than boys, and that a girl could carry dishes for mother a year and not break one, and that a boy would break one every month." I think she is wrong. I

can help mother lots of times, and have never broke one yet. I will close with a riddle:

1. Spell broken-down fence in three letters. Ans.—G a p.
Inglis Falls, Ont. MAC. WILSON.

Dear Cousin Dorothy,—As to which I would rather have for a pet, a cat or a dog, I would prefer a dog, because he is of more use on a farm, but I like a cat very much. I have just read David A. McAlister's letter. I think that he is a very cruel boy to cut off a poor little kitten's tail because it sits under the stove. We have two dogs, named Carlo and Jack. I have a harness for Carlo. We have two cats, named Tom and Finy. Finy is mine. I got it when it was a little kitten. Tom is nearly thirteen years old. In the fall, men come up here to hunt deer. I would like to hear from any boy or girl of my own age.

ETHEL G. WILKINS (age 12).
Sand Lake P. O., Ont.

Dear Cousin Dorothy,—This is the first time I ever wrote on a debate. I would prefer a dog, because a dog is good to get in the cows, and they can be taught to do many tricks. Some dogs will draw children to school; some dogs are good watch dogs. A bulldog is the best, and a collie is too. I have a collie dog; I call him Belvedere Laddie. He is good to the baby, and is a good cow dog; he will jump on the sleigh. Some cats will scratch; but cats are good for mice. GLEN MORGAN (age 9).
Wales, Ont.

I should say cats were bad for mice!
C. D.

Dear Cousin Dorothy,—Seeing the debate going on, I thought I would write, too. I am decidedly in favor of the cats, because the dogs often kill sheep, which is more of a loss than the mice and rats which the cats kill; but it must be owned that the cats do kill birds sometimes. I lost a good \$3.50 on a lamb that was killed by the dogs last year. This year a lamb was bitten by dogs quite badly. A dog may be all right until it comes to the sheep, then the dogs go to grass, I say.
Upper Canard, N. S. ERNEST.

Dear Cousin Dorothy,—We take "The Farmer's Advocate," and I am very interested in the Children's Corner. I thought I would write a few lines on your debate, as to which I would rather have, a dog or a cat? I think a dog is best, although I like cats; but I think a dog is more company. When I go out at night, if my dog is with me, I feel safe, so I prefer a dog.
A COUNTRY BOY.
Perm P. O., Ont.

The Ingle Nook.

Dear Chatterers,—Ever since coming from the W. I. convention at Guelph, a few odd ends of the skein of stuff that I picked up there have been flying around loose, waiting to be picked up. So much other material, however, happened to be ready before, that I have not had a chance to get any of them in hand until to-day. Here, however, they are; just a few straggling wisps which would not look well in a formal report, but which do very well over a cup of tea (imaginary, alas!) in the Ingle Nook.

In the first place, I met two of our members at the big convention, Katharine Blinkbonny, whom many of you must remember, but whose visits of late have been rather uncertain, and Forget-me-not. Forget-me-not, by the way, is just the tiniest bit of a girl; I felt like a great big giant beside her, and I'm not so terrifically big either. We met once at the dairy stable, and I was only sorry that the necessity of hurrying back to the hall to "take notes" prevented a better acquaintance.

Needless to say that the magnet which had drawn us both to the stable was that wonderful cow with the unspeakable name, Boutsje Q. Pietertje De Kol! And she (the cow I mean, not Forget-me-not) was even frisky under it!—trying to lick your furs, bunting at you, and poking at you with her brass-tipped horns, as though to call your attention to the decoration. It was easy to see that she is a great pet with the

students, or whoever the men are who attend the stables, and I held my ears open to hear what they call her "for short,"—but no one came around to call her anything at all. Of this, I was mentally assured, that if I owned her she should go by plain "Pete."

Imagine, "Co, Boutsje Q. Pietertje De Kol!" . . . "Stand over, Boutsje Q. Pietertje De Kol!" . . .
Incidentally, Boutsje Q. Pietertje De Kol is the only cow in the stable which wears the halo of the brass tips. Her record hangs on the wall behind her; I forget what it was, but it has been in "The Farmer's Advocate" lots of times.

Incidentally, too, I do hope you all went to see that stable. If you did, you couldn't help noticing how well it is arranged, how nicely it is lighted, how sweet and pure the air is, and how beautifully clean the whole place. What a pity that all farm stables are not equally comfortable and sanitary; but, perhaps they will be before many more years pass. We farmers seem to be waking up about everything.

It's a far cry from this famous Holstein to the "nice boys up at the O. A. C.," but I can't resist telling you what one of the Toronto girls over at Macdonald Hall said, and with an air of wonderment, as though she had been surprised out of her five senses by the discovery, viz., that she "had met nicer boys from over at the O. A. C. than she had ever met in Toronto." This, perhaps, was a little sweeping; "nice" country boys are, ostensibly, no nicer than "nice" city boys, and there is no sensible reason why they should be; yet the remark suggested an awakening that was salutary at least to one young lady. . . . I have been amused many and many a time at the queer idea a great many city people have of country people, especially of country young men. However, there must be some reason for such an opinion, and it is really a pity if a few of our young ruralites are so "gauche" and ungentlemanly as to cause the whole rural brotherhood to be dubbed boors, the more especially since, while there are many classes in the cities, all the people in the country are thrown into one. . . . So they should be—one class, so far as it can be attained, but that of the best type possible.

A few more ends are still flying loose, but we haven't space for them to-day, so they will have to stand over until some time in the future.
D. D.

Buckwheat Cakes.

(For R. H. R., Huron Co., Ont.)

Buckwheat Cakes (raised).—One pint buckwheat flour, $\frac{1}{2}$ cup corn meal, $\frac{1}{2}$ cake yeast, 1 pint warm water, 1 teaspoon salt, 1 tablespoon molasses. Beat well, and let rise over night; it should rise and fall again before morning. In the morning, stir in 1 teaspoon powdered soda, and fry.

Buckwheat Cakes (baking powder).—Mix two cups buckwheat flour, 1 of wheat flour, a little salt, and 3 teaspoons baking powder. Add equal parts of milk and water until batter is of right consistency. Add a little molasses, and fry.

Re Pickled Corn.

C. W. B., Oxford Co., Ont., writes: "There was a bit in 'The Farmer's Advocate' last fall telling how to pickle corn for table use, but it did not say how to cook the corn after it was taken out of the pickle."

Will the correspondent who sent the recipe, or anyone else who knows, kindly answer this question?

On Entertaining.

Dear Dame Durden,—It is with great pleasure I join in with the Ingle Nook chats. Although I have never written you, I have not failed to reap the benefits of your helpful talks. For some time, we have been trying to solve the problem of entertainment. Nowadays, one cannot entertain his friend without the use of "cards," and it makes it very awkward for the host or hostess who tries to entertain without. It also makes a very uncomfortable feeling for the guest who does not care to join in with this form of entertainment when there is no other provided.

The thought occurred to me that you

might be able to give a suitable suggestion as to giving a pleasant evening to about thirty young people. Perhaps someone might know some games, or a little suggestion in the line of entertainment, which, I am sure, would be so helpful.

I will be so grateful if you find this subject worth while lending some suggestion.
A PEEL GIRL.

Peel Co., Ont.

I think the best thing you can do will be to order a copy of "Bright Ideas for Entertaining," which will be mailed you from "The Farmer's Advocate" office on receipt of 60 cents. I am not recommending this from a mercenary standpoint, as the sale of the book from this office means nothing to me—but simply because I think the book will give you the best possible answer to your question.

Chocolate Icing.

Dear Dame Durden,—I am sending you a recipe for chocolate icing, without boiling. It was requested by Subscriber C's Wife in your column.

Chocolate Icing.—Two tablespoons of dry cocoa or grated chocolate, three tablespoons of liquid coffee, one teaspoon of melted butter, one teaspoon of vanilla.

If the chocolate is used, mix it with the coffee, and let stand on the stove until it thickens, then add the other ingredients, thicken with icing sugar, and spread on cake while warm. If cocoa is used, it is not necessary to heat.
Bois Blanc Island. ISLANDER.

The Dress Question.

Dear Dame Durden,—Many and many a time your delightful Ingle Nook has tempted me to a seat among the Chatterers; but, as often as I thought of entering, that woeful spirit of procrastination took possession of me, and I delayed. However, it is now or never, and I have accepted the now. In my opinion, the Ingle Nook is the most inviting corner in the whole "Home Department" of "The Farmer's Advocate," although I enjoy every other part also.

In your issue of Nov. 14th, I read a most interesting paper by Miss Ada Currie on "Modes of Dress," and was delighted with the clear, common-sense view in which she studied her subject. It was an address well worthy of the attention of all the fair readers of "The Farmer's Advocate," and I fully expected to see some letters of commendation from the Chatterers, but, I suppose, at this time of the year, Christmas preparation is a much more engaging subject than "Dress Reform."

Now, dear Dame Durden, please do not think I am too censorious, but I think there is great room for improvement in our modern style of dressing, both in outdoor and indoor garments.

They are made with very little regard for hygienic or sanitary principles; they are inconvenient, and very often uncomfortable to the wearer; and, in the majority of cases, they are much too elaborately made and trimmed to be attractive. As Miss Currie says, and as all sensible women say, the weight of our clothing should be borne by our shoulders, and not upon the delicate organs below the waist line. Our gowns should be simply made, so that they can be easily and quickly put on—the bodices fastened in front, and with adjustable collars; the skirts provided with pockets, and at least two inches from the floor. These, I think, are very necessary requirements for the simple sake of convenience, and for the sake of comfort I would advocate one more change, viz., the skirts to be attached to the bodices, or else supported from the shoulders by means of straps or braces. When one considers, men's clothing is far more sensible and suitable than women's. The weight of all their clothing is borne by the shoulders; there is no tightness whatever around the ribs or waist; they have pockets in every convenient place, so that it is not necessary for a man to carry his handkerchief either up his sleeve or stuffed under his waistcoat. A man's clothing, too, is made very simply, and with a view to the needs only of the wearer; there is no unnecessary ornamentation nor meaningless detail of cut, such as is only too evident in nearly all of our better gowns. I am sure, dear Dame Durden, that you will agree with me in saying that in the great ma-

majority of cases, the afternoon and evening toilettes of ladies are beautiful merely as works of art—examples of exquisite coloring and combination of textures and elegance of design. Beautiful! but are they attractive by their simplicity, or their utility, or their conduciveness to health? And these three things are, in my opinion, the main objects to be considered in the making of all our clothing.

Now, dear Dame Durden, please do not think I am a public lecturer, for that is the last thing I would wish to be; I am only expressing my sympathy with all those good people who advocate a reform in our "Modes of Dress" but I really must quit sermonizing, or I shall be "pit out" of the Ingle Nook.
RUSTICA.

Leap-year Party.

Dear Dame Durden,—I am a constant reader of "The Farmer's Advocate," and thought I would draw up my chair among you Chatterers for some advice concerning a leap-year party. Should we ask the girls, and the girls ask their partners, and what games should be played, and what to have for lunch, and how to serve it?
AN OLD MAID.

Wellington Co., Ont.

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About the House.

THE GERM OF THE BULLETINS.

POTATOES.

(Adapted from the Yearbook of U. S. Dept. of Agr.)

After bread and meat, potatoes, perhaps, constitute the chief food of the great majority of people. The potato tuber is in reality a thickening of the stem, which serves as a storehouse to contain the material from which new plants may be produced. It is composed of three portions—the skin, the cortical layer immediately underneath the skin, and the flesh. The edible portion is made up of 78.3 per cent. water, 2.2 per cent. protein, 0.1 per cent. fat, 18.4 per cent. carbohydrates (chiefly starch), and 1 per cent. mineral matter. When stored, however, the water content is somewhat reduced by evaporation. Of the protein contained, only a little over half consists of true proteid, the material which builds up the wasting body tissues and keeps them in repair, hence the poorly-fed condition of the peasants who, in different countries, try to subsist chiefly upon potatoes, may be accounted for. The potato is not, however, an unimportant article of food. It is rich in carbohydrates (the source, along with the fats, of heat and energy), and so may very well be made a constituent of the daily diet; but it should be used in conjunction with proteid foods—meat, eggs, milk, etc. For this reason the addition of cream or butter to mashed potatoes, or the mixture of milk or milk and cheese required in scalloped potatoes, is to be commended. Baked potatoes are somewhat more easily digested than boiled ones, and are more nourishing, as the potatoes, if boiled, lose some of their mineral constituents in the water which is drained away.

In regard to its nutritive qualities, Mr. C. F. Langworthy, of the U. S. Dept. of Agriculture, says: "The potato is essentially a starchy food, and eaten alone it would furnish a very one-sided, badly-balanced diet, which would probably prove unwholesome to most people, as it has been estimated that man in health, performing a moderate amount of muscular work, is best maintained by a diet furnishing daily 0.25 pound protein, in addition to fat and carbohydrates enough to make the total fuel value 3,500 calories; while a man without active physical labor might be well nourished with 0.20 pound of protein and 3,000 calories of energy. When the potato is eaten with meat, eggs, fish, etc., which are essentially nitrogenous foods, a well-balanced diet, which is most conducive to health and vigor, is secured." Occasionally someone complains of not being able to eat potatoes, but this condition is due to personal idiosyncrasy, and not to the harmful character of the food. Cases of actual poisoning by potatoes are, however, by no means unknown, especially when old potatoes, which sometimes contain small quantities of solanin, had been eaten. For this reason potatoes a year old, which have lain in a cellar and shrivelled, and small potatoes which have sprouted, both of which contain increased quantities of solanin, should not be eaten.

RECIPES FOR COOKING POTATOES.

Stuffed Potatoes.—Select smooth, uniformly-sized potatoes, and bake until tender. Cut off an end from each, scoop out the potato, and season with butter, salt and white pepper. Add two tablespoons of milk or cream for every six potatoes, beating well. Refill the potato shells, stand on end, and bake a little while longer in a hot oven.

Scalloped Potatoes.—Slice raw potatoes thinly, and place in a baking dish in layers, sprinkling each layer lightly with flour, and adding a few dots of butter. Cover the potatoes with milk, put on a lid, and bake one and one-quarter hours, removing the lid during the last fifteen minutes to brown the top. Serve in the same dish, with a napkin pinned round.

Potato Balls.—Mix cold, mashed potato with beaten-egg yolk; season; make into balls, and place on a buttered pan. Make a depression in the top of each ball; put a bit of butter in the depression, and brown in the oven. Cold, boiled fish may be mixed with the potatoes, if liked.

Mashed Potatoes.—Pare and boil. If they are very mealy when done, drain

and mash at once. If they do not seem mealy, let them stand for a few moments after straining, with the lid off the kettle. Mash them well, and to every quart add one tablespoon butter, one tablespoon salt, half a teaspoon white pepper, and hot milk to moisten. Beat all with a large fork or spoon until light and creamy, then turn out into a warm dish, and serve at once.

Carmichael.

BY ANISON NORTH.

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CHAPTER X.—Continued.

And as I pondered there, the feeling of dull pain—which I, poor child, in my ignorance of the world other than my own small one and its passions, had not yet learned to define as jealousy, much less to determine the cause of—gave gradually away to a sort of resigned sadness that my old playfellow had passed out of my life forever; and, with the peculiar tenacity with which the slightest incidents of my life kept recurring to me, flashing upon me often when un-called, I thought of the day far up in the wood, near the raspberry-grown line fence, the day upon which Dick had straightened his shoulders and declared what he would do when he was a man, while I, small mite, feared only that he would pass out of my life. The memory of that day brought up a host of other and sadder memories, and I stood there, quite losing account of time, until Mrs. Might came bustling out.

"My sakes, Peggie, what are ye standin' there fer? Don't say now 'twas that bite o' berry pie made ye sick?"

"No, no, I'm very well, thank you. It's lovely and cool out here."

"But mercy me, ye'll take cold with nothin' on yer head in the night air! Come right in! I've a cup o' coffee all ready for ye, more 'n half cream it is. I kept Bess's cream—she's the best Jersey, ye know—just fer to-night."

"So I had to go in and please her by drinking the coffee; and soon it was time to go home."

"Ye'll not hev' to git Adam to go home with ye to-night, Peg," whispered Mrs. Might, with well-meaning kindness, but rather doubtful tact. "I picked them very careful, even numbers, 'n' every one o' them came."

But it mattered little who came home with me, and when the girls filed out into the night, looking neither to the right nor to the left, but with self-consciousness born of the uncertainty as to "who it was to be" in every motion, I lagged behind for a last few words with Mrs. Might.

When ready to set out, it appeared, to my confusion, that none other than Dick Carmichael had fallen to my lot as escort. Adam Might was just coming in with him at a side door, and, evidently not ill-pleased, was saying:

"Not too late after all, Dick, boy. The best girl o' the bunch is here waitin' for ye!"

With crimsoning cheeks I glanced at Dick, then at Mrs. Might; then, to hide my confusion, went rapidly down the steps, Dick following.

Not a word was spoken until we had reached the garden gate, and I had time to think.

"Dick," I said, "I shall have to go back and get Mr. Might to come with me. You—you understand—you know—"

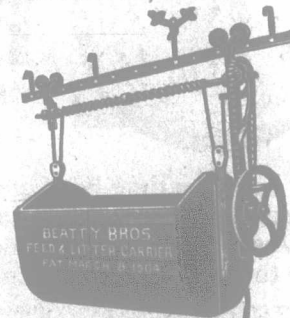
"I know the laws of the Medes and Persians," he said, "and I think the laws of the Medes and Persians utterly unreasonable, if I may be permitted to say so."

"Nevertheless, they must be obeyed," I rejoined quickly. "Really, Dick, I must go back!"

"Don't you think they are out-

A Litter Carrier WITH MERIT.

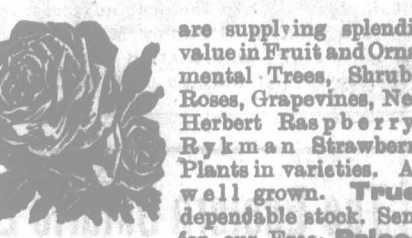
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Milk in any form taken at night is apt to cause digestive disturbance. Your night's rest is not refreshing. To appease hunger, or merely for company's sake, "BOVRIL" in the form of a bouillon or sandwiched between thin bread and butter is excellent.

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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.

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lawed?" he went on, in a half-battering tone that exasperated me.

"No," I returned, sharply, and, turning, began to retrace my steps to the house.

The next instant he had taken me by the arm and turned me about.

"See here, Peggie," he said, in a very different tone, "don't you know you can't do that? What's the use of publishing all that miserable business, as you must do to some extent, if you go back there into Might's? Anyway, this arrangement has neither been of your nor of my seeking. We have been thrown into it, and must abide by it, however disagreeable it may be; and, so far as I can see, no wrong for either of us in it, either."

"But I promised—"

"I know all that you promised. All the same, as I said before, neither you nor I planned for this. It is an accident, and neither of us can be blamed for it."

Feeling that there was some reason in what he said, swayed also by his masterfulness, I began to walk slowly on again, and so we went silently through the gate.

In spite of myself, a sense of satisfaction came to me as we came out on the road, yet I felt as though such a feeling were treason. "Ye'll remember he's the son o' the man that killed yer father!" my mother had said, and I was remembering, yet what could I do? I could not now prevent Dick Carmichael from walking home with me, but I could at least fight against being pleased over the accident. So I resolved to be very stiff and dignified indeed, and to let Dick know that I by no means approved of the way in which things had fallen.

Thus we walked silently for quite a way, I at one side of the road, he at the other, then he said suddenly:

"Peggie, I'm not going to bear with this any longer!"

"With what?"

"This dreadful secret that I have been carrying about with me all these years, ever since the night of—the fire. Peggie, I can't think father ever set fire to that barn! To me he seems the soul of honor! Surely it was someone else you saw that night!"

"No," I said, slowly, for I could not lie, and why should I try to screen Henry Carmichael, of all men? "No, Dick, it was your father that I saw. I was not mistaken."

Dick was silent for a moment, then he said, in a low, worried tone, "And I—I heard him come in! . . . And after a moment he said to me, 'Come, Dick, Mallory's barn is on fire!' . . . And I, too, with you, heard him threaten to be even with your father. . . . Oh, Peggie Peggie!"

—and there was something akin to agony in his voice—"suspicion is enough to kill a man! It has been wearing my heart out by inches all these years. I can't believe, and yet I'm compelled to believe. A thousand times it has been on my tongue to ask my father why he was

abroad that night; how it was that he, in the depths of the night, was the first to see that Mallory's barn was afire, and yet I have shrunk from even hinting to him that I had suspicion of his motives. But, Peggie, it must be done. To-morrow or, at least, very soon, I shall ask him!"

"Yes, that will be the better way," I whispered, in a voice scarcely audible, for I was trembling from head to foot.

For an instant Dick strode on, forgetting me, then waited until I came up, and resumed his walk along the farther side of the road, with the width of the wagon way between us.

"Whether that thing be—be true or not," he said, "it will be the hardest crack my father ever got—my mentioning it to him." If it is not true, then he will know that the son who should have trusted him and whom he has loved—for he does love me, Peggie—has been a miserable, suspicious cur, unworthy of him or his affection. If it be true—with a sort of savagery—"then, let him

enjoy the hell he has made for himself!"

Through sheer nervousness, I broke down utterly, and the sobs which I had been choking back shook me.

He stopped for an instant and looked at me, then came over to me and took my arm.

"Why, Peggie," he said, in that low, caressing tone so, so like that in which his father had spoken to me that day so long ago, when, as a little child, he had held me in his arms in the sheep-house, "why, Peggie, what a brute I am to have made you cry! Oh, girl, girl, I forgot myself! I am a great, careless, clumsy brute—but I'm not much used to girls, Peggie."

There was genuine distress in his voice, and I hurriedly wiped away the tears.

"It's all right," I said, "I'm just—just nervous, or something. There, come on!"

And again we walked silently under the calm, clear sky, with the trees on either side of the road murmuring a lullaby, sweet enough and low enough to soothe a fevered spirit.

And now we had come opposite to the little garden, and the spot where had been the old house, and beyond the meadow field lay, all brown with the upturned sod, beneath the steady light of the moon.

"Do you remember the old call, Peg?" he said, dropping into the old name of my childhood. "I wonder if I could do it now." And he immediately began to whistle softly the song-sparrow's call, the three quavering notes, and a long, wild trill.

With the warble, the memories of the old days came trooping up so keenly that it seemed but yesterday since we had roamed the familiar fields together; and when he began to talk of the pranks we played, I forgot that it was my duty to be angry, and only knew that I was very contented to be walking again with Dick, and living over again the sweet days of long ago.

As we approached the woods surrounding the clearing, the mud on the road grew deeper, and tiny pools began to show all silver in the moonlight.

"We will cross the fields the rest of the way," Dick said, presently, "it will be drier that way."

And so I let him help me over the fence, and even take my arm to steady me as we walked over the uneven surface of the field.

Beyond the next fence there was a strip of plowed land, which I had quite forgotten. Above it a dense, white mist was arising, yet lying low and heavy, so that the whole expanse looked like a ghostly, glittering lake, with a soft spray dashing silently up against the clumps of trees which arose like islands from the calm, white surface.

"Oh!" I said, "this will be dreadful walking! We must go back." But Dick said no; that I should get my feet wet if we went back over the wet bush road.

"I'll carry you, Sis," he said, "as I used to—over the swampy places, do you remember?" And without a word I let him take me in his strong arms and stride into the receding mist, carrying me.

Very strange and unreal it all seemed, we two, plunging into the midst of that silent lake, which gave way in a little circle about us, then stretched off, dense and white, to the black woods beyond. Yet I had no sensation save that which a little child feels in being carried over a difficult way. I was in a sort of dreamland; and it was so pleasant to be with Dick again, and to know that he was not vexed with me, but that we were still the good old friends.

And yet, as he talked, in his deep, low voice, it seemed, too, as though it were not he, but Henry Carmichael, who was carrying me so carefully in his arms. Again I heard the voice, that other voice so strangely like, ask playfully, "Do you hate me now?" and that other childish one find the ready answer, "No."

When the weird lake was passed,

Dick put me down again, and presently, after passing through the dense wood, we saw the light glimmering through the trees from the Clearing.

The sight of it raised all my apprehensions again, and all my burning self-denunciation. I had permitted Dick to come home with me; I had even been friendly with him, and had let him take me in his arms and carry me over the plowed land—I whom my mother had trusted!

Silently we passed up the path toward the house, and about us the corn stooks, awaiting the winter hauling, stood black and still. For the first time in my life I dreaded going home, and felt that I should like to hide away in the black shadows.

"Oh, Dick!" I burst out presently, "this is all wrong, wrong! I wish I had never gone to the party! This must never occur again!"

For a moment Dick stood quite still, looking into my face.

"I'm sorry, Peg," he said, stiffly. "If you are going to worry like this, I promise you it will not happen again, if I can prevent it. Good-night."

Abruptly, as had ever been his way when irritated, he left me, while I went to my room to cry over having angered Dick and been false to my mother—and to live over again, in every detail, the events of this, to me, eventful evening.

(To be continued.)

GOSSIP.

SALE DATES CLAIMED.

- Jan. 16th.—Joint sale at Woodstock, Ont., Shorthorns.
- Feb. 12th.—John E. Disney & Son, Greenwood, Ont., Shorthorns and Clydesdale mares (imported and home-bred).
- Feb. 14th.—R. H. Reid & Sons, Pine River, Ont., Shorthorns.
- March 3rd.—F. A. Gardner & S. J. Pearson, Son & Co., Britannia, combination sale of Shorthorn cattle.
- March 3rd.—S. J. Pearson & Son, Meadowvale, and F. A. Gardner, Britannia, Ont., joint sale of Shorthorns.
- March 4th.—Provincial sale of pure-bred cattle, at Guelph.

THE WOODSTOCK SHORTHORN SALE.

A few notes which have come to hand in relation to the cattle to be offered at the combination sale, Jan. 16th, at Woodstock, Ont., to be held under cover at the Caistor House stables, will be of interest. Commencing with the imported young cow, Cinderella, which is a fine red, with a fine coat of hair, bred by J. Young, Tilbouries, Scotland, and imported by H. J. Davis, of Woodstock; she is sired by the Marr bull, King Victor, a richly-bred Lavender, and is from one of Mr. Young's best cows, whose sire was Remus, that has attained a continental reputation as the sire of Choice Goods, that was sold at a record price at Chicago. This heifer is in calf to the Missie bull, Westward Ho (imp.). Another good imported heifer is by the Duthie bull, Sittyton Choice, also bred by Mr. Young, a rich roan of much the same breeding as the former, and in calf to Westward Ho (imp.).

Mr. Davis contributes two good young heifers, about a year old; one is of the Lord-Lovat Merry Lass family, sired by Prince of Navarre (imp.); the other is of the Margaret family of Scotch Shorthorns, sired by Imp. Deeside Chief. In bulls, some extra good ones are offered, including two richly-bred ones recently imported, namely, Nonpareil Chief, bred by A. T. Gordon, Aberdeenshire, a straight-bred Nonpareil, by Fascinator, a first-prize winner at the Highland and Royal Shows. Nonpareil Chief is seventeen months old, and a smooth, even bull, with an excellent head and horn. His mate, Mount Royal (imp.), is bred by C. Strachan, Aberdeenshire, Scotland; calved Nov. 21st, 1906; sired by Royal Fame (87184); a dark roan, with perfect lines and an extra good head; he is of the Marigold family, and is certainly a head-header. The young Canadian-bred bulls that Mr. Davis offers are three red in color and one roan, about a year old, mostly from imported cows and imported

bulls. They are low-down, blocky fellows, with mellow coats of hair, and are of the Broadhooks, Kiblean Beauty, Claret and Roan Lady families. These young bulls make a high-class offering. Mr. James Innis, of City View Farm, is contributing seven extra fine, growthy bulls, of the Mina and other good sorts, sired by Spicy Count (imp.), Bucephalus of Dalmeny (imp.), and Queen's Counsellor (imp.). These young bulls are mostly red in color; one very fine roan. One is from Imp. Queen of the North, by Queen's Counsellor (imp.), now in Captain Robson's herd. The Mina bulls need no introduction to breeders, as that family is too well known, and the individuals are as good as their breeding. The females that Mr. Innis offers are of top-crossed English-milking strains of Shorthorns that make money for every man, and are either fresh calved, with calves at foot, or soon to calve to the first-prize bull at Toronto, Gem's Lad. Capt. T. E. Robson contributes a few head, among them being the fine large imported cow, Tilbouries Duchess 3rd, one of the Jilt family, a grand breeder and good milker, in calf to The Queen's Counsellor. Rosedale 20th =5042= is a beautiful cow of the Scotch Rosedale family, a splendid breeder, also in calf to the same bull. Miss Mayflower is a beautiful, thick, fifteen-months-old, roan heifer, one of the celebrated Russell Centennial Isabella family, sired by the Roan Lady bull, Imp. Royal Champion (50082).

Messrs. Scott Bros., of Highgate, contribute an extra good roan bull calf in Broadhooks Champion, sired by Lord Lieutenant (imp.), a well-bred Broadhook; dam Pansy Blossom, by Imp. Bapton Chancellor.

This opportunity of securing good Shorthorns, so conveniently as to time and place, should not be lost sight of by farmers and breeders. Half-fare on all railroads on certificate plan.

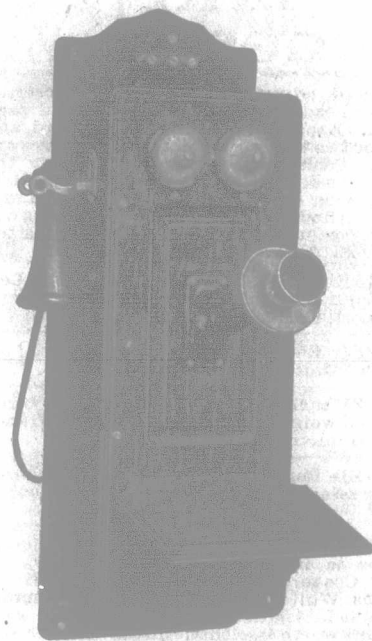
A sale pavilion is being erected at the Caistor House stables to provide accommodation for the event.

Mr. Robert Miller, Stouffville, Ont., writes: "A short time ago I sold to Peter White, Pembroke, Ont., to add to his already excellent herd of Shorthorns, the imported Blythesome heifer, one of the very last calves got at Uppermill before the dispersion of the great herd; her name is Blythesome 23rd; she is roan, and was calved on the 18th of March, 1905; her sire is the Willis bull, Bapton Tyrant, a Cruickshank Crocus; her dam was Blythesome 22nd, by the Willis bull, Golden Victor, a Cruickshank Golden or Brawith Bud; and her grandam was Blythesome 15th, by Sea King, one of the best Cruickshank bulls ever used by Mr. Marr. This heifer won first as a yearling when in only nice field condition at a good show in Scotland. She is due to calve to Scotch Royal, a grandly-bred Lavender bull, bred by Mr. Duthie. I think one of the best young bulls of the present day, and so good in the estimation of his breeder that he has ten of his choice cows bred to him. This heifer looks to me like being the dam of a bull that might be used to advantage by the best breeder in the land; not second to the mothers of the three most successful bulls that have been shown at the International, and imported by me."

TRADE TOPIC

SUCCESS OF DE LOACH MILL.—Over 15,000 De Loach sawmills are said to be in use throughout the world. With a De Loach mill a man can saw his own lumber or do custom work at the very minimum expense. The machine is so simple a fifteen-year-old boy can operate it. Two hands can cut 5,000 feet a day right along. The guaranteed capacity of inch boards in 10 hours is 1,750 feet for the 3½-h-p. mill; 3,500 feet for the 7-h-p. mill, and 7,000 feet for the 14-h-p. mill. As a matter of fact, the capacity of a De Loach mill is 25 to 50 per cent. more than the guarantee calls for. The company pays the freight on mills and other machinery, and is noted for prompt shipment. If you need a sawmill, write to the De Loach Mill Mfg. Co., Box 351, Bridgeport, Alabama, for their free illustrated catalogue.

TELEPHONES FOR FARMERS' AND RURAL LINES.



WALL TELEPHONE, MAGNETO TYPE.

Telephones and Telephone Supplies for cities and villages. A full line.

WE ARE BUILDING UP A NEW CANADIAN INDUSTRY.

Canada has one telephone to every 175 inhabitants.

The United States has one telephone to every 16 inhabitants.

Thousands of homes in Canada are in need of telephones. Do not think that a telephone is a luxury. A telephone is a necessity—in case of sickness, accident, social and neighborly intercourse, business.

A telephone costs but little money. It will save you the price several times over during the first year you have it.

Why not join with your neighbors and own your own neighborhood, city or village telephone system, control it yourselves, and have good telephone service at a fair price?

We furnish full information free.

All our goods are first-class and fully guaranteed.

Canadian Independent Telephone Co., Ltd., 26 DUNCAN ST., TORONTO.

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.
- J. W. Innis, Woodstock, Ont.
- T. E. Robson, London, Ont.
- Scott Bros., Highgate, 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 }

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 50 cents.

BARGAINS in Barred Rock and White Leghorn hens. Pullets and cockerels. Write for full particulars. W. W. Dods, Alton, Ont.

BARRED Rock cockerels, related to 237-egg hen. J. R. Henry, Waterdown.

BRONZE turkeys for sale. Extra fine birds. Good weight. Brilliant plumage. Francis Decker, Dannville, Ontario.

BARRED Rocks only. Extra good cockerels for sale. Miss Emily Spilsbury, Colborne, Ont.

INGLE NOOK POULTRY FARMS—Special offer to introduce our birds. Every one choice. 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 Toulouse geese two dollars each. White Wyandottes and R. I. Red one dollar each. Emerson Tufts, Welland, Ont.

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

MAMMOTH Bronze turkeys. Stock from the first-prize tom, Western Fair, 1907. G. E. Nixon, Arva.

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

WHITE Plymouth Rocks. Best American line bred. Cockerels, two dollars to ten dollars. Pullets 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 Chickens by Steam with the EXCELSIOR INCUBATOR Or WOODEN HEN
Simple, perfect, self-regulating. Hatch every fertile egg. Lowest priced first-class hatchery made. GEO. H. STAHL, Quincy, Ill.
Send for free Catalogue.



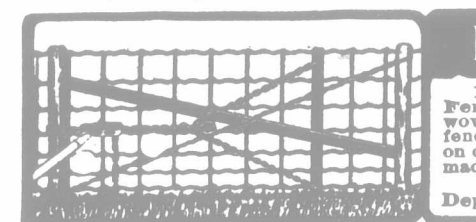
Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock.
TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

TO RENT or for sale on easy terms, Woodland Grange farm (60 acres), 4 1/2 miles from Moosomin, Sask. 170 acres cultivated. 150 acres of remainder fenced. For particulars apply to: W. H. Hewgill, Druggist, Moosomin.

WANTED—A few good subscription agents for The Farmer's Advocate and Home Magazine. Liberal terms. The William Weld Co., Ltd., 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: E. F. BELL, Delhi, Ont.

Mr. Robert Miller, Stouffville, Ont., writes: "My young Scotch bulls, just home, are exactly what I call them in my advertisement—a thick, thrifty lot. They are beautifully colored; have perfect heads and horns; they are near the ground, and they have strength and size enough to insure good size and weight in their progeny. The breeding is of the best Cusickshank, Marr and Bruce blood. Two of them are twelve months old, two are eleven months old, one nine months old, and one eight months old. They are not in high condition, but they are smooth and show promise of making good bulls and valuable sires. They will be sold at a moderate price. I also have a choice lot of both imported and home-bred bulls and heifers, with young bulls and heifers bred from them, and will price any of them so as to sell."



When Eggs Are Eggs

How do you manage your poultry business? Are you content to gather a moderate supply of eggs in springtime when prices are low, or do you aim to get your greatest number during the winter months when prices are up and "eggs are eggs?" The way to succeed with hens is to do what others don't do. When your neighbors' hens are on strike, then see that yours "get busy."

If you will begin now to feed Dr. Hess Poultry Pan-a-ce-a your hens will not stop laying at all. Of course the moulting season is an "off time," but even then Poultry Pan-a-ce-a will make a few eggs, and if you continue to give it regularly, you will get an abundance all through the cold winter days when others get none.

DR. HESS Poultry PAN-A-CE-A

is the prescription of Dr. Hess (M. D., D. V. S.) and is composed of elements which assist digestion, make good blood and cleanse the system of clogging poisonous matter. It is also a germicide and prevents poultry diseases. It has the unqualified endorsement of poultrymen in the United States and Canada, hastens the growth of young chicks and helps fatten old or market fowls. A penny's worth a day is sufficient for 30 hens.

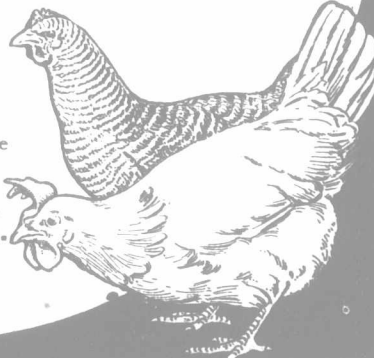
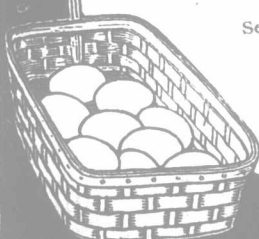
FRESH EGGS—45¢

Sold on a written guarantee.

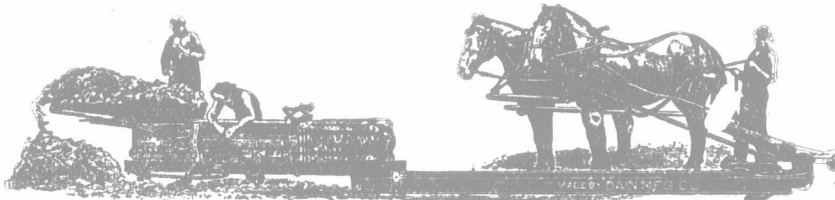
1 1-2 lbs. 35c 5 lbs. 85c
12 lbs. \$1.75 25 lb. pail \$3.50

Send 2 cents for Dr. Hess 48-page Poultry Book free.

DR. HESS & CLARK,
Ashland, Ohio, U.S.A.
Instant Louse Killer Kills Lice.



Buy a Dain Press



and make money during the winter season. In every locality there is some hay to press, especially as hay crop was light; it is a good price, therefore people will sell it. It must be pressed before selling.

Buy now and get the **Best Press** at reasonable prices.

Dain Mfg. Co., Preston, Ont.

Dear Sir,—I have pressed about 150 tons of hay with your press, and I like it fine. I think it is the best made.

Yours truly,

J. J. HILLCOX.

Write for prices.

DAIN MFG. CO'Y, PRESTON, ONT.

John Deere Plow Co., Winnipeg, Man.
Phelps & Smith, Montreal, Que.

Mention this paper.

Annual Sale Guelph Fat-Stock Club.

Entries for the sale of PURE-BRED STOCK to be held in GUELPH, on 4th MARCH, 1908, close 10th instant.

Parties wishing to avail themselves of the advantages offered by this sale should communicate with the Secretary without delay. Entries posted 10th January will be accepted.

J. M. DUFF, Secretary.

HOW TO BUILD A GOOD FENCE

Everyone intending fence building should send for our folder on Erecting Fences. It's full of valuable information on fence building, tells how to erect woven wire fencing quickly and substantially, describes the manufacture of fence wire and has an article quoted from bulletin of U. S. Dept. of Agriculture on concrete post making, showing how these durable posts can be economically made at home. Don't fail to write for a copy. It's free.

THE BANWELL HOXIE WIRE FENCE CO., Ltd.
Dept. B Hamilton, Ontario. Winnipeg, Manitoba.



GOSSIP.

Lloyd-Jones Bros., Burford, Ont., write: "The Burford flock of Shropshires, for the eighth time, met all comers at the International, and, although we did not win a pen prize, we were close to the winners in every section; forty-four ewe lambs in the class, and we won second, and should have been first, and two fifth prizes on American-bred shearing ram and shearing ewe. About fourteen of the best flocks in America met, and many of them never got a place, so we must not feel discouraged. We had the best lot of imported ewes at the Show; that is, of Shropshires, and Mr. Tom Bradburn said they were the best lot of ewes he ever saw in one pen, and why should they not be when they were the pick of Messrs. Minton and Nock's flocks. All they wanted was a little more fitting to get to the top. Our sales were good, considering the money panic. Our list of sales is too large to be given in detail, as we sold seventy-one head at the International. Our best shearing ram, Nock 141, went to the noted firm of Funk Bros., of Ill., and our champion Minton ewe at London went to Mr. Dyson, of Bogota, Ill., with three others; and the Purdue University, LaFayette, Ind., got three Nock ewe lambs and a Minton and Nock shearing ewe, the best ewe lamb imported to America this year. Kansas Agricultural College bought nine, among them being the second best Nock imported to America this year. Ontario Agricultural College got a choice pair of Nock ewes. Our total sales since August first are: One car of ewes to Utah; one car of rams to Iowa; including these, we have sold 240 Shropshires. We wish you and your readers a Prosperous New Year."

H. BOLLERT'S HOLSTEINS.

One of the very oldest, if not the oldest, established herds of Holstein cattle in Canada is the Maple Grove Herd, the property of Mr. H. Bollert, Cassel, Ont. Few men indeed have made the unqualified success in any line of pure-bred stock breeding that Mr. Bollert has with his Holsteins, and, although sweeping as the statement may appear to be, it is nevertheless true, that not one heifer ever bred in this herd failed to qualify for the Record of Merit, and with a good margin to spare at that; some of which have made world's records. Today, all the females in the herd, in milk, have been officially tested, and all are in the Record of Merit; nearly all of them with very large records. They are an exceptionally choice lot of individuals—up to a large size, ideal in type, and carrying large, even udders, Mr. Bollert being a strong believer in beauty of form, combined with great production, and the herd is proof positive that such a combination can be bred up and maintained. The chief stock bull is Sir Abbekirk De Kol 2nd, a son of the great cow, Tidy Abbekirk, whose official record is 551 lbs. milk in seven days, and 25.48 lbs. butter in seven days, computed on an 85-per-cent. basis. One of her daughters, a full sister to the bull, Tidy Abbekirk De Kol, has an official record of 97 1/2 lbs. milk in one day, 26.47 lbs. butter in seven days, computed on an 85-per-cent. basis; equal to 28.34 lbs. on an 80-per-cent. basis. Tidy Abbekirk with her two daughters and two granddaughters make a family of producers unequalled by any other like family in the world; they were all bred in this herd. Second in service is Mercena's Sir Posch, sired by Sir Abbekirk Posch, a full brother to Alta Posch, the world's greatest producer under three years, of 87 lbs. milk in one day, and 25 1/2 lbs. butter in seven days, and his dam, Aaltje Posch 4th, holds the world's two-day public test of 8.6 lbs. butter; dam Mercena 3rd, whose official record is 90 lbs. milk in one day, 556 lbs. in seven days, and 25.78 lbs. butter in seven days, computed on an 85-per-cent. basis. Two such exceedingly richly-bred bulls as these at the head of a herd, whose official seven-day records range from 12.09 lbs. butter for a yearling, to 26.47 lbs. for a six-year-old, must, of necessity, produce great results, and should be an incentive to intending purchasers to look to this herd for foundation stock or a herd-header. For immediate sale are a few very choice young bulls, whose breeding on producing lines is certainly all that could be desired.

LITTLE GIRL'S FACE COVERED WITH ECZEMA.

That terrible skin disease, Eczema, is no respecter of persons. It attacks the newborn baby as readily as the aged, but in Zam-Buk we have Nature's Remedy for combating and overcoming this tormenting and aggressive disease.

Mrs. A. E. Grass, St. Catharines, says: "One box of Zam-Buk healed my LITTLE GIRL'S FACE of Eczema. We use it for Cuts and Sores also."

Mrs. G. A. Kerr, Denbeigh, Ont., says: "My Baby's Legs were so bad with eczema that I could not keep stockings on her. A box of Zam-Buk cured her after the Doctor had failed."

Dame J. R. Smith, Hawkesbury, Ont., writes: "After three applications I was better of Eczema, and before I had used half a box, I was cured."

Zam-Buk cures Cuts, Burns, Scalds, Ulcers, Ringworm, Itch, Barber's Rash, Blood Poison, Bad Leg, Salt Rheum, Abrasions, Abscesses and all skin injuries and diseases. Of all stores and druggists at 50 cents, or from Zam-Buk Co., Toronto, for price. Six boxes for \$2.50.

You cannot possibly have a better Cocoa than

EPPS'S

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

COCOA

Sold by Grocers and Storekeepers in 1/2-lb. and 1-lb Tins.

Liquor and Tobacco Habits

A. McTAGGART, M.D., C.M., 75 Yonge St., Toronto, Canada.

References as to Dr. McTaggart's professional standing and personal integrity permitted by: Sir W. B. Meredith, Chief Justice. Hon. G. W. Ross, ex-premier of Ontario. Rev. John Potts, D.D., Victoria College. Rev. Father Teefy, President of St. Michael's College, Toronto. Right Rev. A. Sweetman, Bishop of Toronto. Rev. Wm. McLaren, D.D., Principal Knox College, Toronto.

Free Veterinary Book

Be your own horse doctor. Book enables you to cure all the common ailments, curb, splint, spavin, lameness, etc. Prepared by the makers of

Tuttle's Elixir

The world's greatest horse remedy. \$100 reward for failure to cure above diseases where cure is possible. Write for the book. Postage 2c. TUTTLE'S ELIXIR CO., 66 Beverly St., Boston, Mass. Montreal: H. A. Tuttle, Mgr., 32 St. Gabriel St. Beware of all blisters; only temporary relief, if any. C. H. R. Crocker, South Farmington, Nova Scotia.

High-class Driving Ponies AND DORSET SHEEP.

For sale: Pair matched bay and white ponies, 2 years old; piebald gelding, 2 years old; black Shetland mare (imp.), 5 years old (bred); and others of various ages. Also a few young Dorset ewes in lamb. Apply to:

E. DYMENT, COPETOWN, ONT. Gilead's Spring Farm. Wentworth Co., Ont.

MAPLE GROVE HOLSTEINS.—Every female in the herd is in the Record of Merit. My stock bulls are backed up by heavy record dams. For sale: A few choice young bulls bred from Record sires and dams. H. Bollert, Cassel P.O., Tavistock Sta.

THE SPICE OF LIFE.

Whatever may be said of other dwellers in the State, a hen in Connecticut has won the right to a reputation of untarnished honesty. Caught on the fender of a trolley car, being overtaken and caught while taking a stroll, she left between the wires an egg to pay for her ride.

Kind Old Gentleman.—Well, here's a shilling for you, my poor man. You say the town council took away your occupation. I sympathize with you very much. That town council of ours has done so many stupid things. But how did they take away your occupation? Tramp.—Well, you see, sir, they went and pulled down the house I used to lean against.

Elder (discussing the new minister's probation discourse).—In my opinion, he wasna justified in dividing folk into the sheep and the goats. I wadna just say, Jamie, that I was among the unco' guid, an' I wadna say that you were among the unco' bad. So, whar do we come in. He'll no do for us, Jamie. We'll no vote for him.

Some years ago there lived in Perth, Scotland, a man of convivial habits, well known as Jamie. One dark night an acquaintance found Jamie lying at the foot of an outside stair.

"Is that you, Jamie?" asked the acquaintance, in a voice of the greatest astonishment.

"Aye, it's me," replied Jamie, in a tone of complete resignation.

"Have you fa'en doon the stair?" was the next question.

"Aye! I fell doon; but I was comin' doon, whether or no."

A lumbering old stage was winding in and out over a remote road in the Adirondacks. There was only one passenger, and he had chosen to sit outside beside the driver. Several times he had tried conversation, but had met with so little encouragement that he had given up, and was silently watching the landscape.

Presently they came to a tiny mountain burying ground, containing a few gravestones and a few unmarked graves. The passenger looked at it, struck by its air of loneliness, which seemed to stir in him afresh the desire for human intercourse. He turned again to the driver, pointed toward the graveyard, and observed:

"People around here don't seem to die very often, do they?"

And without turning his head, "Jest once," said the driver.

PITHY POINTS.

Economy and industry begin at home. Some people make fools of themselves displaying their knowledge.

Some men are unhappy by choice, and to attempt to comfort them is to offend them.

As long as it seemeth easy for a man to do wrong, it will be hard for his friend to do right.

Many a father thinks he is smart until his knowledge is put to the test by the questions of his little son.

It is an easy matter to knock on the door of fame and be admitted, but the trouble is in getting to the door.

It is not in the lack of knowing what to do that the majority of men fall short, but in their failure to live up to their knowledge.

Do not withhold from your friend the ray of sunshine, the smile, or the word of encouragement which drives away unhappiness.

You may not be a Carnegie nor a Rockefeller, a Folk nor a La Follette, a Torry nor a Jones, but you may be more than you are now if you will.

TOOLS AND THEIR USE.

Do you know the proper manner in which to use a hammer? Do you know that the handle should be grasped in such a manner that its end projects an inch or more beyond the side of the hand?

QUESTIONS AND ANSWERS. Miscellaneous.

AMERICAN SHORTHORN REGISTRATION.

What are the conditions of registration of Canadian Shorthorns in the American Shorthorn Herdbook?

Ans.—Rule 9 of the American Herdbook reads: "In case of animals recorded in the Dominion Herdbook, all ancestry back to the imported animal shall be recorded in the American Herdbook, for which a fee of \$1 each will be charged."

For forms of application and further information, write the Secretary, Mr. John W. Groves, Union Stock-yards, Chicago, Illinois.

SCALES FOR WEIGHING MILK—DISPOSAL OF TURNIP TOPS.

1. Does the Government supply spring balances for weighing milk in the stable free? If so, how may one apply for them?

2. Is it good for cattle to allow them to eat the turnip tops in the field in the fall? I allowed mine to eat them this fall, and they seemed to make them washy, and the cattle did not seem in as good condition for going into the stable as they were before they ate them, the calves being the worst. I turned my calves on them last year, and they were even worse than this year. Would it be more profitable to plow them under for green manure?

Ans.—1. No; but blank, ruled forms for keeping track of the weight of each cow's milk and of the food consumed may be had free upon application to J. H. Grisdale, Agriculturist, Central Experimental Farm, Ottawa.

2. A few turnip tops in the fall are good for any class of stock, though they should not be fed to milch cows on account of the trouble from tainting of the milk. Unlimited access to the tops, however, would not be advisable for any class of stock. Especially if the cattle were at once given all they could eat. Rather than feed them in this way, it would pay to plow them under for manure, as not a few farmers consider the best way of disposing of them. They are all right to feed judiciously in moderate quantities.

GOSSIP.

THE BREEDING AND COMMERCE OF THE BELGIAN CARTHORSE.

The breeders of the Province of Hennegau, the most important Province of the breeding of the great Belgian cart-horse, where are found the best horses, have formed a provincial society under the title "Les Ecuries du Hainaut" (the stables of Hennegau).

The society has as honorary president the Minister of Agriculture of Belgium, and as president effective M. George Semal, Agronomist, Provincial Counsellor and breeder.

The secretary is established Grand-place, Cafe Royal, at Mons (Belgium). Anybody interested in the matter can obtain there any information he desires, in order to facilitate his visits and his purchases to and with the breeders. The society having no mercantile aim does not intervene in the transactions.

The secretary will send, free of cost, the list of the members of the society, and will publish periodically a catalogue of the horses to be sold by the members.

The catalogue will be forwarded on demand.

Of the young Shorthorn bull, whose portrait appears elsewhere in this issue, the owner, Mr. A. W. Smith writes: "He is one of the good young bulls for sale at Maple Lodge Stock Farm, where are several fifty-pounds-of-milk-per-day cows; sire's dam, 435 lbs. in seven days."

The Archbishop of Canterbury and a number of clergy were adjourning for luncheon after an ecclesiastical function, when a canon remarked, unctuously: "Now to put a bridle on our appetites." "Say, rather," retorted his grace, "to put a bit between our teeth."

HORSE OWNERS! USE

CAUSTIC BALSAM. A safe, speedy and positive cure. The safest, best BLISTER ever used. Removes all bunches from Horses. Impossible to produce scurf or bluish. Send for circular. Special advice free. THE LAWRENCE-WILLIAMS CO., Toronto, Canada.

Bone Spavin. No matter how old the bluish, how lame the horse, or how many doctors have tried and failed, use Fleming's Spavin and Ringbone Paste. Use it under our guarantee—your money refunded if it doesn't make the horse go sound. Most cases cured by a single 5-minute application—occasionally two required. Cures Bone Spavin, Ringbone and Sidebone, new and old cases alike. Write for detailed information and a free copy of Fleming's Vest-Pocket Veterinary Adviser. FLEMING BROS., Chemists, 73 Church Street, Toronto, Ontario.

AN INFLAMED TENDON NEEDS COOLING. ABSORBINE. Will do it and restore the circulation, assist nature to repair strained, ruptured ligaments more successfully than Firing. No blister, no hair cure, and you can use the horse. \$2.00 per bottle, delivered. Book 2-C Free. ABSORBINE, JR., for manking, \$1.00 bottle. Cures Strained Torn Ligaments, Various Wounds, Varicocoele, Hydrocele, Enlarged Glands and Ulcers. Always pain quickly. W-F-JOHN, P.O.-F., 73 Kenneth St., Springfield, Mass. Canadian Agents: EYRE & SON, 50 St. George St., Montreal.

An Infallible Cure For Sprains, Ringbone, Splint, Curb, Sweeney, Lameness and Soft Bunches. Kendall's Spavin Cure has no equal. MONTREAL, P.Q., Sept. 12, '06. "I have the care of a number of horses and have used your remedies, which always proved infallible." D. Baillergues. Be prepared—keep Kendall's always in the stable. Our book "Treatise on the Horse" free from dealers or \$1 a bottle—6 for \$5. Dr. R. J. Kendall Co., Hensbury Falls, Vermont, U.S.A.

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

HACKNEY STALLION. MARQUIS OF DUFFERIN—Rising 4; registered; Silver Medal, Dominion Exhibition. A beauty. Chestnut, 15.2; fine action; splendid condition; mare sister. Sire Bell Boy, champion of Canada Exhibition, recently sold for a large sum in U.S.; dam first at Dominion Exhibition, by Barsthorpe Performer. Bargain for quick buyer. Railway fare of purchaser stocked from price. MOUNT VICTORIA STOCK FARM, (Clydesdales and Hackneys), Hudson Heights, P. Quebec, Can.

NOTHING BUT THE BEST. New importation of Clydesdales and Hackney Stallions. For sale more Old Country premium and N. and A. Society winners than any other importer. Such horses as Acoma, Menorah, Marquis, Roselle, Ardethan Goldsmith, King's Seal, Baron's Charm, Baron's Carrick, Abbey Fashion, Medallion, and many others equally good. Thirty six in all. Prices reasonable. OSWALD SORBY, QUELPH P.O., ONT.

Clydesdales, Shorthorns and Cotswolds—For richest bred and choicest individuals of above breeds, write me. My new Cotswold and Clydesdale importation will arrive early in the season. J. C. ROSS, Jarvis P.O. & Stn. GLYDESDALES AND SHORTHORNS—Canadian-bred, registered. One stallion, rising 8, by Imp. Macqueen. Two stallions, rising two, by Imp. Primrose. Also my stock bull, Gilbert Logan 86424. W. G. PUGH, Oshawa P.O. and Station.

FOR QUICK SALE.—Choice registered Holstein bull calves at \$25.00 each, sired by Prince Grotqui De Kol, whose dam has an official record of over 18 pounds at three years old. Express paid anywhere in Ontario. W. A. BRYANT, Cairnsgorm, Ont.

INTERNATIONAL STOCK FOOD COSTS ONLY



**This Beautiful Picture
in 6 Brilliant Colors
Mailed to You FREE**

A Marvellous Picture of 2 World Champions
**Dan Patch, 1.55, The Pacing King
Cresceus 2.024, The Trotting King**
We have large colored lithographs of
our World Famous Champion Stallions,
Dan Patch 1.55 and Cresceus 2.024, in an
exciting speed contest. It is 16 by 21 in.
and shows both horses as life-like as if
you saw them racing. You can have one
of these Large and Beautiful Colored
Pictures of the Two Most Valuable Har-
ness Horse Stallions and Champions of
the World, Absolutely Free. We Prepay
Postage. This cut is a reduced en-
graving of the large Colored Lithograph
we will send you free.

WRITE AT ONCE

1st, Name the Paper in which you saw
this offer.
2nd, State how much live stock you own.

International Stock Food Co.
TORONTO, CANADA

3 FEEDS FOR ONE CENT

QUESTIONS AND ANSWERS. Miscellaneous.

MATERIALS FOR SILO.

I am making preparation to build a cement silo. How many yards of gravel, and how much cement would it take for a silo 15 feet in diameter and 30 feet high? I am drawing the gravel now, and would like an answer as soon as possible. Could you tell me how to build the silo in the best way? J. W.

Ans.—Assuming that you are to have a cement floor, and that the inside of the walls will be plastered, we would advise you to procure forty yards of gravel, and thirty-five to forty barrels of cement. In case field stones are available, quite a few loads of these could be worked in, to the economy of both gravel and cement. If a little material is left over, it will not come amiss for other work. A specially good article on the construction of a cement silo appeared on page 500 of "The Farmer's Advocate" of March 29th, 1906, and another on page 946 in our issue of June 6th, 1907, and others will be published shortly, giving the actual experience of farmers who have built them.

CEMENT-SILO QUERIES.

1. Is a cement silo liable to crack after being built?
2. Does the ensilage keep well in it?
3. Is it apt to be mouldy?
4. In building a round cement silo, would it be necessary to have a circular-shaped box, and where could one be procured, or would it be difficult to make one?
5. How thick should the walls of silo be?
6. How would the silo be bound together on the side where the doors are?
7. How much gravel and cement would be required for a silo 14 feet in diameter inside and 27 feet high?

I would be much obliged for this information now, in winter time, when gravel could be hauled and other preparations made. SUBSCRIBER.

Ans.—1. Not if well built and properly reinforced with wire.

2. Yes; if it is plastered or washed with cement-mortar on the inside.

3. Not if the silo is constructed and plastered as above.

4. Either a circular box or steel rings, specially made for the purpose, and usually kept for hire by someone in each neighborhood.

5. Ten inches at the bottom, tapering to five or six at the top, depending upon the size of silo, strength of mortar and system of metal reinforcement.

6. The wires laid in the cement-mortar pass completely around the silo between the doors.

7. Assuming the silo is to contain a cement floor, we would advise you to lay in about 30 or 35 cubic yards of gravel and 30 barrels of first-class Portland cement. Some loads of field stone may be worked in to good advantage to the economy of both gravel and cement.

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 8 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 ever made. Look them up in our barn on Exhibition Grounds. Over 30 head to select from.

SMITH & RICHARDSON, COLUMBUS, ONTARIO.



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., Steuville and Germley Stations.

Oak Park Stock Farm IMP. HACKNEYS, SHROPSHIRE, AND BERKSHIRES. BRANTFORD, ONT.

shires—imp. and from imp. stock; singly or in car lots. About 30 choice young Berkshires, imp. sire and dam. Everything strictly high class. T. A. COX, Manager, Brantford, Ont.



Imp. Clydesdales (Stallions and Fillies), Hackneys, Welsh Ponies.

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

SIMCOE LODGE CLYDESDALES

Our stable of imported and Canadian-bred Clydesdale stallions and fillies was never so strong in show stuff as now, although we have had some very strong lots. Call and see what we have before buying elsewhere. HOGKINSON & TISDALE, BEAVERTON, ONT., G. T. & C. N. R. Long-distance phone.



IMPORTED CLYDESDALES! 9 stallions, 1 to 6 years of age; 10 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, RAVENSHOE P. O., BROWN HILL STA.

TRADE TOPICS.

CALIFORNIA, MEXICO, FLORIDA are the favorite winter resorts, and the travel from Canada is constantly increasing, owing not only to the improved financial conditions of the people, but largely to the more comfortable and quicker transportation facilities, and the Grand Trunk Railway system is a leader in this. Round-trip tickets give choice of all the best routes, going one way and returning another, together with full information, and reservations may be obtained from any Grand Trunk ticket agent, or write to J. D. McDonald, D. P. A., Toronto, Ont.

"WE LIVE IN THIS WORLD, NOT IN THE IDEAL WORLD."

That was Mr. Gladstone's reply to a mother who was pleading that boys should be kept more strictly in the home. Then Mr. Gladstone went on to say: "If boys are to meet and master the rough facts of this world, if they are to make a living and make a success in this world, if they are to keep themselves straight and true in this world, they must have responsibility shouldered onto them early in life. The boys who are too well shielded from danger are precisely the ones that fall into all sorts of danger."

There is no danger which the apron-string boys fall into as quickly and surely as the danger of shooting themselves and other boys by their ignorant handling of firearms. You teach them how to avoid a thousand other dangers—how to use kerosene and gas and matches and knives—how to ride and drive and swim and skate and coast—how to get on and off cars, and cross the crowded street—how to climb trees and keep away from the heels of a mule, and leave red hats and shawls at home when they go into the cattle pasture—why not make them wise and self-reliant and careful in the use of firearms? They will be handling guns. Get a Stevens "Little Krag," and have some target-practice with them; and teach them all about it. The J. Stevens Arms & Tool Co., of Chicopee Falls, Mass., just for five cents in stamps to pay postage, will send you a finely-illustrated book of 160 pages on firearms. The book explains all about the make and the use and care of every kind of rifle and shotgun and pistol.

GOSSIP.

Will you kindly make the following corrections in the list of winnings in Lincolns at the Ontario Winter Fair at Guelph: J. H. Patrick, of Iderton, won the following prizes: First for ewe lamb, first for pen of three ewe lambs in the Lincoln class. He also won first for yearling wether in Long-wool-grade class. A. P. WESTERVELT, Secretary Winter Fair.

HIS CONTRIBUTION.

Stories have been told of buttons, tacks and various extraneous substances found in contribution boxes, but it is seldom that a church member strikes a blow so severe as was that delivered by Amos Budd, of Petterville, on one occasion.

It was at the close of a missionary sermon that Mr. Budd, whose wont it was to contribute ten cents to each of the charities to the support of which the church subscribed, was seen to take a blue slip from his pocket and look at it keenly and affectionately.

When, after a slight but evident hesitation, he dropped the slip, carefully folded, into the box, Deacon Lane, who was passing it, could hardly refrain from an exclamation of joy.

"The Lord will bless you, Brother Budd," he said when the sermon was over, hurrying down the aisle to overtake the prosperous grocer.

"I hope so," returned Mr. Budd, dryly, "but I'm afraid you call late on that being a cheque that I dropped in the box. It wasn't. 'Twas a receipted bill for kerosene the church owned me last year, and it had been overlooked. Of course, it's just the same as money though, when you come to that."

Candidate.—Yus, as I've already told you, gentlemen, you see before you a self-made man.

Voice (from the back).—Better ha' put the job out, mister!

LISTEN!

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

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

Lost Strayed or Stolen—One Cow

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



did. You can't afford to lose the price of one or more cows each year—there's no reason why you should. Get a Tubular and get more and better cream out of the milk; save time and labor and have warm sweet-skimmed milk for the calves. Don't buy some cheap rattle-trap thing called a separator; that won't do any good. You need a real skimmer that does perfect work; skims clean, thick or thin, hot or cold; runs easy; simple in construction; easily understood. That's the Tubular and there is but one Tubular, the Sharples Tubular. Don't you want our little book "Business Dairyman," and our Catalog A.135 both free? A postal will bring them.

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

Shorthorns—Sweepstakes herd at

Wallacetown, Rodney, Ridgetown, 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, Ridgewood Marquis—48995—, 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.
Breeder of Short horns and Clydesdales. 15 bulls, 60 cows and heifers, 1 imp. shorthorn and home-bred Allises. 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.

D. ALLAN BLAOK, 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, 12 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 years old. Write, or come and see them.

JAMES McARTHUR, GOBLES, ONTARIO.

QUESTIONS AND ANSWERS.

Miscellaneous.

CREAM HARD TO CHURN— SPRING-SOWN PASTURE CROP —TIME TO SOW HUNGARIAN FOR HAY.

1. Explain the cause of not being able to get butter from cream of certain cows after they have been with calf for five or six months. Is there any remedy, or has the feeding anything to do with it? If so, please give rations for a cow of that class.
2. What could I sow in the spring that would make a lasting pasture for eight head of stock? My land is a sand farm, not very light; but have no old sod for pasture, and not a very good catch of spring seeding, so will have to grow something for pasture.
3. What is the proper time for to sow Hungarian for hay, also time of cutting same?

A. E. S.

Ans.—1. The cows being a long time in milk and probably fed mostly on dry feeds, the fat globules become hard and, consequently, are not so readily massed together by the agitation of churning. Some breeds are worse than others, because their fat globules are smaller. Ayrshire milk is inclined to be somewhat slow to churn for this reason. There is, however, a great difference among individual cows in this as well as other respects.

2. Feeding succulent foods and a fair grain ration, especially bran, oil meal and certain other grains, will materially influence the churnability of the cream. Well-cured clover hay, cut at or before fall bloom, produces a cream much easier to churn than that from cows fed on straw or on dry, chippy, over-ripe hay. Cottonseed meal is inclined to harden the butter, and should, therefore, not be fed in winter to cows whose cream is hard to churn. Liberal salting of the cows will increase the churnability of the cream. Feed clover hay, mangels, corn silage, oil meal, shorts or bran and corn meal.

3. After considerable experimenting with spring-sown pasture crops, Prof. C. A. Zavitz, of the Ontario Agricultural College, strongly recommends a mixture of 1½ bushels oats, 30 pounds Early Amber sugar cane, and 7 pounds common red clover. The oats come on first, being later reinforced by the sugar cane, while towards fall the clover yields a considerable amount of grazing. This mixture is especially suitable for light land, not seriously injured by trampling.

3. Corn-planting time, or a little later.

ONE ON THE FISH.

"Doin' any good?" asked the curious individual on the bridge.

"Any good?" answered the fisherman, in the creek below. "Why, I caught forty bass out o' here yesterday."

"Say, do you know who I am?" asked the man on the bridge.

The fisherman replied that he did not. "Well, I am the county fish-and-game warden."

The angler, after a moment's thought, exclaimed, "Say, do you know who I am?"

"No," the officer replied.

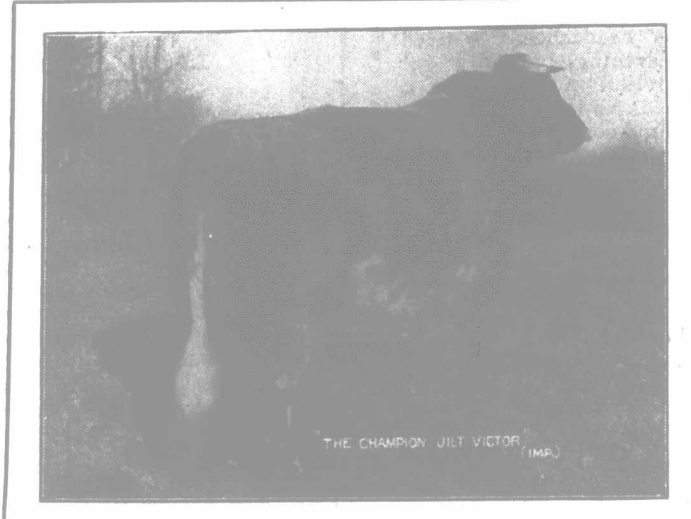
"Well, I'm the biggest liar in eastern Indiana," said the crafty angler, with a grin.

VIRTUE OF EXERCISE.

Do you ever see a woman with her ears covered, no matter how cold it is? Do you ever hear of a woman having her ears frozen?

Well, it isn't because women's ears are made of something different. Not at all. It is because they use their ears, and the exercise keeps them warm. A woman hears everything.

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.

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.**

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 mo. old—the last will make a show bull. Flora bred—will be sold easy. **L. S. POWELL, Wallenstein P. O. and Stn. G. P. R.**

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.

PLEASANT VALLEY SHORTHORNS

For sale: 3 young bulls by Old Lancaster Imp., from imp. dams, including Lancaster Victor, first prize at bull calf at Dom at Sherbrooke, second at C. N. E., Toronto. Correspondence solicited. Inspection invited.

Geo. Amos & Son, Moffat Stn. & P.O. C. P. R. Farm 11 miles east of City of Guelph.

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.

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.

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.

SCOTCH SHORTHORN BULLS—Woodfield Prince, sire of the \$3,100 Goldcup, imported, =50038= (86064), dam Trout Creek Missie 20th =65967=; red, little white; calved July 6th, 1906; a show bull. Also four extra bull calves, 8 to 10 months, by the Lavender bull, Trout Creek Wonder =56167= (247851), out of Scotch cows; imported by W. D. Flatt; eligible for American Herdbook. Write for pedigrees. **Gibbs' Woodfield Stock Farm, St. Catharines, Ontario.**

PRINTED BY REQUEST.

Mix the following by shaking well in a bottle, and take in teaspoonful doses after meals and at bedtime:

Fluid Extract Dandelion, one-half ounce; Compound Kargon, one ounce; Compound Syrup Sarsaparilla, three ounces. A local druggist is the authority that these simple, harmless ingredients can be obtained at nominal cost from our home druggists.

The mixture is said to cleanse and strengthen the clogged and inactive Kidneys, overcoming Backache, Bladder weakness and Urinary trouble of all kinds, if taken before the stage of Bright's disease.

Those who have tried this say it positively overcomes pain in the back, clears the urine of sediment, and regulates urination, especially at night, curing even the worst forms of bladder weakness.

Every man or woman here who feels that the kidneys are not strong or acting in a healthy manner should mix this prescription at home, and give it a trial, as it is said to do wonders for many persons.

The *Sewanee* (Pa.) Times was first to print this remarkable prescription, in October of 1906, since when all the leading newspapers of New York, Boston, Philadelphia, Pittsburg and other cities have made many announcements of it to their readers.

Two Highland farmers met on their way to church. "Man," said Donald, "I was wonderin' what you will be askin' for yon bit sheep over at your steadin'?"

"Man," replied Dougal, "I was thinkin' I wad be wantin' fifty shullin's for that sheep."

"I will tak' it at that," said Donald; "but och, man, Dougal, I am awful surprised at you doin' business on the Sawbath."

"Business!" exclaimed Dougal. "Man, sellin' a sheep like that for fifty shullin's is not business at all; it's just charity!"

Lump Jaw advertisement featuring an illustration of a cow's head and text describing Fleming's Lump Jaw Cure as the first remedy to cure Lump Jaw.

SUNNYSIDE STOCK FARM advertisement listing various breeds of cattle and sheep available for sale.

Athelstane Shorthorns advertisement featuring a picture of a cow and text about a special offering of three choice young bulls.

Hawthorn Herd of Deep-milking SHORTHORNS advertisement listing 6 young bulls available for sale.

SHORTHORN BULLS FOR SALE advertisement listing two young bull calves for sale.

QUESTIONS AND ANSWERS. Miscellaneous.

SALIVATION IN COLT.

1. Would you prescribe for my colt? It is nine months old, and slavers so badly that his oat-box is half full of water; the slaver is water—no foam. The colt has not lost any flesh, and is feeling well.

2. Would it be advisable to give oil to a mare in foal about four months, and how much? She is a heavy mare and suckles a foal.

Ans.—1. Slavering is generally due to some uncomfortable condition of the teeth or mouth. Have the colt's mouth and teeth carefully examined, and remove the cause, if discovered.

2. Raw linseed oil is the safest purgative for an in-foal mare. From 1 1/2 to 2 pints is a safe dose.

RAISING WATER TO HOUSE.

My well is situated about thirty yards from my house; it is down a slope. The bottom of the well is about twenty-five feet lower than the ground at the house.

1. Will you please tell me if I could bring the water to the house by a pump, or what would be the best and cheapest way of getting it to the house?

2. What size pipe would be required, and what kind?

I have been a subscriber to your paper for quite a time, and I am very much interested in it. Wishing you a Prosperous New Year.

Ans.—1. Yes, by putting down a dry well, about five feet deep, near the house, covered with a platform, and putting pump cylinder at bottom. If supply is for house alone, you can pump by hand; but if for stock, a windmill would relieve your elbow, and save valuable time.

2. Use 1 1/2-inch galvanized-iron pipe.

NON-TRANSFER OF PEDIGREE.

A has an auction sale of pure-bred cattle. B buys a cow. The cow is sent to B, and, also, the pedigree; but the transfer of the pedigree is not signed to B, and A refuses to do so. How is B to get her calves registered?

Ans.—Our correspondent does not state which breed of cattle he has reference to, although it makes little difference, as the point raised is covered in some way or other in the constitutions of the different record associations. If "A" is a member, he may be expelled for conduct prejudicial to the interests of the association, and thereby forfeit right to do further recording, or a transfer of ownership may be made under the following clause: "In case of neglect or refusal of the seller to give a certificate of transfer, the record of transfer may be made upon the written approval of the majority of the Executive Committee on evidence of the sale and delivery of the animal."

This clause applies to members and non-members alike.

TANNING SKINS.

Would you please publish in your paper a recipe for tanning muskrat and black squirrel hides—one for tanning and leaving hair on, and the other for tanning and taking it off?

Ans.—Soak well in soft water for two or three days to make it perfectly soft, then scrape off all flesh and fat. When thoroughly cleansed, put the hide into a tan composed of equal parts alum and salt dissolved in hot water, seven pounds of alum and salt to twelve pounds water, or in these proportions. The skin can be left in the brine for two days, after which it should be hung up and well scraped or shaved to soften it. After shaving well, put the hide back into the brine for a day or two; then hang up till quite dry, and shave or scrape again. After this, apply a coat of oil, roll up in damp sawdust, and lay away till dry. Apply a good coat of soft soap, and lay away again in sawdust. As scraping is the main operation in softening the skin, it should be well worked again when dry. Drawing the skin back and forth over a round pole will impart pliability. We have no recipe we feel safe in recommending for the tanning of muskrat skins that will remove the hair.

HERD BULL FOR SALE.

Lord Lieutenant (Imported) No. 50080—Five-year-old. All stock bull, quiet and sure. 9 bulls just over 1 year. 2 bulls just under 1 year. Half dozen choice 1 and 2 year old heifers. All from imported sires, and some from imported dams. All are from good milking dams. Visitors always welcome.

SCOTT BROS., Highgate P. O. and Station. M. C. Ry. and P. M. Ry.

STONELEIGH E. JEFFS & SONS, STOCK FARM

Breeders of Shorthorns, Leicesters and Berkshires. Young stock of various ages and both sexes for sale. Head Head P. O., Bradford & Bolton stns., G. T. R. Neidpath. A choice lot of bulls ranging in age from 2, 4, 8 and 15 months. Ayrshires All sired by the world's champion, Imp. Douglasdale W. W. Ballantyne, Stratford, Ontario. "Neidpath Farm." Long-distance Phone.

STONECROFT STOCK FARM, St. Anne de Bellevue, Quebec.

(Adjoining the new Macdonald College.) Breeders and Importers of High-class Ayrshire Cattle, Glydesdale 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.

Illustration of a cow and text: COWS GIVE MORE MILK—cattle make better beef—Bulls are no longer dangerous when dehorned with the KEYSTONE DEHORNER. Cuts & sides at once—No crushing or bruising. Little pain. The only humane method. Write for free booklet. R. H. MCKEENA 210 Robert St. Toronto, Ont. Late of Fiction, Ont.

STONEHOUSE AYRSHIRES. On hand for sale: A number of imp. cows and heifers, winners of high honors in Scotland & Canada. 4 young bulls bred from champions and winners themselves. Extra choice offering. HECTOR GORDON, Howick P. O. & Sta., Quebec.

Burnside's Champion Ayrshires

My 1907 importation of 75 head being about all disposed of, I am preparing to import again. Mr. And. Mitchell, the world's most extensive dealer and breeder of Ayrshires, is at present securing for me the best young bulls from the best herds in Scotland. Send in your order now for a choice bull and a female or two. Bulls will be out of quarantine in time for spring service. Correspondence solicited. Long-distance phone in house. R. R. NESS, Howick, Que.

SPRING BROOK AYRSHIRES. Produced nearly 7,000 lbs. of milk each, testing 4.9 per cent. butter-fat, during the past three years. 30 head for sale before spring. All ages. Write for prices. W. F. STEPHEN, Box 163, Huntingdon, Que. Glenhurst Ayrshires. Oldest-established herd in Ontario. Imp. and Canadian-bred. Averaged B. F. test for the whole herd, 4.9; milk yield, 40 to 60 lbs. a day. For sale: females of all ages, and several young bulls; all by Imp. sire, and some out of Imp. dams. James Benning, Williamstown P. O., Lanark Stn.

SPRINGHILL AYRSHIRES. If you want something really good, we have cows and heifers, all ages, imported and home-bred. Winners in any company. Out of dams with H. A. S. official milk records. Imported bulls two- and one-year-old "winners." Three extra good Sept. bull calves (imp. in dam). Prices very reasonable, within reach of all. ROBERT HUNTER & SONS, Maxville, Ont. Long-distance phone, Maxville 83.

Wardend Ayrshires. We have only four spring bull calves on hand for sale. Will sell them at reasonable prices. Sired by White Prince of Masie No. 31285, bred by A. Hume, Menie. F. W. TAYLOR, Wellman's Corners, Hoard's Sta., G. T. R.

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. D. Y. HILL, Hickory Hill Stock Farm, Clappison, Ont. Dundas Station and Telegraph.

When Writing Advertisers Please Mention this Paper

JERSEYS 2 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.

Golden Fox of Dentonia. First prize and junior champion, Toronto, 1907. One of the bulls now at the head of my herd. He is doubly bred—Flying Fox and Golden Fern's Lad. Correspondence invited. T. PETERSON, Weston Road, Toronto Junction, Ont.

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

Pine Ridge JERSEYS! Having more bull calves this year than usual, we will sell them cheap, considering quality. They are bred from our stock bull, Earl Denton, gr-son of the famous Flying Fox. Wm. Willis & Son, Newmarket P. O. & Sta.

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

Glenwood Stock Farm—Holsteins and Yorkshires. Holsteins all sold out. Have a few young Yorkshires, about 3 months old, for sale cheap. True to type and first-class. Bred from imported stock. THOS. B. CARLAW & SON, Warkworth P. O., Campbellford Stn.

EVERGREEN FARM HOLSTEINS are headed by the richly-bred bull, Sir Mercers' Favorit Dam, Favorit 7th, and sire's dam, Mercers 3rd, have records averaging 28 1/2 lbs. butter in 7 days—85% fat. Young bulls out of Advanced Registry cows; also young females. F. O. PETTIT, Burgessville, Ont.

Ridgedale Farm Holsteins—1 yearling bull, from one to four mos., by Prince Pauline De Kol 6th, and from rich, heavy-milking dams. Come and see them or write: R. W. WALKER, Utica P. O., Ont. Port Perry, G. T. R., or Myrtle, C. P. R., Ontario Co.

Spring Valley Stock Farm. Holsteins, Leicesters and Oxford Downs. Present offering: 2 young bulls fit for service, sired by Count De Kol. Sheep—A few young registered ram lambs from prizewinners. J. VALENTINE, Violet, Ont.

8 CHIEF ARGUMENTS

IN FAVOR OF OUR No. 3 BINDER

Argument 1.—High-Grade Material—inside, outside, wrong side, right side. Whether steel, iron, wood or other material—every part of the No. 3 Binder is first-class, "A No. 1." WE KNOW IT because we test them.

Argument 2.—Light Neck-Weight on Horses. No. 3 is so nicely balanced on the main axle that there is very little appreciable weight on the horses. This means a great saving in a day's work, and does not wear down their vitality.

Argument 3.—Light Draft. No. 3 is noted for its light draft. As Mr. McGregor says, "It is light, strong, easily adjusted, two horses handle it nicely." The reasons are, we use ball and roller bearings, plenty of oil-cups, and accurate gears. They reduce friction and lengthen the life of the Binder.

Argument 4.—Picks up Flat Grain. Our lever that controls the reel, can be changed

instantly to any position—up, down, backward or forward—to pick up flat or lodged grain.

Argument 5.—Binds Every Sheaf. That's what our customers tell us. The record is pretty clear, and we're sure of every binding attachment, because each is carefully adjusted and thoroughly tested before it leaves the factory. We know then that it will work accurately in the field.

Argument 6.—Accurate Knottor. This is an improvement peculiar to our No. 3, and we believe ahead of anything on Canadian binders. It must be right before it leaves our works. Each one must tie a small harvest of sheaves before our sharp-eyed inspectors will pass it.

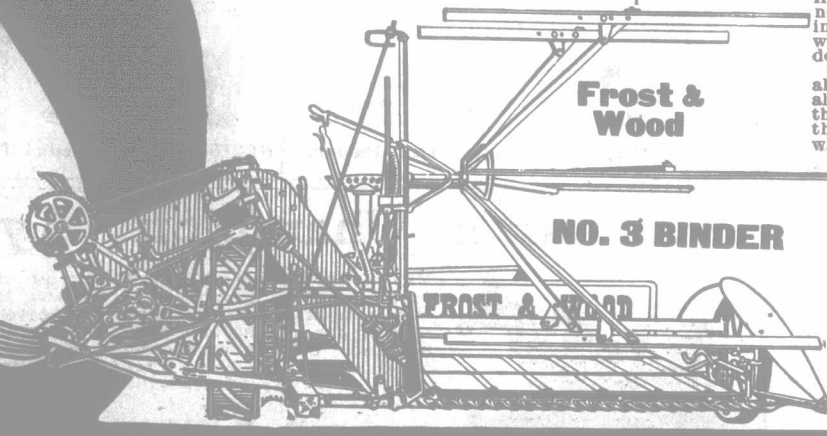
Argument 7.—Extra Elevator Roller. This roller on the upper elevator deflects the grain and sends it to the packers on the binder deck in good condition to make a solid, well-shaped sheaf.

Argument 8.—No 3 binders serve the needs of every class of farmers, for they are made in 5 ft., 6 ft., 7 ft., and 8 ft. widths.

"She is a Dandy," says Peter Graff. "No Binder could possibly do better or nicer work, and it is so very light on my horses, both in draft and neck weight. It has not missed a sheaf in tying all season, and any person wanting a Binder is missing it if he does not buy a Frost & Wood machine. The needle and tensions are far ahead of any other for permitting or allowing the thread or twine to pass through where there are any knots in the twine, it never in any instance will catch."

Yours truly,
(Signed) PETER C. GRAFF.

But there are a score more reasons for your buying an improved No. 3. Our booklet, "Reasons Why," and general catalog "P." give them. They are both free. Send now for them. Our organization covers the whole Dominion, so we have an agent near you. He'll gladly answer any questions.



Frost & Wood
NO. 3 BINDER
FROST & WOOD

THE FROST & WOOD CO., Ltd.
Smith's Falls, Canada

GOSSIP.

Mr. J. A. Cerswell, Bond Head, Ont., writes: "I wish to draw your attention to an error in report of prize-list of the Ontario Winter Fair at Guelph: In Oxford sheep, the champion wether should have been credited to me instead of W. E. Wright, as I got both the money and the ribbon with my first-prize wether lamb."

EDUCATIONAL INSTITUTIONS IN TOUCH WITH THE PEOPLE.

W. J. Black, President of the Manitoba Agricultural College, is thus reported on this subject in a speech before the convention of Saskatchewan agricultural societies. The ideal agricultural college, as Principal Black understands it, is the one that is built up and held up by men who are close to the people, who have a grasp of practical problems. The course of instruction which it undertakes should be intensely practical in its nature. It is not alone sufficient that a college offers instruction in the theory and sciences of agriculture; it should, in addition, bring out and develop the executive abilities of the student. A man to make a successful farmer must know more than the mere principles underlying his vocation. He must have the ability to manage affairs and apply his knowledge to practical ends. Consequently, farm management, the practical direction of farm affairs, should be the most important subject taken up in agricultural education. The square deal is what the world is calling for, and that should be the aim in all education, but especially in agricultural education.

GOSSIP.

Mr. F. W. Ewing, Salem, Ont., has for sale two bulls and two heifers in his herd of Scotch Shorthorns, and, as the strains are the choicest, it will pay someone to select here.

Official record of 117 Holstein-Friesian cows, of which one-half were heifers with first or second calves, were accepted by the American Holstein Association from November 29th to December 17th, 1907. This herd of 117 cows, of all ages, produced in seven consecutive days 44,924.7 lbs. of milk, containing 1,555.527 lbs. of butter-fat; thus showing an average of 3.46 per cent. fat. The average yield for each animal was 389 lbs. milk, containing 13.295 lbs. of butter-fat; equivalent to 55.6 lbs., or 27 quarts milk per day, and 15½ lbs. of the best commercial butter per week.

J. & D. J. Campbell, of Fairview Farm, Woodville, Ont., in their change of advertisement elsewhere in this issue, tell of their manner of doing business, which has resulted in pleased customers, and their own satisfaction with the past year's doings. They also write: "The Fairview Shropshires, at the International and Guelph Winter Fair—the only shows exhibited at—made more than ordinary records. At Chicago, where the greatest show of Shropshires ever seen in any country by the breeders present was made, the exhibits from Fairview won in breeding and fat-wether classes more of the money than any three of the competing flocks. The noted sires in use: Belvoir Sirdar, grand champion at St. Louis World's Fair, and Harding's Best, champion at the following International, made their mark as being extraordinary breeders. For pen of four lambs, the get of one sire, their progeny won second and third prizes in that wonderful show; and the following week a selection of same lambs won the Sir George Drummond \$250 silver trophy, offered for the best five lambs bred by exhibitor, all breeds competing; and it was a very popular win. What better evidence is there of the wisdom of using rams to head flocks which have the outstanding merit in keen, open-to-the-world competitions, to stand at the top, and thier sons, out of equally good ewes, which cannot fail to transmit to their get in return the concentrated good qualities which gave the sires and dams their notable standing. As years go by, it is becoming more and more apparent that in ewes it is all-important to have the faultless-as-possible individual, and all the good breeding behind as means will allow."

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. EDM, 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 Pietertje Posch DeBoer, whose dam and sire's dam average in official test 25.57 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 KORDYKE, 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 31½ pounds at four years, and the whole number averaged over 4 1/4% 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 50 cows and heifers in calf to him. Come and look my herd over before making your selections elsewhere. E. H. DELIAR, Heuvelaan, St. Law. Co. N. Y., near Prescott.

Maple Hill Holstein-Friesians

Bull calves from No. 1 dams, sired by bulls with great official backing. Write for prices.

G. W. Clemons, St. George, Ont.

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 20 lbs., and sired by a grandson of Pietertje Hengerveld's Count De Kol. BROWN BROS, LYN, ONTARIO.

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 g. dam. Come and inspect the herd. Any animal will be offered for sale. G. A. GILROY, GLEN BUELL, ONT.

QUEEN CITY HOLSTEINS.

Over 40 head high-class Holsteins. 10 or 15 could be spared. Almost any animal in the herd for sale. High-class stock bulls used. Farm situated 7 miles north of Toronto, near Metropolitan Street Ry. Write: R. F. Hicks, Newton Brook P. O.

LIVE - STOCK LABELS!

Metal Ear Labels for Cattle and Sheep. Try some this spring; save worry, time and money. No trouble to put in. See about them. Sample and circular free. Write for them. F. G. JAMES, Bowmanville, Ontario.

LOOK HERE

Have on hand bull calves from choice dams, and sired by son of greatest cow in Canada. Boutsje Q. Pietertje De Kol; 643 lbs. 7 days; 96 lbs. 1 day. His sire's dam and granddam have records averaging over 26 lbs. butter week. Also choice bulls fit for service. Prices right. FRED ABBOTT, Fairview Stock Farm, Harrietsville, Ont.

Grove Hill Holstein Herd

Offers high-class stock at reasonable prices. Only a few youngsters left. Pairs not skin. F. R. MAJORY, Frankford, Ontario. G. T. R. and C. O. Railway connections.

HILTON STOCK FARM - Holsteins,

Oatswolds and Tamworths—Present offering: Some young cows; a nice lot of young pigs; few boars six months old, and sows in pig. R. O. MORROW & SON, Hilton P. O. Brighton Tel. and Stn.

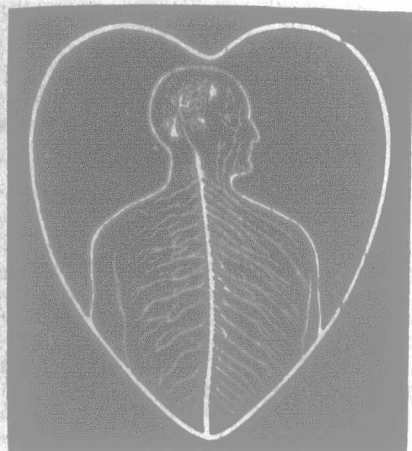
PROFESSIONAL BACKING FOR OUR POSITION.

A Philadelphia newspaper has sought and obtained a scientific solution of the vexing servant problem which "The Farmer's Advocate" had the temerity to tackle some weeks ago. It consulted a distinguished professor in the University of Pennsylvania, an authority on sociology and economics, as to the best way of obtaining domestic service; and the distinguished professor replied, even as we had suggested, that the best way will be for all middle-class wives and daughters to do their own housework. They will then have no difficulty with servants.

Here, says Agnes Repplier, in Life, we see the scientific mind cutting a clear swath through a tangle of doubts and difficulties. While feeble reformers have been trying to patch up the situation with half-way measures, like pianolas in the kitchen, or the freedom of the drawing-room for visiting policemen, the professor, with an acumen past all praise, demonstrates that our trouble with servants arises entirely from keeping them. His argument is invulnerable, and his measures for our relief have the simple vastness of outline which characterizes all that is truly great. Like Mr. F.'s aunt, he dislikes a "proud stomach," and feels convinced that woman's noblest field of activity is the performance of lowly duties for the comfort and convenience of man.

On one point only the oracle is a trifle vague. He forbears to say who constitute the middle-classes in the United States, beyond an intimation that they have incomes under \$3,000. This is a little like the old definition of respectability—"keeping a gig"; but it is at least a boundary line which can be universally understood. If middle-class wives would add ten or twenty dollars a week to the middle-class incomes, we should reach, says the professor, "a proper economic adjustment." If they would cease reading novels and magazines, they would be more humble-minded and industrious. If they would do their own housework, there would be more servants left for the aristocracy (people whose incomes exceed \$3,000), who would be greatly benefited by the reform. All that is wanted is a large body of women, strong, healthy, intelligent, capable, energetic, unselfish, untiring, sweet-tempered, frugal, judicious and affectionate (and that's little enough for any man to ask), and housekeeping troubles—like most other troubles—will be over. The millennium will be at hand.

MILBURN'S Heart and Nerve Pills.



Are a specific for all diseases and disorders arising from a run-down condition of the heart or nerve system...

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 Butlar ram.

JOHN MILLER,

Brougham P.O. Claremont Stn., C.P.R.

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.

FAIRVIEW SHROPSHIRE

We wish our customers a prosperous New Year. Allow us to heartily thank you for your many kind words of appreciation of sheep sent in 1907.

40 IMPORTED SHROPSHIRE RAMS AND EWES - First choice of England's best flocks. Ram lamb from the champion ram of Canada, 1906. LLOYD-JONES BROS., Burford, Ont.

Oxford Down Sheep, Shorthorn Cattle, Yorkshire Hogs.

Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons, Buena Vista Farm, Harriston, Ont.

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. WAC. CAMPBELL & SONS, Harwich, Ontario.

There is a well-known editor who dislikes nothing more than superfluous questions.

On one occasion the telegraph editor approached with this query:

"Here's a story of a big landslide in the west. Under what head shall I put it?"

"You might throw it in with the real-estate transfers," caustically suggested the "old man."

DODD'S KIDNEY PILLS. CURES RHEUMATISM, BRIGHT'S DISEASE, DIABETES, BACKACHE. FOR ALL KIDNEY DISEASES.

QUESTIONS AND ANSWERS. Miscellaneous.

ENGAGING A TEACHER.

A, B and C are trustees. A, of Union-school section, is secretary. A and B are V-trustees, and C is an M-man. A notifies B and C to come to his home, and, while there, discusses the hiring of the present teacher.

Ontario. Ans.—We think not.

ORGANIZING A SOCIETY.

In organizing a society, what are the duties of the officers: president, vice-president, etc., of an agricultural society, for instance?

Ans.—The president is one of the most important officers of an agricultural society. His duties are to act as chairman at all the Board meetings, and take an active part in the interests of the society.

SALE OF UNSOUND HORSE.

A bought a horse of B for \$200, and after A got the horse home he discovered that it had a sidebone, and had the feeder taken out of the foot by an unprofessional man.

Ans.—B can probably recover, from A, the amount of the note; but A is apparently entitled to counterclaim against B for damages in respect of the unsoundness of the horse.

FEEDING VALUE OF THRESHED ALSIKE - RINGWORM.

- 1. What food value, if any has clean alsike straw, with the chaff in it, which has been kept inside after threshing? 2. Is it good for milk cows, or has it any effect upon the milk? 3. What will cure ringworm on calves?

Ans.—1 and 2. Alsike straw, if from clover that has been cured without undue exposure to dew and rain, has enough feeding value to make it moderately useful, especially for use along with ensilage or roots and straw.

3. Wash well with warm water and soap to soften the scale; wipe dry, and rub well with a mixture of sulphur and lard, after which it would be well to sweep out the stable, and whitewash all over.

RAW HIDES, SKINS, & C. FURS. Consignments Solicited. Write for Latest Price Lists. We Pay All Express and Freight Charges. E. T. CARTER & CO. 83-85 Front St., E., TORONTO, Can. The LARGEST DEALERS in CANADA

Southdowns Farnham Farm Oxford Downs. FOR SALE: 2 imported prizewinning rams, and 60 home-bred and imported ewes. COLLIES.—Puppies by champion sire, and out of prizewinning dam. Robt. McEwen, Byron, Ont.

Large English Berkshires. for sale from imported stock. Sows with pig and pigs for sale. All ages. A reasonable price. Guarantee satisfaction. JOSHUA LAWRENCE, Oxford Center, Ont.

MONKLAND YORKSHIRES. are the easily fed, quick maturing kind. The sort the farmers want. All ages for sale. 100 sows bred now. JAMES WILSON & SONS, FERGUS, ONTARIO.

Large White Yorkshires! 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.

DUNROBIN STOCK FARM. Clydesdales, YORKSHIRES, 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 speciality. Write for prices and particulars. DONALD GUNN & SON, Beaverston, Ontario. Inspection invited. G. T. R., C. N. O. R. stations 1 1/2 miles from farm. Customers met on notification.

Cedar Lodge Yorkshires. 100 head brood sows (Imp.) and the product of imp. stock, weighing from 600 to 800 lbs. each. Stock hogs by Imp. sires and dams, very large and full of quality. Young stock of both sexes constantly on hand for sale. Pairs not akin. Satisfaction guaranteed. P. O. COLLINS, Bowensville P.O., Ont. Manotick Sta., C.P.R.

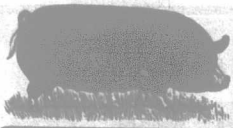
LARGE ENGLISH YORKSHIRES.—We have a limited number of choice young pigs for sale, bred from our choicest sows and got by the imported boars, Dalmoney Joe 18577 and Broomhouse Beau 14514. Pigs from the latter won all the first prizes at the Ottawa Fat Stock Show last March for the best dressed carcasses, and sweepstakes over all breeds or grades. We guarantee satisfaction in all mail orders. JOSEPH FEATHERSTON & SON, STREETSVILLE, ONT.

Willowdale Berkshires are unsurpassed for quality and breeding. Young stock, all ages, for sale reasonable. Satisfaction guaranteed. Long distance Breeder, Milton P.O. and Station, G. T. R. and C. P. R.

FAIRVIEW BERKSHIRES. Bred from imported and Canadian-bred sires and dams, and bred on prizewinning lines. My brood sows are large, choice animals. Young stock of both sexes. Some sows bred to imp. boars. HENRY MASON, SCARBORO P. O. Street cars pass the door.

CHESTER WHITE HOGS. The largest herd of bacon-type Chester White hogs in Canada. Strictly high-class, have won highest awards. Young stock of both sexes always on hand. Satisfaction guaranteed. ROBERT CLARKE, 41 Cooper Street, Ottawa, Ont.

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. Buckers either bred or sex. Also sows and calves; some prizewinners. Barred Rock cockerels, 75c. and \$1. Satisfaction guaranteed. Write, call or phone.
IRA L. HOWLETT, KELDON P. O.
 Shelburne Station, C. P. R.



OAKDALE BERKSHIRES Largest Berkshire herd in Ontario. Stock boars and several brood sows imported. For sale: Sows bred and ready to breed, boars ready for service, and younger ones, all ages, richly bred on prizewinning lines and true to type. Everything guaranteed as represented. Long distance phone. **L. E. MORGAN, Milliken P. O., Co. of York.**

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 skin. As good as the breeds produce.
CHAS. CURRIE,
 Schaw St., C.P.R. **Morrison P.O.**

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.

Yorkshires—Boars ready for service; sows ready to breed, and bred; young pigs just weaned and ready to wean. Ootswold and Shropshire rams, yearlings and lambs, registered. **GEO. M. SMITH, Haysville, Ont.**

SUBSCRIBE FOR "THE FARMER'S ADVOCATE AND HOME MAGAZINE."

TRADE TOPICS.

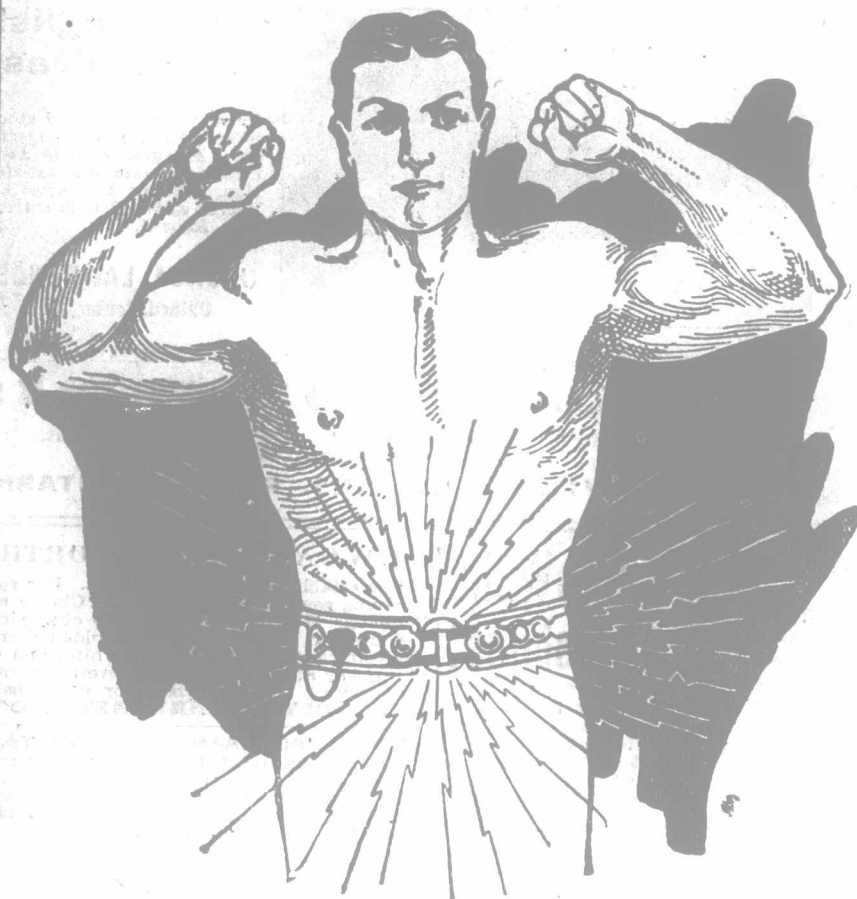
STOCK FOODS FOR FATTENING ANIMALS.—The manufacturers of proprietary stock foods are on their safest and least-debatable ground when they urge the use of their respective preparations for market animals. There are certain vegetable and mineral substances which contain tonic principles, under the influence of which the vital organs are mildly and persistently stimulated to increased activity, with the result that better use is made of the food; flagging vital processes are urged to renewed activity, and larger gains in weight secured in a given time than would otherwise be the case. As it matters not what may be the ultimate effect of the tonic upon the digestive apparatus of the vital organs of animals intended for the killing bed, the feeder need have no regard for such considerations, but must appraise the value of each preparation only by the results it secures in increasing gains, making allowance, of course, for whatever the cost of the "tonic" or stock food may be. There are quite a few of the better older and reliable preparations which have, in public experiment, shown profitable results in the feeding of market animals, and while it is possible to secure similar and cheaper results by the judicious use of home mixtures of simple drugs, and by the use of such condiments as salt, ashes and charcoal, the fact is that few farmers make use of these; consequently, there is a legitimate field for the manufacturer of stock foods or tonics, the better classes of which may be used in many cases with satisfactory and profitable results.

MAKERS OF FINE CARRIAGES.—It is a pleasure to bring to the notice of our readers such a deserving firm as the Baynes Carriage Company, Limited, of Hamilton, Ont. Many of our readers probably know about Baynes carriages. About fifteen hundred of these vehicles were sold last year—the first since the new factory was completed. With a steadily-growing demand and increased facilities, it is expected that there will be over six thousand Baynes carriages spinning over Canadian roads by the end of next summer. Baynes carriages are made by a company that believe in giving people a square deal. This company sell to the trade only; but they hold themselves responsible for the wear and service of every vehicle they make. They are men enough to own up to a fault, and if there is anything wrong with material or workmanship, you don't have to wait ten years to have the matter adjusted. They know how to build carriages, too. Baynes carriages contain many practical, sensible improvements—things you have probably been wanting ever since you first rode in a carriage. For instance, there is the Baynes dustproof axle that is said to run a year with only one oiling. And there is—but the best way to find out about Baynes carriages is to see them for yourself. By writing to the Baynes Carriage Company, Limited, at Hamilton, they will send the name and address of a dealer in your neighborhood who handles them.

TEACHING A CALF TO DRINK MILK.
 "Your stories of the Englishman in the Calgary district remind me of one I heard when living in Calgary, which was vouched for as being an actual occurrence," writes a Vancouver correspondent to Toronto Saturday Night.
 "It seems that a young Englishman who was out there getting experience on a ranch, was endeavoring to wean a calf, but could not get it to drink milk out of the pail, so he came back to the family and recounted his difficulty.
 "'Oh,' they said, 'go back and give it your fingers,' referring to the well-known method of teaching a calf 'how.'
 "He strolled away with a thoughtful air, and was gone a rather long time, so they went round to see what he was doing, and found him with his fingers in the calf's mouth while the pail of milk stood some little distance away. He looked up as they approached, and said, innocently:
 "'I don't think it can be very nourishing, but he seems to like it.'"

MEN! LOOK HERE!

Men with Back Pains, Rheumatism, Nerve Weakness, Indigestion, Constipation, Liver, Kidney or Bladder Troubles.



My Electric Belt has restored health and strength to thousands of nervous, debilitated and pain-worn men and women. You also can be cured if you will grasp the opportunity I offer. Read what the cured say. Electricity, as furnished by my Belt, cures by giving back to the weakened nerves, muscles and organs the vitality they have lost, reducing inflammation, developing the full vigor of health and removing the effects of overwork, exposure to weather and long-continued sickness.

This grand restorer of life carries a strong current direct to the weakened parts, and is a positive cure for all weakness in men. It develops and expands all weak organs, and checks unnatural drains; no case of failing vigor or debility can resist the powerful Electric Suspensory. I have cured thousands of weak, impotent men, and I can cure you, if you will write me. You are a broken man as a result of living a reckless, fast life; your errors of youth and dissipation in manhood have drained the vital forces from your body. Before you are forty life will have lost all its pleasures for you, unless you stop this drain now. A grand method, and every man who has ever used it is praising it.

DR. McLAUGHLIN'S ELECTRIC BELT

With suspensory for weak men has brought strength, ambition and happiness to thousands of weak men in the past year.

I will not promise to make a Hercules of the man who was never intended by nature to be strong and sturdy. Even that man I can make better than he is, but the man who has been strong and lost his strength I can make as good as he ever was. I can give back to any man what he has lost by abuse of the laws of nature.

Vermilion Bay, Ont., Oct. 18, 1907.

Dr. McLaughlin:
 Dear Sir,—I have just received your letter, and was pleased to hear from you, and to know that you are still improving your Belts. I thought they were perfect, as they have done so much for me. I have worn the Belt for three months, and can say that I am a new man. You may use my name if you wish, and I will tell anyone the great good the Belt has done for me. Yours very truly,
THOMAS KIRCHEN.

Dr. McLaughlin: St. Catharines, Ont., Oct. 21, 1907.

Dear Sir,—Before buying your Belt, I had Sciatica so bad that I was unable to walk across the floor. Being persuaded by my family to try one, although I had no faith in it myself, I consented to get one, more to stop them from bothering me, as I had given up all hope of ever being able to walk across the room, and in three days I could walk out doors. Now, I claim I am soundly cured, giving Dr. McLaughlin's Belt all the credit. Yours truly,
CHAS. HOBBS, P. O. Box 425.

It is the grandest remedy in the world for building up wrecked humanity. It fills the exhausted nerves and organs with the fire of life while you sleep. To you who have been reading my advertisements for months, and who need the help of my appliances, why do you hesitate? Is it not because, tiring of spending money trying to seek relief through other treatments, you are doubtful whether there is any help for you? Now, to enable you to satisfy yourself whether or not I have the confidence which I tell you I have in my treatment, I make this offer: If you will secure me for the price of my Belt, I will take your case and cure you before you pay me. Is this not fair? This is my offer:

PAY WHEN CURED.

Free to All—My Beautiful Book.

Weak Men, Broken-down Women, I want to see you all at my office! Call on me if you can do so; if not, cut out this Coupon, mail me your address, and I'll send you my elegantly-illustrated, 80-page Book, which points out the Road to Health. Don't put it off. I have a book for Men; one for Women, too. Send to-day.
 Consultation free. Office hours—9 a. m. to 6 p. m. Wednesday and Saturday till 8.30 p. m.

DR. M. S. McLAUGHLIN.

112 Yonge St., Toronto, Can.

Please send me your book, free.

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