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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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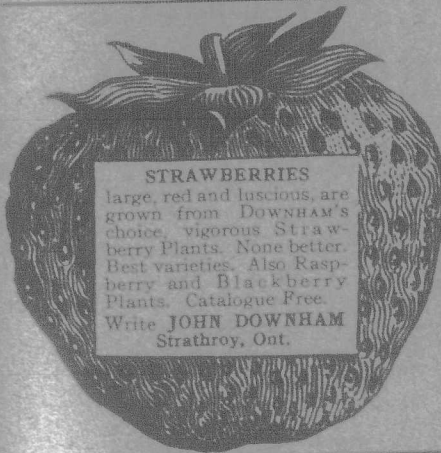
No. 856

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Some Salts have lime and other impurities in them—which makes them coarse and gritty.

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—on chemical analysis—was found to be the purest of the principal brands on the British and American market.

Fine 172



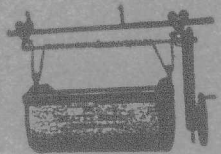
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Telegraphy

Is taught quickly and thoroughly. All students are placed in good positions immediately upon graduation.



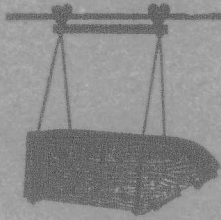
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properly installed, is a machine that will last. The track is the heaviest used by any firm for this purpose. The carrier is simple in construction, and running on a strong level track there is nothing about it to get out of order.

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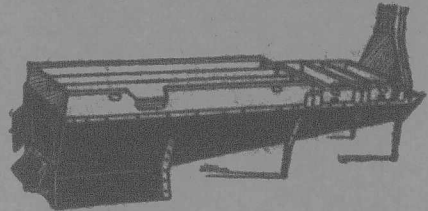
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can be made from a given amount of apples or grapes with one of our presses than with any other. The juice will be purer and bring higher prices, while the extra yield soon pays for the press. We make HYDRAULIC Presses in all sizes, hand or power, 25 to 400 barrels per day. Also Steam Evaporators, Apple-buster Cookers, etc. Fully guaranteed. Catalogue FREE.



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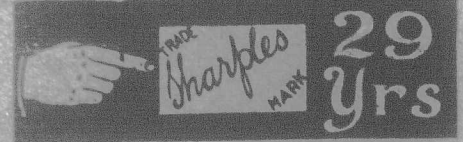


Washing the Sharples Dairy Tubular bowl. Only three pieces. The brush, the girl is using, cleans the inside in a moment. Easier washed, more durable than any other bowl.



This is the Sharples Dairy Tubular. So simple and perfect in construction, that the medium sizes can be turned by one who is seated. Self oiling enclosed gears. Low, steady supply can.

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The easy cleaning of the light, simple Sharples Dairy Tubular Cream Separator bowl will please **your wife**. Its simplicity and durability will please **you**. The upper left hand picture shows it. Tubulars are entirely different from all other separators and will strongly impress **both of you** with their many exclusive advantages.

The Sharples Dairy Tubular bowl has **only three pieces**—the bowl itself, the bowl bottom which closes the lower end of the bowl, and the tiny smooth piece that slips inside the bowl. Other separator bowls, as shown in the lower right hand pictures, have many pieces—some almost fifty—all separate in some bowls or joined together in others—but all much harder to wash and much quicker to rust and wear than the Sharples Dairy Tubular.

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Toronto, Can. Winnipeg, Man.

She Will NOT Want These

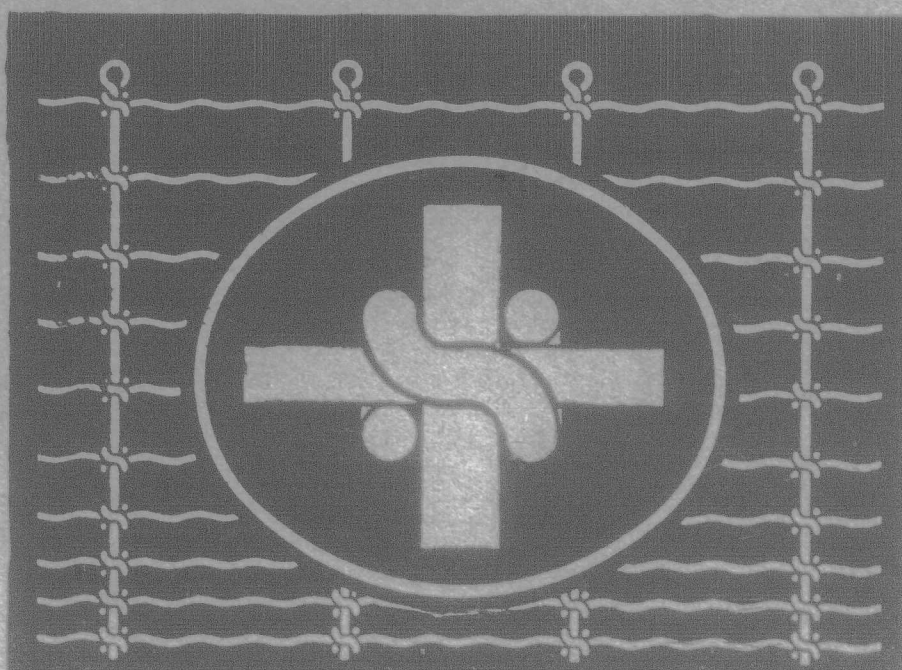


What woman would choose to wash any of these heavy complicated "bucket bowls" when she can have a simple Dairy Tubular instead? What man would expect any of these complicated "bucket bowls" to be as durable as the simple Dairy Tubular?



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are just a little Heavier, Stronger, Stiffer, More Secure and Serviceable than any other by comparison. They are the Best and Most Economical to Use and Buy, and the Most Profitable to the Agent.
THE SELKIRK Lock, although cheaper than any other independent lock, is the only one that grips tight enough to justify the use of High Grade Wire. The best metal fence lock will cost 40% more and will not hold half as much. Fill out the blank below and mail it to us and we will send you proof of the above statements, a handsome catalogue and full particulars.
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I want to examine for myself the merits of Selkirk Stiff Stay Fencing and Gates. Send me a free sample piece of the fence with descriptive catalogue and Agent's terms.
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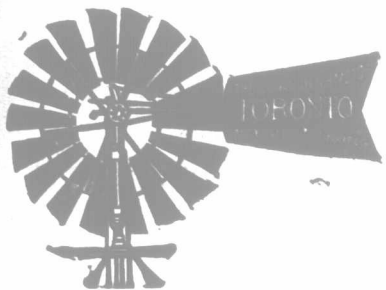
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All Sizes
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Ont. Wind Engine & Pump Co.
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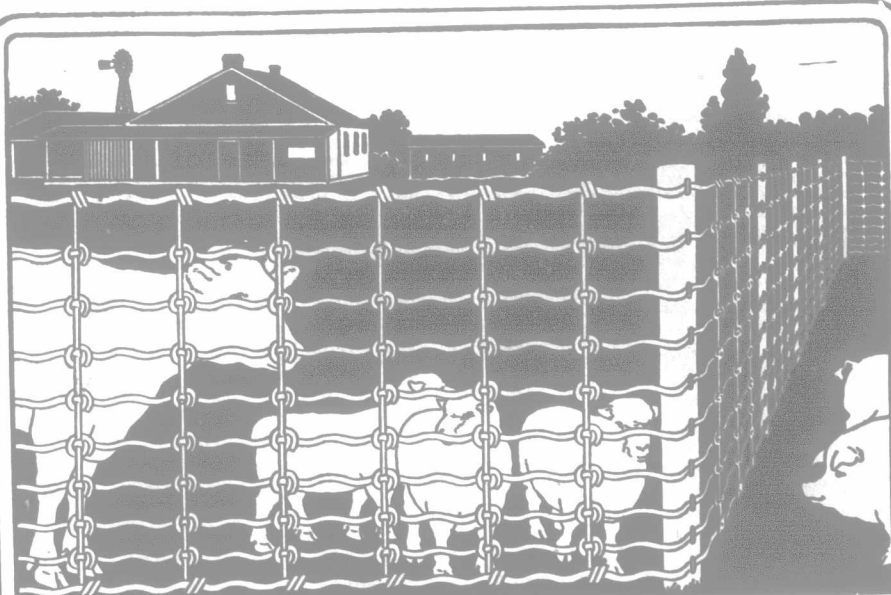
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For Pumping, Cream
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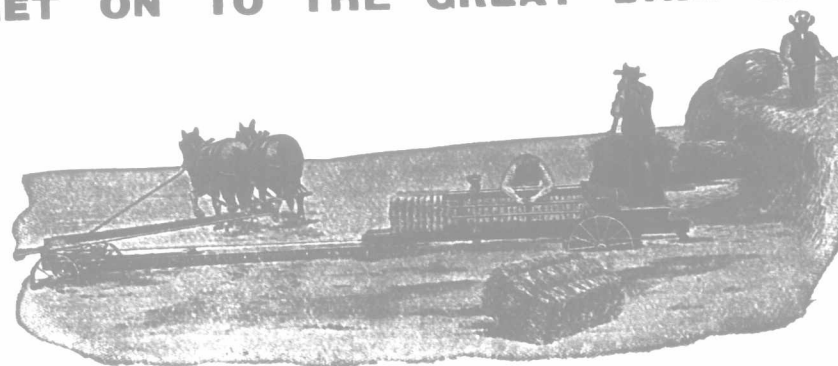
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JOSEPH RODGERS & SONS, Limited,
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AVOID IMITATIONS OF OUR
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BY SEEING THAT THIS EXACT MARK
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Trinidad Lake Asphalt
is nature's perfect water-
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Genasco Ready Roofing

is made of Trinidad Lake Asphalt. You know it will last and give your roof absolute protection.

Do you know that much about roofings made of "secret compounds"?

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Largest producers of asphalt, and largest manufacturers of ready roofing in the world.

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Minister of Agriculture,

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Wm. Linn, Georgia and
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Last for years. Easy to
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For immediate sale, 110-acre farm on the Lake Shore Road, in the Township of Clarke, County of Durham, about four miles east of Newcastle. Fifty acres double plowed, balance seeded with clover and timothy. Land in good condition. Attractive dwelling house, excellent outbuildings, with stone foundation under barn. Three cisterns, two wells, farm well fenced.

Price low for a quick sale. Terms: Small cash payment down, and balance on easy terms.

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THE ARNOTT INSTITUTE
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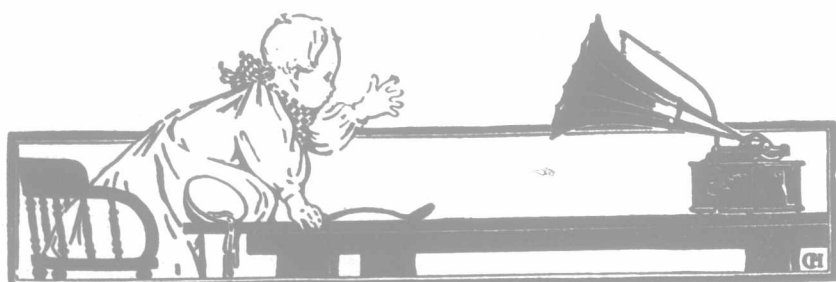


STINGY!
The Farmer who gets every piece of labor-saving machinery possible for field work and lets his wife drudge along with cans and crocks in the Dairy is mighty mean. A

**De Laval
Cream
Separator**

MAKES THE WIFE'S LIFE WORTH LIVING.
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The Farmer's Advocate

and Home Magazine

"Persevere and Succeed."

Established 1866.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

Vol. XLIV.

LONDON, ONTARIO, FEBRUARY 18, 1909

No. 856

EDITORIAL.

United States Sheep Quarantine.

As announced in "The Farmer's Advocate" of February 4th, a petition has been circulated among Canadian pedigree-sheep breeders, pressing upon the Dominion Minister of Agriculture the importance of endeavoring to secure early removal of the American thirty-days' quarantine on Canadian sheep sold to cross the border. As a result of the present regulations, which came into force last June, some of our leading breeders have suffered the loss of a large proportion of their most lucrative trade. The petitioners are anxious that the Dominion Government should make every effort possible to rid the country of the contagious disease (scab) which the American Secretary of Agriculture claims we are harboring, and which has admittedly existed to some extent in certain parts of Ontario. Unhindered access to the American market is declared to be of utmost importance to the breeders of pure-bred sheep in Canada, which should be to the American continent what Britain has been to the world in the production of pure-bred stock.

It would have been well had the framers of the petition stopped at this point. Instead, they raised up a snag of opposition for themselves by proposing a generous sacrifice of the swine-breeders' interests, if necessary, to secure relaxation of the sheep quarantine. It seems that the Dominion Department of Agriculture, in correspondence with the United States Department upon this subject, was reminded of the embargo maintained by Canada on American swine coming into our packing-houses in bond. This fact being communicated to the sheepmen, the petitioners took it upon themselves to suggest that, if necessary to the end in view, the Dominion Government should lift the embargo on American hogs, the reason advanced being that this is of comparatively slight advantage to Canadian hog-raisers, while the American sheep quarantine is a heavy handicap to our sheep-breeders. Naturally, this offer of a quid pro quo aroused a storm of indignation and protest in the annual meeting of the Dominion Swine-breeders' Association, which finally passed a resolution expressing disapproval of the lifting of the embargo against American hogs, on account of the grave danger of hog cholera being introduced and distributed throughout the country.

That the Canadian swine embargo had anything at all to do with the imposition of the present American sheep quarantine is scarcely conceivable, though it may be offered now by the United States authorities by way of justification. As Dr. Rutherford pointed out to the Dominion Sheep-breeders' Association, sheep scab could not be compared to hog cholera in seriousness. Hog cholera had been frequently brought into Canada by means of imported hogs, and it was essential that strict precautions as to quarantine regulations should be enforced.

On the other hand, no outbreak of sheep scab in Canada had been reported to Ottawa for some time. The Veterinary Director-General's Branch had spared no effort to rid the country of scab, and had also taken up the subject of the removal of the sheep quarantine energetically with the American authorities. There seemed to be prospects for modification or rescindment of the onerous regulations; but, meanwhile, a good word of advice was given to push the sheep business in Canada for all it was worth. In view of the success attained by Canadian sheep-breeders on this continent, it is deplorable that sheep husbandry is so generally neglected by our farmers. Let us try to develop the home market.

The Man for the Place.

Canadian stockmen and veterinarians have been disturbed by a report that Dr. J. G. Rutherford, Dominion Veterinary Director-General and Live-stock Commissioner, has tendered his resignation as head of these two important branches of the Department of Agriculture. With a thorough education, experience and training, Dr. Rutherford combines extraordinary executive capacity. Hard-headed, astute, and widely-informed, he has proven an exceedingly capable official, first as Veterinary Director-General, and later in the dual capacity which he now occupies. It is understood that the Minister of Agriculture, Hon. Sydney Fisher, is anxious for his Commissioner to remain, and this desire is shared by all who have the veterinary and live-stock interests of the country at heart. The Federal Department of Agriculture is of such wide scope and importance that it demands not merely a capable head in the person of the Minister, but expert lieutenants in charge of the several branches. Salary may not properly stand in the way of securing the best men available, and the Minister might wait long and look far before finding another who would serve with the same sagacity, efficiency and acceptability as Dr. Rutherford, whose service is to be measured only by the freedom allowed him in the formulation and execution of policies designed in the public interest. Given scope and authority, with absolute freedom from political interference, the head of an important branch like this is in a position to do much for the interest he represents, and "The Farmer's Advocate" expresses the unanimous opinion of its readers in urging that no opportunity should be lost to retain Dr. Rutherford in the important position he now holds.

The Stockman's Outlook.

The financial stringency which hampered many lines of business last year, including the pure-bred stock industry, is evidently proving of shorter duration than had been feared, and the prospect has brightened encouragingly since the advent of the new year. The signal success of the recent sales of Shorthorn cattle in Toronto are a striking evidence of improved conditions. And this revival of interest is but the logical result of the decided upward trend of market prices for beef cattle, owing, in part, to a shortage of supplies and an increasing demand; to money being more plentiful, or more easily available, and doubtless in part to restored confidence in the immediate future of the business, which is an important factor in the uplift of any industry. But it is not only in the beef-cattle business that improvement of prices is noticeable. Dairy cattle and dairy products, which were less affected by the depression than any other class of stock or produce, are still in active demand at high prices. The market for commercial hogs has recently shown a gratifying upward tendency, seven cents a pound at the point of shipment having already been paid, with a prospect of a continuance of this advance, or even a higher mark being attained. And this improvement is, we are told, already having its influence on the demand for breeding stock of the pure breeds, a condition which will doubtless grow more encouraging in the coming months.

The horse trade, which has been comparatively quiet during the past year, though good ones have continued to sell well, will assuredly improve with the advent of spring, as the Western Provinces will require many horses, as will also the many railway-construction companies, and the constantly-growing cities and towns. The pure-bred sheep trade received a serious shock last year,

owing to the United States quarantine regulations, which will, it is hoped, have served a good purpose in teaching our flock-owners to be more careful in keeping a clean bill of health. And now, since scab has been declared by the Dominion Veterinary Director practically non-existent in the country, and the assurance given that any cases reported will be promptly attended to, the prospect is that the embargo will be raised in time for the spring and summer trade, and that the business will regain its normal condition. In the meantime, market prices for commercial sheep and lambs are satisfactory, and the indications are that yearling sheep and spring lambs will command unusually high prices in the next few weeks.

Farm stock and products of all kinds are bringing good prices, and it would appear that, on the whole, the markets should be considered fairly satisfactory, even though purchased feed is high in price, and the cost of production in some lines perhaps greater than formerly. The present conditions and the prospects for the farmer are encouraging, and the people of our fair country have reason for thankfulness in the outlook.

Pros and Cons of Pork-duty Question.

A couple of noteworthy resolutions were passed by the Dominion Swine-breeders' Association, which convened in Toronto a fortnight since. One, asking that the embargo be maintained against American hogs imported by our packing-houses for slaughter in bond, will be unanimously endorsed by public opinion. The danger of distributing hog cholera is not to be lightly incurred, to say nothing of other considerations bearing on the question. The request for an increase in the duty on United States cured pork from two to four cents a pound, is more of a debatable proposition, though there is something to be said on both sides. The case for tariff increase is, briefly, this: While there is a duty of five cents a pound on Canadian bacon going into the United States, the American product can come into Canada on a duty of two cents. This results in the importation, from time to time, of certain grades of pork from the United States, tending to weaken the market for the Canadian-grown product, particularly the rougher grades, such as sows. It is held by some, though disputed by the packers, that the fluctuations in the price of hogs during recent years has been partly due to this importation of American pork by our packers, by their taking advantage of dips in the market on the other side, thus filling up their cellars, and being thereby rendered more independent of the local hog-raiser. Owing to the peculiar nature of the Canadian export trade, the Canadian farmer has only one outlet for his product, so there is ground for the position that Canadian packers should have only one source of supply. Latterly, however, it is being urged that the packer has a joint interest with the farmer in asking for an increase of duty, as a means of protection from the American brands of pork sold in Canada. As indicating the proportions of the trade in imported meats, we quote these figures from the Canadian Yearbook of 1907, official figures for 1908 not being at hand: In the nine-months' fiscal period of 1907 there was imported into Canada, from the United States, 5,162,912 pounds of bacon, hams, shoulders and sides, valued at \$643,290; and 7,595,848 pounds of pork, valued at \$615,099. In the same year our exports were 75,378,919 pounds of bacon, worth \$9,018,470, and 181,161 pounds of ham, worth \$203,652. Thus, we exported in that year between seven and eight times the value of what we imported, while the home demand, also, has of

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

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DOMINION.

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JOHN WELD, MANAGER.

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recent years been absorbing large and steadily increasing quantities, notably in the West, which is not producing pork in ratio with its consumption. Taking all things into consideration, it is doubtful whether the Canadian pork-packer has very much either to gain or lose by an increase in the duty on pork, and, indeed, there are not a few who question whether the Canadian farmer would be much profited, except, perhaps, to a slight extent, at certain seasons, and on certain of the cheaper grades. The fact that we have an expanding home market and an unlimited outlet in Britain for fancy Wiltshire sides would seem to indicate that the inroads of American pork have not assumed, and are not likely to assume, any devastating proportions, or have any serious effect in depressing values. There are, moreover, two very important principles that must be borne in mind: First, the interest of the consumer must not be sacrificed; secondly, every time any section of the agricultural community ask for increased protection, it affords a handle to the manufacturers, who, as we know by experience, are only too ready to ask for higher tariff on their already over-protected lines of goods. It is generally conceded that, in the main, the agricultural community stands to suffer far more than it can possibly gain through a high protective policy, and for this reason it behooves us to forego trifling advantages, rather than lend our voice too readily to the appeal for higher protection. The tariff on American pork, if reduced to an *ad valorem* basis, is almost equal to the tariff on agricultural implements. We see no reason why it should not remain as it is. There are good arguments for an increase in the duty on pork, but there are also strong contra reasons. Balancing all considerations, is it worth while disturbing the existing status?

The Wallaceburg Sugar Co. has purchased, for a consideration of \$230,000, the plant of the Ontario Sugar Co., at Berlin, Ont., which cost about \$600,000 to start, and which was wound up recently under an order of the courts. The new proprietors intend to develop the business at Berlin somewhat on the same lines as at Wallaceburg, and feel confident that, with the hearty co-operation of the farmers there, they will meet with similar success, and that the business will be mutually beneficial.

Appeal to Youth.

[From an address by Prof. L. H. Bailey, New York State College of Agriculture, on "The Lessons of the Day."]

Young men and women, I have something to say to you. I hope that I am speaking to some young person who has the love of the open country in his heart, and who looks out to usefulness in the world. The opportunities in that farming country are more numerous than the men on the farms that you find there. Every question that is asked by a farmer suggests a subject for inquiry, and we all wait for the solution. Take hold of something because you feel that it will help your fellow man or woman. Do not be afraid to see visions. The man who never had a vision is dead. No person should enter into service for the purpose of developing leadership; he should serve for the sake of the service. Leadership is a result of good service, and will come as a natural consequence. Whatever the problem, and no matter how small it may seem to you, if you solve it, greater things will come to you. The opportunities will be measured only by your ability to see them and to handle them. Most of us are so blind that we never see the opportunity that lies directly before us. I bid you, then, go back into the rural country, fully inspired with the idea that great opportunity for service awaits you. Here is a new thing in the world, and a new opportunity for usefulness.

I am convinced that the opportunity for personal development is now as great in the open country as in any other direction. Every man or woman on the land who makes a real success at farming and at living is a marked person. He is not buried in the mere multitude. The good, new things that need doing are so many that I do not see how a man can escape them.

Above all, old and young, we must never lose faith in the soil. It is the source and condition of our existence. It never grows stale, and it never wears out. The earth is always young.

The fields were parched with summer heat,
The life and green from swamps had fled,
The dry grass crunched beneath the feet,
And August leaves dropped stiff and dead.

Then light south winds 'cross wood and shore
Brought cooling clouds and slow, sweet rain;
And hills and crops were new once more,
And grasses greened as marsh and plain.

So swift the magic sent its spell
Thro' burning corn and pastures dumb,
'Twas clear the world had rested well—
Against the time when rain should come.

So virile is this earth we own,
So quick with life its soil is stung,
A million years have come and flown,
And still it rises green and young.

Illustration Farms.

Numerous and varied have been the schemes for the advancement of Canadian agriculture conceived in the fertile brain of Dr. Jas. W. Robertson, Principal of Macdonald College, who now proposes a system of illustration farms, say, five in each Province, each farm with a specialty, as well as with good general agriculture. Financial assistance to the extent of \$1,000 might be advanced to the owner under an advisory committee, in consideration of which he would undertake to carry on his farming according to the counsel and plans of the committee, and let visiting farmers observe and learn, also preparing an annual report for publication. For such service, \$200 of the loan might be written off annually.

Except in work of research, and for instruction of students, the operations of agriculture can be carried on most economically by those who follow it for what they can make out of it. But these men, says Dr. Robertson, can be helped by expert counsel and supervision, and perhaps by a little money, to give fine illustrations of what

may be done when the counsel of highly-trained experts, the knowledge of local conditions, and energy with enthusiasm are united to render definite public service. With illustrations of the occupation at its best, of the rural home at its best, and the rural school at its best for the children, we should be in a fair way to make real progress, worthy of our heritage and of our obligations."

The foregoing plan, like many others, has points to commend it, though its practical working-out will require rare judgment, enthusiasm and tact. It would seem a fitting idea for the Macdonald-Robertson combination of resources and talent.

Luxuries of the Farm.

The farmer who envies the town or city man, and fancies that he makes an easier living, and lives better, enjoys more luxuries, etc., than the farmer, should stop and do a little thinking before he allows himself to get away with that idea. First, what is the average town or city man's annual income? Not as large as most people fancy, perhaps. And what about his expenses? What does it cost to live in a house as good as the average farmer lives in? What of cost of fuel, water, light, and the taxes he has to pay? True, he has advantages in the way of conveniences—he is close to the best educational institutions; he has the chance, if his means permit, of enjoying some high-class entertainments. But, as an offset to these, his young, growing family is exposed to the many temptations and dangers that beset the young in city life. And what about his living? He usually has to pay the highest retail price for everything, and often for goods of a very inferior quality. As the saying is, he "gets it in the neck" when he buys good sweet milk and cream, and, although he pays the highest price for butter and eggs, the butter is quite likely to be off-flavor, and the eggs, many of them stale. His fruit and vegetables are supplied by the green grocer and fruit dealer, and we have seen potatoes of a poor quality retailed at 25 cents a peck, when the very best were worth only 15 cents a bag wholesale; and apples at the same price, 25 cents a peck, that would not grade No. 3. The berries and other fruits that he buys are not always fresh. Many of the basket fruits are picked too green, and lack flavor and finish, while the berries have been picked for some time, have travelled a considerable distance, and have been through the hands of the baggage-smashers on the express cars. And then, he lacks one essential luxury during the warm months—a drink of pure, cold spring water from the old stone well, free from microbes and all bacteria.

And now, how is it with the farmer? To-day, many of the things that formerly made farm life monotonous and uninteresting have passed or are passing away. By means of the rural-telephone lines, the farmer is no longer isolated, but is brought into close touch with neighbors and with city and town. The modern farmhouse, as built now, contains all the comforts and conveniences of a city house, in the way of bath, closets, water supply, etc. In most localities he has the advantage of a daily mail, and can keep in close touch with the news of the world. And, with regard to his living, there is no man in a better position to enjoy the best of everything than the farmer.

The beefing has become an almost universal institution through the rural districts of this country, so that he no longer has to depend on cured and salted meats when away from the route of the butcher's wagon. He has the milk and cream of his own in all its freshness and purity. He can at all times enjoy strictly new-laid eggs; and, with a little extra labor beyond the ordinary farm routine, he can enjoy the very best in the line of fruits and vegetables. But, in many cases, and on many farms, the latter are sadly neglected. And why? Is it owing to rush of work and lack of time, or a disinclination to attempt anything out of the ordinary routine of farm work?

Since Co., Ont.

G. C. CASTON.

HORSES.

Unwisdom of Cross-breeding.

A short time since we were asked how we would advise breeding a Thoroughbred mare of some 1,200 pounds weight so as to produce a salable class of stock for city purposes. Of course, in the case of such a question, the answer is confined within certain limitations. However, we took occasion to impress upon our inquirer the wisdom of breeding the mare to a stallion of her own breed, providing, of course, that she was actually Thoroughbred, and eligible for registration. Pure-bred stock of quality possesses a premium in value above its intrinsic worth for commercial purposes, by reason of its suitability for the production of high-class, prepotent sires, calculated to improve the general horse stock of the country. This will remain so until pure-bred horses are as common as pure-bred pigs, chickens or sheep. To cross breeds habitually, is to check the work of improvement, for a cross-bred sire, however good as an individual, is an uncertain breeder; that is to say, one may not be sure of the type and quality of his progeny. He lacks prepotency. Of course, an occasional gelding or mare, phenomenally valuable for exhibition purposes, may be produced by crossing, but, for the most part, it is in the general interest of the cause of stock improvement that pure-bred females be mated to males of their own breed, and this will usually be found the best business proposition for the individual to pursue, providing his females are sound, and of reasonably good type, quality and disposition. Cross-breeding is a dissipation of accumulated influence for good.

Farming in the Old Country.

Editor "The Farmer's Advocate":

As almost all the readers of "The Farmer's Advocate" are interested in farming, perhaps you would like a bit of experience I have had in the Old Land. My father was a farm manager in the eastern counties of England. He had 600 acres to manage, and about 8 to 10 men, except at haying and harvest; then we had 16 to 18. Our stock comprised 16 workable horses, 8 stallions, 2 horses for the owner to ride and drive, and also 3 blood mares, which were ridden or driven, as desired, and a stud of colts and mares to break-in for the London market. The work horses were mostly all Shires, and three or four Suffolks. The Suffolk mares were put to blood horses to get 'bussers for the London 'Bus Company. These colts would be broken at 3 years, or coming 4 years. The colts are always broken on the plow on the sandy part of the farm. This was to harden them up. After about six months' easy work on the plow, they were taught to drive double in a road brake, and then put in single harness on the road for about three weeks. We always tried to get about three or four colts broken at the same time, and then the Luyers would come to try them, and buy them, mostly, as we rarely had one unsound. They would fetch from \$200 to \$250, which we considered a good price. The three blood mares were always sent away to a stud horse for about six weeks; this would cost about \$50, and \$2.25 groom fees; the moneys were always paid, whether the mares were in foal or not. The colts from these mares were mostly sold unbroken; if unsound, they would be kept to do light work when the others were extra busy. The colts were sold at two years old for about \$100 to \$125. This may seem a small amount, but they are plentiful locally, as the grass is good, on account of the sea washing up the dykes. The mares live out all the year round, with an open shed to run in, and a little hay or straw, and a few mangels pulped. We scarcely ever had a Shire horse to sell, as they were kept on the clay land most of the time, and a great many mares slipped their foals, mostly through boys and men overworking them, or owing to ill usage. When we did sell one, they would fetch about \$200. The colors were mostly dark brown, black and dappled gray. The Shire stallions were always made to work, except during the breeding season, when they travelled round to the farms. The fees were from \$2.50 to \$5.50, whether mares were in foal or not. The 50 cents was for the groom.

The teamsters had to feed two stallions each, and four other work horses. The teamsters would travel with the stallions, and extra help would be hired to do their work. I might say, in addition to the eight or ten men we kept, we always had a good supply of farm lads, sons of the teamsters, who would do almost as much work as the men. There was one groom, one gardener, one cooper to look after his cows and all other

stock, with one lad to help. These would do no work on land, only at harvest time. The cowman's wife made the butter and looked after the turkeys and fowls. We only had 25 acres of grass for pasture for the cows and horses. But this was good land, and the stock would get fat on it. In the summer, we grew green feed for the horses. We cut this as soon as we required it in the summer. What we did not feed green, we cut when the flowers were falling off the tares, and it made great hay. For horse hay, we used sainfoin and English rye grass. This makes a good hay, except in wet seasons, when the rye grass musts badly. For cow hay, we grew red clover and lucerne, and trefoil. We tried alsike for a year or two, but soon stopped, as we had several sheep poisoned, by allowing the alsike to grow up to flower before the sheep were turned on. We kept 600 Southdown ewes, and crossed them with a Lincoln ram to get lambs for the market. We never raised our ewes. The ewes and lambs were fed in summer rye and tares. The lambs would have a place fenced off to get oil cake and bran, then would go on hay stubble till the mustard was ready. Before going on the mustard, the lambs would be sold. After the ewes came off the mustard, where the rams had been with them, they would go on turnips till spring again. The sheep paid best of anything on the farm. L. G. CLARKE.
Peel Co., Ont.

Chicago Horse Values.

The forty-third annual live-stock report, issued by the Union Stock-yard and Transit Co., of Chicago, contains the following interesting summary of horse values for the several months of 1908, and also for the years 1908 backward to 1903:

1908.	Draft Horses.	Carriage Pairs.	Drivers.	General Use, Trammers.	Bussers & Trammers.	Sad-dlers.	Southern Chunks.	
January	\$177.00	\$400.00	\$150.00	\$195.00	\$135.00	\$155.00	\$70.00	
February	185.00	450.00	155.00	180.00	140.00	165.00	75.00	
March	187.00	460.00	160.00	185.00	145.00	175.00	77.50	
April	185.00	475.00	165.00	187.00	150.00	177.00	77.50	
May	185.00	490.00	165.00	185.00	145.00	175.00	75.00	
June	182.00	470.00	160.00	180.00	140.00	170.00	70.00	
July	182.00	465.00	155.00	180.00	140.00	170.00	70.00	
August	182.00	465.00	155.00	180.00	140.00	165.00	65.00	
Sept.	177.00	450.00	150.00	180.00	135.00	160.00	65.00	
October	175.00	425.00	145.00	125.00	130.00	155.00	62.50	
Nov.	172.00	425.00	142.00	120.00	130.00	145.00	60.00	
Dec.	172.00	425.00	142.00	120.00	130.00	145.00	60.00	
Av. 1908	\$180.00	\$450.00	\$156.00	\$129.00	\$138.00	\$164.00	\$69.00	
Av. 1907	194.00	482.00	165.00	137.00	152.00	172.00	77.50	
Av. 1906	188.00	480.00	158.00	154.00	147.00	174.00	72.50	
Av. 1905	186.00	486.00	156.00	132.00	145.00	172.00	70.50	
Av. 1904	177.00	475.00	150.00	140.00	140.00	160.00	64.00	
Av. 1903	171.00	455.00	150.00	122.00	140.00	156.00	62.00	
Valuation of horses, 1908								\$14,260,000.

LIVE STOCK.

Chicago Live-stock Trade, 1908.

Since 1900, there has been marketed and sold in Chicago a yearly average of over 16,000,000 animals, exceeding \$300,000,000 in value, or about one-half the combined receipts of the six principal live-stock markets of the United States. In view of these facts, the annual report of the Union Stock-yard and Transit Co., of Chicago, becomes a valuable register of the volume, tone and values of the previous year's trade. The 1908 report contains figures of the receipts and valuation for 1908. It gives 3,039,206 head of cattle, worth \$170,635,070; 421,671 head of calves, worth \$4,175,820; 8,131,465 head of hogs, worth \$97,810,295; 4,351,889 head of sheep, worth \$19,685,333; 92,138 head of horses, worth \$14,260,000; or a total of 16,036,369 head, worth \$306,566,518. While the year 1908 was a period of recovery from the near-panic at the close of 1907, yet the total valuation of live stock received during 1908 was only 4 per cent. less than the record valuation of 1907. This large valuation is accounted for mainly by an increase of nearly a million hogs and about 133,000 sheep, together with a material increase in cattle prices; though, on the other hand, there was a decrease in receipts of about 266,000 cattle and nearly 10,000 horses, together with lower average prices for hogs, sheep and horses, and smaller average weights for all classes of stock. The outlook is regarded as bright, not only for a season of peace and plenty, but for a season, also, of abundant activity, of a kind that makes for improvement and progress during the year.

Cleanliness of Hog Quarters.

Editor "The Farmer's Advocate":

If a desire for cleanliness in animals could be taken as a standard in estimating their intelligence, the hog would be in the front rank. Those who are only familiar with the habits of hogs in a general way usually think of these animals as lovers of filth, but this idea has little basis in fact. No doubt, hogs seem to revel in mud, but this is only done for protection from heat and flies in hot weather. When clean water is available, the hog will prefer it to mud, even to rid itself of insects; and this preference, which is within the writer's own observation, indicates its desire for what is clean.

The importance of the hog's instinct to be clean should not be lost sight of during the fattening period. It is true that the animal will live, even if obligated to gather its food from filthy quarters, but gain in weight will never be so rapid as if the grain ration is fed on a clean floor. It is a good plan to use the broom freely on the hog's feeding-place after every meal. Notwithstanding the animal's natural desire for cleanliness, considerable filth is apt to be transferred to the feeding-ground, and, when this becomes mixed with feed, it tends to reduce the quantity that is eaten, which is, of course, undesirable, partly because it means waste, and partly on account of it delaying the day when the hog will be ready to be made into pork.

Another factor is worthy of attention. It is never wise to feed to hogs more than they can eat up clean at one time. Mussed-over feed cannot be as palatable as fresh, clean food, and hogs that are being fattened would rather go hungry than eat stale food of any kind. It is true, no doubt, that close watching on the part of the feeder is necessary in order to know just about the quantity that will be eaten up, without any residue being left. Should an overdose of food be given accidentally at any time, it is



A 32-year-old Mare which Raised a Foal in 1908.
Property of R. Kennedy, Ettrick, Middlesex Co., Ont.

usually the most profitable plan to clean the troughs and feeding-ground thoroughly, and turn the feed over to the stock hogs, rather than to save it for the animals that are being fattened. The motto of the successful hog-raiser should be, "Enough, but no waste."
New York State. LAWRENCE IRWELL.

Hog-cholera Immunization.

Editor "The Farmer's Advocate":

During the past year a number of Missouri State herds have been inoculated with the "hyperimmunized serum," with good results. The serum is made by immunizing a hog against cholera. This is done by taking a well hog, or, preferably, one that has naturally passed through the disease, and feeding it increasing amounts of infected cholera entrails, etc., or injecting it with gradually-increasing doses of infected blood from pigs dying with cholera, or doing both the above. In the course of a couple of months he becomes thoroughly immune to cholera, and his blood is then drawn from the tail, which blood is then mixed with carbolic acid to the extent of 5 per cent. It is now the "hyperimmunized serum" used in the inoculation of pigs for the prevention of cholera. The pig is bled from the end of the tail at intervals of a week to ten days, until the tail is all chopped off, and then the pig is killed and the remaining blood taken. All this blood is also mixed with carbolic acid to the extent of making the serum 5 per cent. acid, and it is then ready to be used in the inoculation of pigs. Each hog will furnish about 300 to 400 doses. By a dose is meant 20 cubic centimetres, sufficient for a pig weighing less than 100 pounds. For each additional 75 or 100 pounds, an extra 20 cubic centimetres is used; that is, about 40 cubic centimetres of the serum for a hog weighing 200 pounds, and so on.

Within the last eight months, over fifty herds were vaccinated in Missouri against cholera, and, with the exception of one herd, every owner was highly pleased with the results accomplished. This one herd was vaccinated with a rush-order serum, which had not been tested at the Station, because of the urgency of the call. The herds inoculated were, for the most part, all pure-bred, and furnish excellent proof of the possibilities of the serum.

Experience teaches us that the loss of well hogs, inoculated, even though exposed to the disease and unlimited infection, after inoculation is very slight. Fifty-nine well pigs, running in infected pens, Columbia, Mo., were inoculated with the "hyperimmunized serum," and of that number but three succumbed to the disease. Nearly all the check or untreated pigs died. In other words, in this particular instance a loss of but five per cent. was experienced, or a saving of about 95 per cent., which speaks well for the potency of the serum. Inoculation of sick hogs, already down badly with the cholera, has not been attended with such successful results, although, in most cases, where the disease has not gone too far, some benefit is noticed in that death is delayed. This leads us to the inevitable conclusion, therefore, that the serum is a preventive rather than a cure. This is, however, worth millions to the swine-growers of the United States. That the treatment has the faith and backing of the owners of the herds in which tried, is certainly a sensible criterion of what it will do. If hog cholera breaks out in a herd, and the pigs not showing signs of disease are inoculated immediately, one may expect to save from 60 to 90 per cent. of the inoculated pigs. Some of our experiments upon pure-bred herds of the State have shown a saving of 93 to 94 per cent. However, this is a greater saving than we ordinarily expect.

The process of treating is comparatively simple. The herd to be protected is entered, and the pigs caught, one at a time, and vaccinated or inoculated by the injection of "immunizing serum" into the pig at the rate of 20 cubic centimetres to each pig under a hundred pounds in weight, and 20 cubic centimetres for each hundred pounds additional weight. But one inoculation is necessary.

Under present conditions, the Veterinary Department of the Station is almost out of available funds, and, of course, it is obvious that it cannot, under these conditions, push the work as it should be pushed. If the Department is provided with the proper facilities for the manufacture and distribution of serum, the loss will be so reduced as to lose its momentous economic importance. An outbreak, then, occurring in any part of the State, can be limited to the farm on which it occurs, the spread to neighboring herds effectively prevented, and that practically at the loss only of those animals which are down with or showing signs of the disease at the time when it is recognized. This "Immunizing Serum," then, will, when produced under State supervision and control, be used as a quarantine measure, and not be sent out promiscuously for free distribution. This means that an outbreak of hog cholera will be treated, quarantined, and dealt with just like foot and mouth disease, glanders,

scabies, or any other dangerously infectious disease. The farmer having the cholera on his place will notify the authorities, and they will take charge of the outbreak, sending a skilled veterinarian, who, by adopting a strict quarantine, and, by judicious use of the "Preventive Immunizing Serum," will stop the disease on the spot.
JOHN M. EVVARD.

Assistant to the Dean and Director,
College of Agriculture and Experiment Station,
Columbia, Missouri.



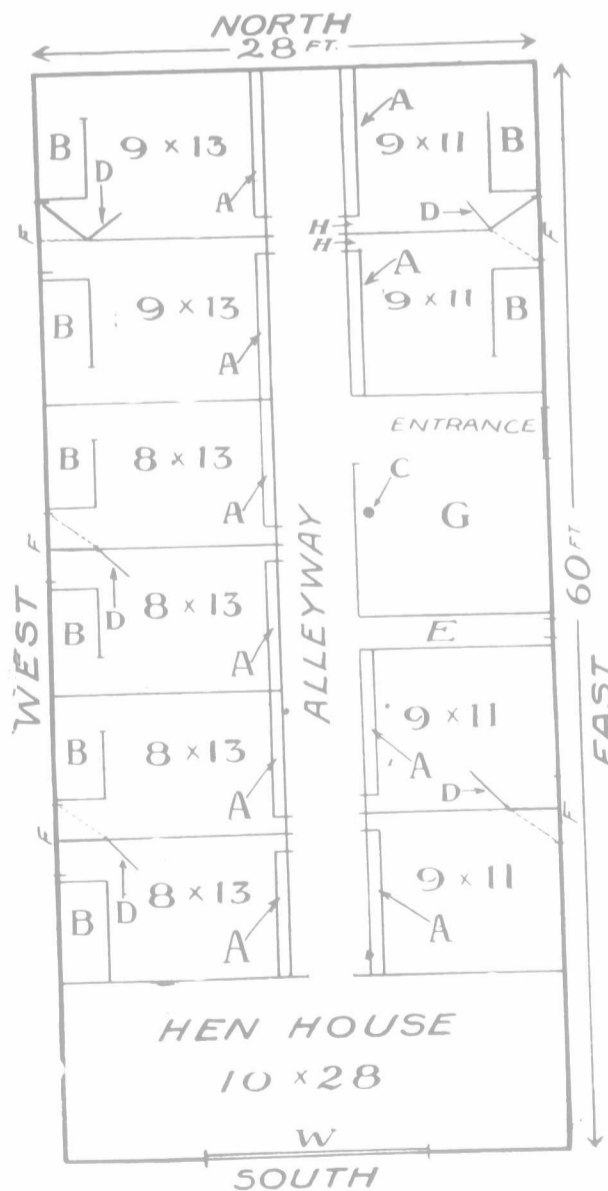
Showing How the Hog-cholera Serum is Drawn and Prepared.

[Note.—The foregoing important subject is dealt with in full detail in "Circular of Information, No. 29," by Dr. J. W. Connaway, Veterinarian of the Missouri College of Agriculture. He cautions swine-raisers against any neglect of the usual sanitary precautions against hog-cholera outbreaks. The serum is a preventive, not a "cure," as reported in the newspapers.—Editor.]

A Satisfactory Pigpen.

Editor "The Farmer's Advocate":

In reply to your request for pigpen plan, I herewith submit ground-floor plan of pen which I built in 1907. The building is 28 x 60 ft. In it



Mr. Wilson's Pigpen Plan.

there are ten pens, two of which are 9 x 13 ft., four 9 x 11 ft., and four 8 x 13 ft., with henhouse 10 x 28 ft. across south end of building. Feed-room (G) in east side, near center; entrance from outside into feed-room, then into alley, 4 ft. wide, running from north end to henhouse. North end is built against barn, A indicating troughs, B beds, C water-pipe from tank under barn, which is supplied by windmill; D, swinging doors on end of short partitions, to swing to either side, and bolts so that one pen may pass in or out at will and close the other pen, or, swinging free, both pens are open to door F, which leads into outside yard; G, feed-room, 11 x 12 ft.; E, loading chute, 2 ft. wide, in which is a loose runway for either wagon or sleigh. There are small doors leading out of each pen into alley; immediately over each door (F) is a large window. There is also a window in feed-room, as well as one 2 x 12 ft. in south side of henhouse, and one 2 x 6 ft. in west end. The partition between henhouse and pen is wood, 3 ft. high, with wire netting to ceiling, and wire door from alley into henhouse, which admits light from large window. The troughs and floor are of cement. The loft is covered with lumber laid slightly open, and covered with two or three feet of straw, so that, with the ventilators in roof, good ventilation is afforded. This pen is quite satisfactory, and, if building again, would make few, if any, changes.
J. J. WILSON.
Halton Co., Ont.

Beef Trade with Japan.

A recent issue of Trade and Commerce Report contains an item from W. T. R. Preston, Trade Commissioner at Yokohama, Japan, in which the beef supply is discussed as follows:

The consideration of a supply of beef for Japan is becoming an exceedingly interesting question. The number of cattle raised annually in Japan is less than 150,000, and it is very doubtful whether that number can be appreciably increased. Lands for grazing purposes are exceedingly limited, and, unless some cheaper mode of feeding young cattle can be discovered, it is hardly likely that greater facilities for raising cattle will exist in the future. On the other hand, the cattle killed at present for domestic purposes in Japan aggregate 225,000. The number of cattle imported from Korea annually has been less than 20,000. It is not unlikely but that this number may be doubled or quadrupled within the next few years, but even that will not keep pace with the increased demand in Japan for meat food. In any event, there can be no marked increase in the export of cattle from Korea for some years, and then it will only be in the Koreans having become more proficient in the raising of cattle, which they are likely to do through the careful instruction which has been given by the newly-established Japanese agricultural station.

In the meantime, however, and probably for all time, there is going to be an increased demand in Japan for beef. It is not surprising that, under present circumstances, the frozen meat from Australia is finding a profitable market, and those engaged in the business are more than satisfied with the outlook. Importers, however, have learned that, if they dispose of it only to wholesale dealers, the general public, whether foreigners or Japanese, are contributing a handsome profit to those who are engaged in the business. In order to put a stop to this situation, it is rumored that the Australian traders have decided upon opening retail stores for the sale of Australian beef in large centers of population. By doing this, they expect to reap a considerable share of a profit which now passes into the hands of the middlemen, and, by selling it at a lower price than the domestic beef is usually marketed for, they expect to engage in an exceedingly profitable business.

The freight rate for chilled or frozen meat from Australia to Japan is 75 shillings per ton, or 40 cubic feet. This is equivalent to about \$18 currency per ton. The trip from Australia takes about 35 days. Inasmuch as the centers of the great cattle markets of Western Canada are within 18 days of Yokohama, it should not be a difficult problem for Canadians to successfully control the meat market of Japan.

Cobblestone Floor.

We have a floor of small cobblestones in part of our horse stable and in the cow stable, which has been down for thirty years, and it is just as good to-day as it ever was, and is very satisfactory. But there are not many who understand the work of laying such a floor right.
D. L.

Pigpen Plan.

Editor "The Farmer's Advocate":
 In a recent issue of "The Farmer's Advocate" I read that you wanted some pigpen plans. Now, the size of this described pen, which was built in 1905, and has been in use since, is 30 x 36 ft., with a 3-ft. cement wall, on which is built the frame, with 10-ft. posts; the ceiling is built 8 ft. All the 2-ft. and 3-ft. doors are just the height of the cement, 3 ft. The general passage, 4 ft. in width, is a driveway, for the purpose of cleaning pens out. The 4-ft. doorways in each and every pen may be opened and fastened, so as to make a passage from pen to pen. The flooring is of cement, with a slight slope towards the passageway, to a sort of rounded gutter falling towards one end. There are two of these, one on each side of the passageway, but inside the pens. To take this through the feed halls, 3-in. tile are used, built in the floor. It may either be caught at the lower end by a cesspool or a tile built in the wall, thus allowing it to run off with the fall of the ground in the hog-yard. There is a sleeper built in each pen. The troughs are built of very strongly-mixed cement. There is a large upstairs-room for 1,000 bushels of grain, four loads of straw, and a good workshop. The chop is kept in bins upstairs, and a chute is built to boxes below, one in feed hall for dry feeding, and one in mixing room. If you have a windmill, have a tap in the mixing room; if not, a well may be dug for the water.

Middlesex Co., Ont. E. G. BOURNE.

THE FARM.

Pennsylvania Board of Agriculture

Complete organization seems to be the chief characteristic of the State Board of Agriculture, established in 1876 by the Pennsylvania commonwealth. The annual meeting, held at Harrisburg, Pa., January 26th to 29th, was one of the best organized State agricultural meetings which it has been our pleasure to attend. A splendid exhibit of corn, butter, market milk, dairy and farm machinery, and exhibits from the State College and Sanitary Board, in a large hall adjoining the place of meeting, added interest to the gathering. The State Live-stock Breeders' Association and the Dairy Union are affiliated organizations.

The Dairy Union meetings were not largely attended, as this branch of the work has been organized only recently, under Prof. Van Norman, of the State College. As an indication that the Dairy Union means business, we may mention that, when the plan of appointing State instructors for creameries, of which there are some 700 to 800 in the State, was laid before the meeting, and the fact pointed out that funds would be necessary to pay the expenses of a committee to lay the matter before the State Legislature, a number of creamerymen came forward and placed five or ten dollars in the hands of the secretary to forward the work. This was done without any urging on the part of the chairman. In a short time they obtained \$200 or more for the work. This impressed us most favorably. The creamerymen need instruction; they knew it, and they were willing to pay for it. They expect that the State will assist them, and rightly so. We had thought that coal and iron were the great natural resources of the State, but one speaker said that these would all be exhausted in a few years, and the Commonwealth would have to depend upon the top foot of soil as a source of wealth. We were convinced that the greatest asset which the State has is its farms and farmers. We never met so enthusiastic, whole-souled farmers anywhere as at this meeting.

SOME THINGS SAID AT THE MEETINGS.

Dr. Frear, Chemist, State College.—We were amazed at the way in which the audience of farmers listened to a lecture on "Lime Nitrogen, or Calcium Cyanamide." The wealth of technical terms used by the lecturer would have completely staggered an average Canadian audience, but both lecturer and listener seemed to consider that these scientific phrases were to be taken as a matter of course. Dr. Frear pointed out that, while lime-nitrogen may be produced at about one-half the cost of nitrogen in nitrate of soda or ammonium sulphate, it was only about two-fifths to three-fifths as valuable as these for top-dressing purposes. He thought it more valuable as a fertilizer when worked into the soil for some time before sowing a crop, or when used as part of a mixed fertilizer. A mixture of nine parts acid phosphate and one part lime-nitrogen was recommended.

Dr. Hallertadt, State Mineralogist, deplored

the useless waste of money in mineral prospecting. He pointed to a number of instances where farmers had lost a good deal of money digging for coal, coal oil, etc., beneath the surface of their farms. He showed that in certain rock formations coal or oil is not found, and advised farmers to consult with State officers before giving up their hard-earned money to human parasites who prey upon farmers.

Prof. Surface, State Ornithologist, made a strong plea for the preservation of insect and

if sown in the day time, especially when the weather is warm. Sow 20 to 30 pounds seed per acre, and have the seed free from weed seeds. On light soils the alfalfa will remain in good condition for three to five years, and on heavier soils four to six years. As necessary factors in successful alfalfa-growing, he mentioned:

1. Well-drained, moderately porous soil. Good potato or corn land is good land for alfalfa.
2. Plow deep, cultivate well, and have a fine seed-bed.
3. The preceding crop should be potatoes, oats or peas.

4. Soil should have plenty of available manures, and a certain amount of vegetable matter for the proper action of the bacteria.

Dr. Voorhees was of the opinion that alfalfa would furnish a large part of the proteids now purchased by the New England farmer.

The foregoing will be sufficient to indicate the many good things furnished on the programme. We must not close this short and imperfect sketch without saying a word regarding the good work being done by the Grange order. The Master is a member of the Legislature, and he informed me that they keep a pretty close "tab" on all legislation affecting the farmer.

The committee on resolutions at the meeting had some very important suggestions for State legislation. Not only this, but I was told that the Grange have organized fire insurance, banks and other organizations for the benefit of farmers.

The writer's address, on "Some Needs of Agriculture," wherein he pointed out the need of relief from tariff burdens, and more direct control of agricultural machinery and institutions by the farmers, seemed to meet with the cordial approval of the meeting. We also intimated that, whenever the United States expressed a willingness to join Canada, we were prepared to take them in. The audacity of the suggestion seemed to tickle the audience immensely. We met many persons who had relatives in Canada. Many "Pennsylvania Dutch" residents of the State have friends or relatives in Waterloo County and other parts of Ontario. It has not been our pleasure to meet more cordial sympathy for Canada and Canadians than we found in the State named after Wm. Penn.

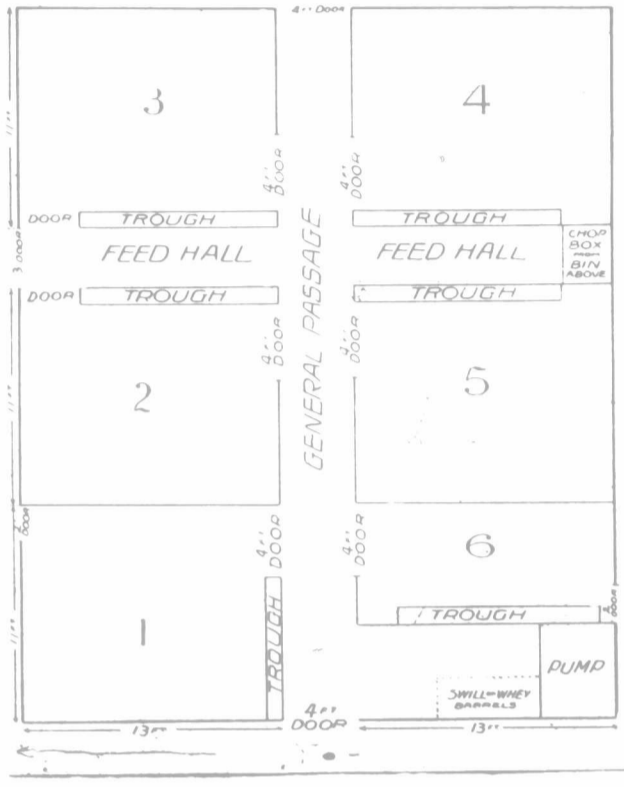
The State Capitol Building is possibly the finest to be found in any State of the Union. Its marble steps, marble columns, beautiful statuary and paintings are excelled by few public buildings anywhere. The only one we have seen to rival it is the Pantheon, at Paris, France. It is unfortunate that "graft" to the extent of several million dollars should have been associated with so beautiful a building. However, it is fortunate, as John Bright said, "Palaces, baronial castles, great halls, stately mansions, do not make a nation. The nation in every country dwells in the cottages." H. H. D.

Build a New House.

Editor "The Farmer's Advocate":
 In reading over the contribution of J. C. S., in the recent issue of your valuable journal, "How the Old House was Improved," it strikes me very forcibly that the time is now past when such work should be advocated in this glorious land of ours, and I would not advise any person who has any intention of improving his home to do any such thing, for in more ways than one it is never very satisfactory, and in the end generally costs as much, or nearly so, as a brand-new building, and can never have the same conveniences.

A much better plan would be to leave the old home (if it is worth leaving) where it now stands, and select the most desirable spot on the farm for a new site; and if you are not just now prepared to build, you can make out your plans, and lay out your drives and lawn, and then plant trees and shrubs where they will be required, and in a very short time you will have a most desirable spot for a modern structure.

The old home can then be utilized by the boy if he is of matrimonial disposition, or can be kept for the hired man, if such happens to be married. The late Lord Dufferin stated that, "The greatest mistake he saw in Canadian rural life was the tendency to leave the farm, and move into town or city as soon as a little competency was acquired." Such, he said, was a great mistake. Spend your money where you made it, and help build up a class of country gentlemen such as they have in England, and it would not be long until it would have a marked effect on our country life. It would not only do that, but would tend to longer life and much more happiness. The time is not far distant in this Province, at least, when all the conveniences of town or city life may be enjoyed on the farm, and when that time comes, country life will be much more preferable, if we prepare for it as we might. W. P. J.



Mr. Bourne's Pigpen Plan.

weed-destroying birds, which were among the most valuable helps which the farmer has.

Prof. Hunt, Dean of the State Agricultural College, gave the results of 25 years' tests of fertilizers on a four-year rotation of crops. These tests, he said, are the longest continuous tests which have been made in America. He pointed out the need of proper environment (moisture, heat and light) in order to obtain good results from commercial fertilizers. The application of mineral manures (phosphoric acid and potash) had maintained soil fertility on the limestone soil where the experiments were conducted, without the addition of any other form of manure, except that obtained by growing clover in the four-year rotation. The commercial fertilizers gave better results than did barnyard manure in all cases, except one, but the barnyard manure was more economical.

He showed that an application of six tons of barnyard manure per acre twice in the four-year rotation gave a value in increased crops, compared with plots on which no manure was put, equal to \$2.00 per ton; an application of eight tons per acre gave a value of \$1.66 per ton, and ten tons per acre a value of \$1.44. His conclusion was that light applications of stable manure, made frequently, was most profitable and most economical, but that a combination of barnyard manure and commercial fertilizers as a supplement would likely be more economical still. He advised a mixture of one hundred pounds potash, one hundred pounds phosphoric acid and six tons of barnyard manure per acre. For the second crop of hay, where barnyard manure was not available, use 150 pounds nitrate of soda, 150 pounds acid phosphate and 50 pounds muriate of potash per acre.

Dr. E. B. Voorhees, of the New Jersey Experiment Station, read a most valuable paper on the subject of "Alfalfa." His experience was that late summer or early fall seeding was preferable to spring seeding, and that better results are got by seeding alone than by sowing with a nurse-crop. Barnyard manure is not always necessary; in fact, is sometimes a disadvantage, owing to the weed seeds it usually contains, which tend to choke the young alfalfa plants. He recommended sowing on a dry, sandy soil, and the use of about a ton of lime per acre, together with mineral fertilizers. Lime is necessary to neutralize any acidity there may be in the soil, to improve the physical character of the soil, and to furnish needed lime for the plants. Either caustic lime or raw ground limestone rock would answer the purpose. Soil inoculation was necessary, especially on light soils. It was not wise to take chances on the necessary bacteria being present, especially with first seedings. The best way to inoculate a field was to sow about 200 pounds per acre of soil from an alfalfa field. This is best done in the evening, so that the bacteria will not be killed by drying out, as they are likely to be

Fifth Canadian Seed-growers' Convention.

The fifth annual convention of the Canadian Seed-growers' Association, held in Ottawa, Feb. 4th and 5th, was well attended, representatives being present from all the Provinces east of the Great Lakes, and keen interest was manifested throughout in the meetings and discussions. Some previous conventions may have been more largely attended and more widely representative of the whole Dominion, but never has greater advancement been made toward putting the work of the Association on a basis that will appeal to farmers, and widen its influence throughout the country.

AIMS OF THE ASSOCIATION.

The aims and objects of the Association were very fully and clearly reviewed by the President, Dr. James W. Robertson, of Macdonald College. Dr. Robertson pointed out that the system of selection, as practiced by the members of the Association, was by no means a new principle. In Scotland, it has long been the practice of the best farmers to build a "seed stack" of grain taken from those portions of the field where the grain is of best quality. This superior grain is then kept separate, and used for seed. A quotation from Virgil indicated that the process of hand selection for crop improvement was practiced with marked advantage even before Christ was born.

Reviewing the Macdonald-Robertson competition in seed-growing, it was shown that the yields had been greatly increased and the quality of the grain improved, covering a period of only three years' selection. Dr. Robertson estimates that if the field crops of Canada last year had been increased to the same extent that the crops entered in the seed-growing competition were by three years' selection, the increased value to the country would have amounted to \$80,000,000. Another striking instance of what can be done by the use of good seed and improved methods of farming is furnished by the experience at the College Farm at Ste. Anne de Bellevue. When the farm was purchased, it was no better than the average in the Province. After three years' careful cropping, using improved seed, the yield per acre is practically double that of the average farm in Quebec. This season the farms of Quebec yielded crops to the value of \$73,000,000. If the average yield throughout the Province had been as good as at the College farm, the value would have been \$147,000,000. These figures, Dr. Robertson points out, convey some conception of the room there is for plant improvement, and the work accomplished by those who took part in the seed-growing competition is good evidence as to what can be done through methods employed by the Association.

IMPORTANT CHANGE IN CONSTITUTION.

Among the recommendations brought before the convention, and finally accepted, after considerable discussion, was one altering the constitution so as to give recognition to work of improvement in plants that may have been done by other recognized authorities. Up to the present, no standing in the Association has been given to seed that may have been improved by the experiment stations, or by private individuals, unless the work was done strictly in accord with the Association regulations, which demand that one-quarter acre be the minimum size seed-plot, and that in no case shall more seed be selected from the seed-plot than sufficient to sow a plot four times the size of the one from which the seed was taken. At most of our experiment stations the system of individual plant selection is followed as a basis of improvement, rather than a bulk selection of heads, as practiced by the Association. The system, as outlined by Prof. L. S. Klink, of Ste. Anne's, is, in brief, as follows: Several thousand grains of one variety are planted in rows separately, several inches apart each way, and throughout the growing season these individual plants are carefully studied. Those showing the desired characteristics are noted, and, of the large number of plants growing, about one hundred are selected and carefully stored. During the winter, these one hundred plants are again culled down by more rigid inspection of both the plant and the ripened grain. The progeny of each plant is kept separate, and the seed sown in small test plots in the spring. In this way, improved strains of the different varieties are established, and, when sufficient seed is produced, it is distributed to farmers.

Work of this nature must necessarily be done by public institutions, rather than by private growers, and it was felt by the Association that grain that has been improved in this way should be given a standing in the Association, as many members would likely wish to start with seed of this sort. The constitution, as now amended, gives the executive council power to give seed improved by recognized authorities a standing in the Association records as high as hand-selected seed of the fifth year. The outcome of this amendment will probably be that most of the new

members will start their work of selection with seed already improved by the experiment stations, as outlined above, and this would seem to be the most rational system.

DR. CHAS. SAUNDERS ON PLANT IMPROVEMENT.

In the course of a paper on the work of plant-improvement, Dr. Chas. Saunders, Cerealist at the Central Experimental Farm, Ottawa, pointed out the difference between the methods of selection followed by the Seed-growers' Association and that followed at the Experimental Farm. The Association method is to select heads from the growing crop repeatedly year after year. One difficulty with this system is that large heads, which are likely to be picked, may be produced on a poor plant, or it may even be a different variety. With wheats, especially, it is extremely difficult to distinguish accurately between some of the varieties, and, as the selection has to be made each year, there is always the danger of not keeping the variety perfectly pure. With the individual-plant system, as outlined above, this difficulty does not present itself, and the desired qualities can be more readily recognized and established in improved strains. Dr. Saunders' recommendation is that farmers who wish to grow specially-selected seed, secure their stock from a strain that has been improved by individual-plant selection, and then keep it pure by the hand-selection process or by the use of a small seed-plot, on which should be sown hand-picked seed.

SHOULD ONTARIO IMPORT SEED POTATOES?

During a discussion on crop-improvement, W. T. Macoun, Horticulturist, of the Central Experimental Farm, Ottawa, expressed the opinion that the time will come when Ontario will import her seed potatoes from the Maritime Provinces. He bases this statement on the results of experiments conducted at the Central Farm, testing Maritime seed potatoes with home-grown seed of the same variety. The first year, the imported stock greatly outyielded the home-grown stock, and even in the second year there was still a marked difference in favor of the Maritime stock. Mr. Macoun attributes this to a loss of vital energy, due to the tubers being grown under adverse weather conditions. The past three seasons have been very dry in the Ottawa district, and Mr. Macoun thinks that this has resulted in the lowering of the value of the potatoes for seed. To overcome this, he recommends securing seed potatoes from districts where a heavier rainfall insures more perfect development, and, therefore, stronger vital energy, and greater ability to give a heavy-yielding crop. In support of this contention, Mr. Macoun instanced the case of England and Scotland, where it has been found advantageous to secure seed from the moister sections of the country for planting in the dry districts.

In discussing this question, T. G. Raynor, Seed-branch representative for Ontario, stated that, during his work of inspection, he had found one man who had been growing the same variety of potatoes for twenty years, and was now getting better yields than ever before. He also pointed out that the results at Guelph indicated that a change of seed was not necessary for best results. This seeming contradiction may be due entirely to the very dry seasons which had prevailed at Ottawa during the past few years, and the results there during this abnormal season can scarcely be taken as representative of the Province generally over a number of years.

THE PRODUCTION OF SEED CORN.

A very valuable address was given by Prof. L. S. Klink, of Macdonald College, on the most approved methods of breeding and selecting seed corn. Prof. Klink stated that, in corn work, the ear is taken as the unit, and it was found that individual ears vary greatly not only in the yield and quality of grain and fodder, but also in the proportion of broken and barren stalks produced. It is only by careful row tests that the best seed corn can be picked out.

J. O. Duke, of Ruthven, Ont., in the discussion, stated that his experience indicated that there was now a ready market, at good prices, for home-grown seed corn. It has been demonstrated that home-grown seed gives much better satisfaction than stock grown further south. Seedsmen recognize this now, and are willing to pay from two to ten cents per bushel more for the home-grown seed. Mr. Duke expressed the opinion that many more men would take up the work of corn selection under the Seed-growers' Association if the size of the breeding plot required were reduced to twenty-five per cent. of the present size. As it now stands, the work is too heavy an undertaking to appeal to the general farmer.

REPORT OF THE YEAR'S OPERATIONS.

The report of the Secretary-Treasurer, F. H. Newman, covered in detail the operations during the past year, and represented the Association to

be in a prosperous condition. Most of the old members are reported to be doing good work in selection, and several promising men have been added to the list of members. Last season there were 536 names on the list, including members and applicants. Of these, 139 reported having selection plots under operation, and requested visits from the inspector. In all, 199 members were visited by the inspectors during the past season. The number of members in full standing last year was 140, and 30 more were accepted during the present convention.

Dealing with the different sections of the country, Mr. Newman noted that improvement is noticeable, both in the number of men operating and in the character of the work being done in all districts. In British Columbia, most of the operators are working with potatoes. In Alberta, oats receive the greatest attention, with fall wheat coming next. Turkey red is the favorite variety chosen for improvement in the southern part of this Province, while in the northern districts more attention is being given to the softer varieties, such as Dawson's Golden Chaff. In Saskatchewan there are not many active members; most attention is given to wheat, oats coming next. The Manitoba members are reported to be doing excellent work. South of the C. P. R. main line Red Fife wheat is the favorite variety, but in the northern districts considerable attention is being given to the earlier varieties. Considerable work is also being done with fall wheat in the northern sections. The order of crops in Ontario, as to their popularity for improvement by selection, is corn, oats, barley, wheat and potatoes. There are a large number of members in Ontario, and, on the whole, they are doing excellent work. Quebec members are not getting along as well as they might, due, largely, it is thought, to the fact that they do not understand the details of operations thoroughly. It is hoped to overcome this difficulty by having a general meeting in French next spring, when the process will be fully explained. In the Maritime Provinces the work is becoming more and more popular, due, to some extent, to the excellent educational influence of the annual Winter Fair at Amherst. Prince Edward Island and Nova Scotia both have a goodly number of men who are doing excellent work in plant improvement. New Brunswick has fewer members, but they are equally good.

TO ENCOURAGE DISTRICT MEETINGS.

Among the recommendations made by the Board of Directors, and approved by the Convention, was one favoring the holding of district meetings or conventions by members of the Association. These informal conferences have been held at some of the winter fairs, and have been very beneficial in getting expression of opinion from a large number of members who are unable to attend the annual convention.

FAVOR EXPERIMENTS WITH CANADIAN-GROWN ROOT SEED.

It was pointed out by the Board of Directors, and also by Peter H. McKenzie, ex-Chairman Standing Committee on Agriculture and Colonization, that a great deal of the vegetable and root seed sold in Canada is of low vitality, and does not produce uniform plants. It was suggested that experiments should be conducted at the Experimental Farm, with the view to determining whether root and vegetable seeds can be grown economically in this country, and testing their relative value, as compared with the imported stock.

Very interesting and instructive papers were presented during the convention by Geo. Michaud, Assistant Seed Analyst, Ottawa, on "Conditions Which Affect the Vitality and Viability of Seeds"; by Prof. R. Harcourt, O. A. C., on "The Comparative Baking Value of Flours Made from Different Varieties of Fall Wheat"; by A. P. McVannel, Perth, Ont., on "Barley Production"; by Prof. Wm. Lochhead, Macdonald College, Quebec, on "How Plants Feed"; and by J. W. Gibson, Ottawa, on "The Seed-plot as an Educator."

OFFICERS RE-ELECTED.

The President of the Association, Dr. Jas. W. Robertson, was re-elected for another year, as were also the ten first directors. Thirty new names were added to the list of honorary members.

HON. SYDNEY FISHER ON THE ROME CONFERENCE.

In an address before the Seed-growers' Association, Hon. Sydney Fisher, Minister of Agriculture, took occasion to give a brief statement as to the aims and objects of the International Agricultural Institute, a session of which was recently held in Rome, at which Mr. Fisher was present. The objects of the Institute, as outlined by Mr. Fisher, are twofold. First, to secure co-operation in the compilation of reliable reports on crop conditions throughout the world, and in this way secure a solid information which will be of great

use in arriving at proper market values, and suppress, in a large measure at least, artificial manipulation of the grain markets by large operators, often to the great loss of the producer of the grain. Secondly, to compile at headquarters, at Rome, and distribute to the countries belonging to the Institute, all the latest information on agricultural reasearch work that may be conducted at the various stations in the countries represented.

The idea of the Institute was presented to the King of Italy, who was very strongly impressed with the value of the scheme, and invited representatives of the different nations interested to a conference, to be held at Rome, in 1905. This conference resulted in the drafting of a definite plan, somewhat as outlined above. The proposition was submitted to the various governments interested, and in 1907 about thirty countries had accepted the plan. Great Britain requested that invitations be sent to the self-governing colonies. This was done, and in the spring of 1908, Dr. J. G. Rutherford, Live-stock Commissioner for Canada, went to Rome to meet the committee for perfecting the organization. In November the general conference was called, and Hon. Mr. Fisher attended as a representative from Canada.

The maintenance of the Institute is provided for in two ways: The King of Italy has endowed it from his private estate, so that there will be an annual income of \$60,000. The first three years' income has been used in erecting suitable buildings and furnishing accommodation for the staff. In addition to this, each country is expected to contribute annually to the expenses. Canada's share will amount to about \$4,000 per year, and, in addition to this, there will be the expenses of the delegate to the conferences. The work is just getting under way, but great things are expected from it.

Silo Enquiries Answered.

Editor "The Farmer's Advocate":

In reply to D. R.'s queries in issue of Jan. 21st, I would say that the sill of the first door of silo is on the top of first ring, 2 1/2 feet from floor, and this door is 2 ft. 4 in. by 4 ft. 10 in. There are four doors above this one, 2 ft. 4 in. by 3 ft., about 5 feet apart, except the top one, which is closer. These doors are made of two thicknesses of 1-inch pine, with tar felt between. A recess is made in the cement to receive these doors, so that the inside is flush with the inside of silo. The doors are made in two pieces. The ladder is beside these doors, and is enclosed in the chute for putting down silage, which goes from the ceiling of feed-room to top of silo, and has a window in the gothic to furnish light. There is also a large window in feed room, and another window in granary.

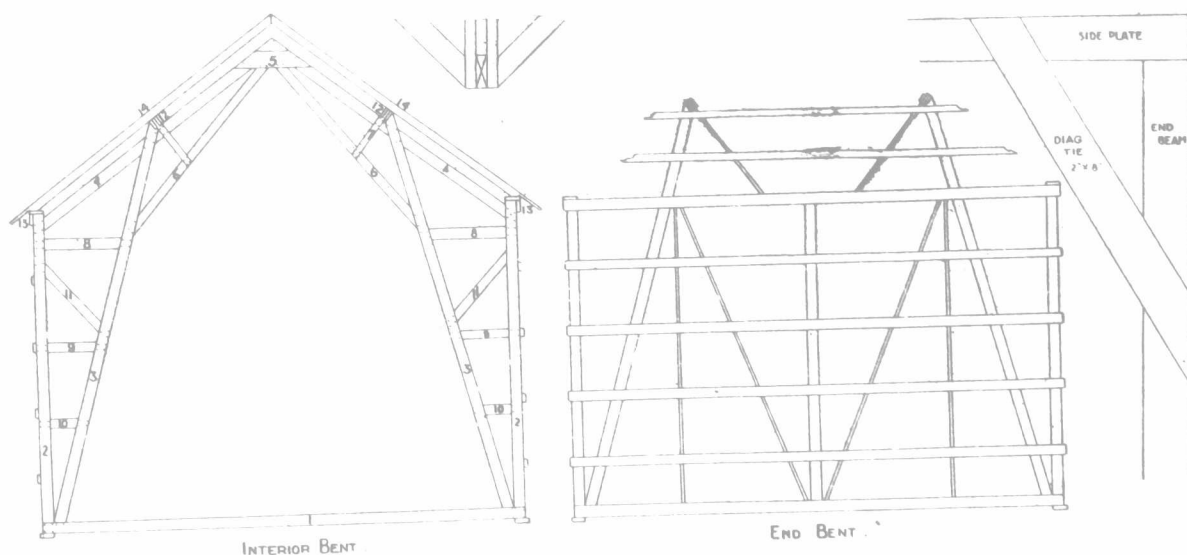
"D. R." asks why I did not start two or three feet below stable floor. I had to dig out about five or six feet to get to the level of stable floor, where the soil was a sort of limestone rock and gravel, and was not easy to dig, but which was very good for a foundation. We thought that a 14-foot silo was large enough for a 100-acre farm, and still think so. "D. R.'s" plan of having the taper on the inside of silo would not work out well in the settling of the silage, as it would tend to prevent or hinder the settling. I think I forgot to mention that four or five strands of No. 7 wire were twisted and put in the middle of wall below and on top of each door, and that stones were used in the wall for the lower 15 feet, care being taken not to let them reach either the outside or inside of wall. I think a silo 37 1/2 feet high is better than one only 30 feet, as it gives the silage a better chance to settle, and the blower seems to send it up 37 1/2 feet just as easily as it would 30 feet; at least, it goes up all right. D. L. Oxford Co., Ont.

Plank Frame for Barn, 30x60.

Editor "The Farmer's Advocate":

Could you furnish me with a plan and bill of material, through the columns of your valuable paper, for a plank-frame barn 30 x 60 ft., 20 ft. to plates, similar to the one published in your issue of January 7th, only with an ordinary roof, instead of the hip-roof. Mr. Gilmore seems to speak very highly of that style of barn, both from point of strength and economy.

SLUGGETT BROS.
Nantano, B. C.
Ans.—In answer to Sluggett Bros.' request for plans and quantities for above-size barn, to be furnished through the columns of "The Farmer's Advocate," I would respectfully submit the accompanying, and am confident that, if built strictly according to directions, they will have a barn proof against decay and windstorms, and for less money than the cost of framing the old-style structure, for work alone.



BILL OF MATERIAL.

- Two end bents:
 - Four sills, 2 x 8 x 30 feet, or eight 2 x 8 x 15 feet.
 - Twenty nailers, 2 x 6 x 15 feet.
 - Four beams, 2 x 8 x 30 feet, or eight 2 x 8 x 15 feet.
 - Twelve posts, 2 x 8 x 20 feet.
 - Two post fillers, 2 x 4 x 20 feet.
 - Four braces, 2 x 6 x 21 feet.
 - Eight purline posts, 2 x 8 x 27 feet.
 - Eight purline braces, 2 x 4 x 9 feet.
 - Two stiffeners, 3 x 6 x 20 feet.
 - Four uprights, 2 x 8 x 20 feet.
- Four interior bents:
 - Eight sills, 2 x 8 x 30 feet, or sixteen 2 x 8 x 15 feet.
 - Eight sills, 2 x 8 x 2 feet.
 - Sixteen posts, 2 x 8 x 20 feet.
 - Sixteen purline posts, 2 x 8 x 27 feet.
 - Eighteen roof supports, 2 x 8 x 20 feet.
 - Eight sub-supports, 2 x 6 x 16 feet.
 - Eight collar ties, 2 x 12 x 6 feet.
 - Sixteen stays, 2 x 4 x 4 feet.
 - Eight ties, 2 x 8 x 7 feet.
 - Eight ties, 2 x 6 x 5 feet.
 - Eight ties, 2 x 6 x 4 feet.
 - Eight braces, 2 x 6 x 8 feet.
- Side timber:
 - Eight sills, 3 x 10 x 17 feet.
 - Thirty-six nailers, 2 x 6 x 13 feet.
 - Ten plates, 2 x 8 x 13 feet.
 - Ten plates, 2 x 10 x 13 feet.
 - Twenty purline plates, 2 x 8 x 13 feet.
 - Sixteen couplings, 2 x 8 x 8 feet.
 - Four couplings, 2 x 8 x 4 feet.
 - Four purline braces, 2 x 4 x 8 feet.
 - Sixteen purline braces, 2 x 4 x 6 feet.
 - Eight uprights, 2 x 6 x 20 feet.
 - Two uprights, 2 x 6 x 8 feet.
 - Sixteen braces, 2 x 6 x 21 feet.
 - Four braces, 2 x 6 x 10 feet.

KEY TO ELEVATION NUMBERS.

- 1—Sill, 2 planks, 2 x 8.
- 2—Posts, 2 planks, 2 x 8.
- 3—Purline posts, 2 planks, 2 x 8.
- 4—Roof supports, 1 plank, 2 x 8.
- 5—Collar tie, 2 planks, 2 x 12.
- 6—Sub-supports, 1 plank, 2 x 6.
- 7—Stays, 2 planks, 2 x 4.
- 8—Main ties, 1 plank, 2 x 8.
- 9 and 10—Ties, 1 plank, 2 x 6.
- 11—Brace, 1 plank, 2 x 6.
- 12—Purline plates, 2 planks, 2 x 8.
- 13—Main plates, 1 piece 2 x 10, and 1 piece 2 x 8.
- 14—Rafters.

The small quantity of material used in the frame requires it to be sound, and of the given dimensions. The sills are of 3 x 10 material, laid in soft mortar, and bedded by repeated blows of a heavy hammer. All splices must lap 18 in., and be carefully spiked. On these I first lay off the positions of the bents, and set the two joists to be used as ties about 6 1/2 inches apart, thus forming a sort of pocket, into which the ends of the posts settle as the bent is raised. When all of these are placed, the joists are placed between

the spans and the floor nailed in place, leaving ample room for all posts on end and side to go into place.

We are now ready for the bents, and commence by building the end bent foot of posts to end of building, and outer end resting on trestles. The way I do this is by laying planks from foundation to trestles, and on these planks the nailers are spaced, and, upon the posts and other vertical timbers being laid in place, it is not so very difficult to spike up through from below.

My reason for not raising, as Mr. McIntyre suggests, is that I cannot get the upper ends of my purline posts to clear the sub-support and stays. The remainder of the bents are built in the usual way, foot toward opposite end to which we commenced, and so proceeding to other end bent is completed, and, being now ready to raise, I have all girths or nailers carried to the proper span, and spikes started, ready to place when bents are raised. Plates are put in same shape, and, on the arrival of twenty to thirty men, we proceed to raise and stay-lath the end bent, care being taken to have it plumb before securing. Then bent after bent is quickly raised, those of the interior being kept from spreading at the bottom, while being raised, by safety blocks, which are removed as soon as posts are spiked to tie sills. When we arrive at last, or end, bent, which is resting on trestles, I have a tackle block attached to each purline of the last bent raised, and carried out and secured to end beam at purline post. By this method the bent is easily raised after the men start in with the "pikes."

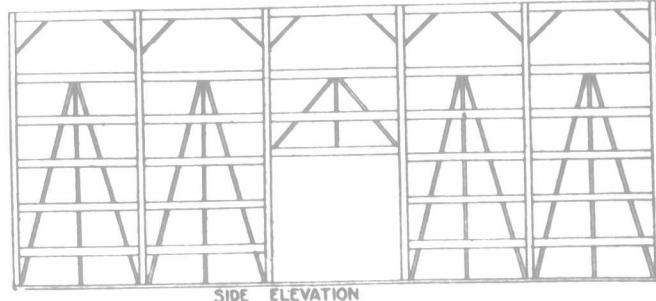
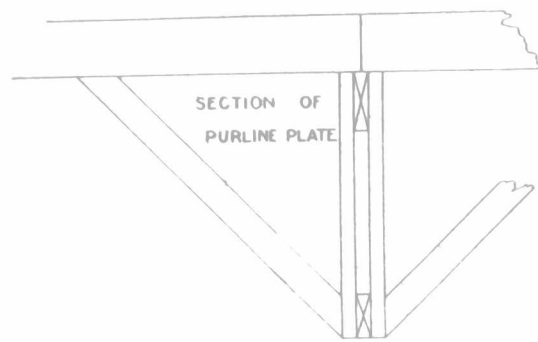
Now plates are hustled into place, and rafters are carried and set ready for the younger men to run up over the purlines into position and spike; and in something like three hours the frame is all up, when the carpenters commence placing each post in the sides, and the braces which fill in alongside them. These must be set edgewise, to resist the outward thrust of fodder, and, on the nailers being spiked to them, the frame is completed by inserting the purline braces, and the frame is safe from wind.

Each plate is built of two planks, the main being a 2 x 10, laid on top of posts, and a 2 x 8 lapping down over sides of posts, and the purline built of two planks, 2 x 8, with 2-inch space between.

I would draw attention to the end center post, and advise that it be constructed as shown. To support the end from inside pressure, and to resist wind pressure on outside, the simplest and best method I have ever seen is by the use of the diagonal tie. This laps over main plate and runs diagonally across the corner, and is spiked to the end beam.

The elevations explain themselves. The roof is given a rise of 9 inches to a run of 12 inches. Hoping that the readers may profit by these drawings and explanations, I must say that, to hear of the possibility of a plank-frame being built in British Columbia is indeed encouragement.

ALF. A. GILMORE.
Huntingdon, Que.



State Afforestation.

The second report dealing with the subject of afforestation, of the British Royal Commission on Coast Erosion, the Reclamation of Tidal Lands, and Afforestation, has been issued as a Bluebook. The Commissioners, after considering at length the present condition of British forestry, arrive at the conclusion that a national scheme of afforestation would contribute to the solution of the unemployed problem, and that the immediate taking in hand of such a scheme would be in the highest degree in the public interest.

The report recommends a loan of £2,000,000 for the creation of a national forest estate. The net deficit, it claims, according to the London Times, will rise from £90,000 in the first year, to £3,131,250 in the 40th, when the forest will become more than self-supporting. In 80 years the State will find itself in possession of property worth £562,000,000, or £170,000,000 more than its cost, calculated at 3 per cent. interest. The approximate area available for afforestation, without encroaching on farm land, is 9,000,000 acres. The national forest lands would be entrusted to special commissioners. One member of the Royal Commission thinks certain parts of the reports are too optimistic.

The Indispensable Corn Crop.

J. H. Grisdale, Agriculturist, Central Experimental Farm, Ottawa, speaking at the Dairymen's Convention, held in Valleyfield, Que., said no successful dairyman in that part of Canada considered he was producing milk cheaply without a silo and a good crop of corn. The experimental stage of the silo was past, the lagyards were getting into line, and siloes were being erected on every hand. The silo was now a factor in summer feeding, as well as winter feeding, for no cheaper soiling crop could be raised than corn. With land well manured, drained and cultivated, the corn crop was assured, and he advised for the section in which he was speaking, Early Leaming, Longfellow and White-cap Dent. Secure the seed early and test it, so there will be no loss of crop.

THE DAIRY.

Care of Milk for Cheesemaking.

The following article is the text of a splendid address, delivered on various occasions this winter by G. H. Barr, of the Dairy and Cold-storage Commissioner's staff, Ottawa, who, with the assistance of J. G. Bouchard, also of the Dairy Commissioner's staff, conducted last summer a remarkably valuable and illuminative series of experiments with the care of milk under average farm conditions. His conclusions go to show that prompt cooling and exclusion from the air is what milk needs if it is to keep well, aeration, either by means of an aerator or by dipping and pouring, doing actually more harm than good.—Editor.

Although this is an old topic, and one which has been discussed in the press and at dairy meetings probably more frequently than any other, it is still a subject in which all dairymen should be deeply interested, for the very foundation of successful cheesemaking lies in the production of clean, sweet milk.

It is the general opinion that milk for cheesemaking should be aired in some manner after it is drawn from the cow, and for many years patrons of the cheese factories were advised to use some special style of aerator, or expose the milk to the air by dipping it.

A few years ago Professor Dean reported some experiments on this subject. His conclusions were that there was no advantage in aerating milk for cheesemaking. Many dairymen at the time thought such a statement almost rank heresy, and that his College experiments were scarcely applicable to factory conditions, but there has been a growing conviction in the minds of dairymen that aeration is of little value.

In order to throw some further light on this important, if somewhat threadbare, subject, Mr. Ruddick, Dominion Dairy and Cold-storage Commissioner, decided to have some experiments conducted last summer under factory conditions.

It was my privilege to carry out this interesting and instructive work, with the able assistance of J. G. Bouchard, also of the Dairy staff. Our object was not to secure information from a bacteriological standpoint, but rather to discover what effect different methods of handling the milk at the farms would have on the quality of the curd and cheese.

The principal points we had in view were to ascertain the advantages or disadvantages of aerating, of cooling and aerating, and of cooling the milk without aeration, under ordinary farm conditions, and, if possible, discover a simple, convenient, inexpensive and effective method of

treating the milk, so that it might be delivered at our cheese factories in such a condition that our cheesemakers would not have to contend with gassy and other undesirable fermentations during the process of manufacture, or suffer losses from unclean flavors in the cheese.

We made a very convenient arrangement with John McEwan, proprietor of the Rideau Queen Cheese factory, Smith's Falls, whereby we had the use of his creamery room for the season, and also a number of his patrons were willing to allow us the privilege of going to their farms to arrange for the care of their milk. At first we thought of taking the milk from six or eight patrons, but we found it would be difficult to get all the details in connection with the treatment of the milk received at the farm from so many, and finally decided to use the milk from two patrons, Walter Hyslop and D. Condie. These two gentlemen had the largest herds convenient to the factory, and also had ice stored for summer use. Mr. Condie's farm lies on the west, and Mr. Hyslop's on the south side of the town of Smith's



Mr. Hyslop's Milk Stand.



Mr. Condie's Milk Stand.



An Easy Method of Cooling Milk.

Falls. Part of Mr. Condie's farm consists of drowned land from the Rideau Canal, and the cows pastured a good part of the summer on the flats around this swampy section. Mr. Hyslop's farm had some low land, as well as high and stony soil. One could scarcely call either farm ideal pasture land for the most delicate-flavored milk, but we were very glad to have these conditions, thus giving an opportunity to see results from what may be considered about average farm lands.

Mr. Condie's herd of 17 cows consisted of 8 grade Ayrshires, 4 grade Holsteins and 5 grade Shorthorns. Several of these cows had aborted during the winter, but were milking fairly well all season. One cow had been milking over a year.

Mr. Hyslop's herd of 18 cows consisted of 1 pure-bred Holstein, 2 grade Holsteins, and 15 grade Ayrshires. A number of his cows had also aborted during the winter. These cows were fed silage for several weeks in July, which kept up the flow of milk well, with no detrimental effect on the milk for cheesemaking.

The cows were always milked in the stable at both places.

Mr. Hyslop's stable was frame, and Mr. Condie's a stone basement under the barn. Both had wooden floors, which could not be considered by any means as sanitary as cement. The walls, ceilings and floors were dusty.

The milking was done at Mr. Hyslop's by his four sons, and at Mr. Condie's by himself and two hired men.

At both places, bright tin pails were used to milk in. No special regulations were asked for in regard to milking or feeding the cows, our object being to take the milk as they gave it to us, and see what result different treatment at the farm would have on it when manufacturing it into cheese.

The milk was delivered to the factory in the usual way, each patron delivering his own milk. Mr. Hyslop usually came to the factory about seven o'clock, and Mr. Condie about eight o'clock, each morning, which gave us ordinary factory conditions for delivery.

The equipment used at each farm consisted of two Champion aerators, a box for dividing the milk equally in the cans, a shotgun can for ice and water, a dinner, a thermometer, and two half barrels for setting the milk cans in cold water.

Only the evening's milk was treated. The morning's milk was not aerated or cooled.

Mr. Bouchard and myself were always present at the farms when milking commenced in the evening, to take charge of the milk as soon as it was drawn from the cow. At Mr. Condie's, as the cows were milked, the milk was strained into shotgun cans sitting behind the cows, and then carried to the milkstand. At Mr. Hyslop's, the milk was poured into a strainer pail in the stable, and carried to the milkstand and strained into the milk cans.

The milk was divided by pouring it into a square tin box placed on top of the aerators or milk cans. An outlet at each end of this box allowed the milk to flow quite accurately into the two milk cans marked A and B. The morning's milk, when mixed with the evening's, at the farm, was divided in the same manner. The different lots were treated as nearly alike as possible at both farms. At the factory, two small vats were used, the A lots of the evening's milk from each farm being put into Vat A, and B lots into Vat B. The morning's milk was divided equally into each vat.

Curd tests were made of each can of evening's milk, and also of the morning's milk. Babcock tests were made of the milk in each vat after it was received, and during the whole season only four times was there any difference in the per cent. of fat, showing that the different methods of handling the milk had not much effect upon the per cent. of fat. The per cent. of fat in the milk from the two herds was practically the same.

The per cent. of acid was determined in each lot of evening's and morning's milk by the acidimeter or alkaline test.

Milk from the Hyslop farm nearly always showed a higher acidity than that from the Condie farm.

The average tests for the season were as follows:

	Evening's Milk.		Mixed Milk.		Morning's Milk.
	A	B	A	B	
Hyslop	.169	.174	.170	.171	.165
Condie	.160	.162	.166	.168	.160

When the milk was cooled in the evening, and the morning's milk delivered in separate cans, one-half of one-per-cent. starter was added as soon as the first milk was received (about seven o'clock) and often the milk would not "set" until about ten o'clock.

We had to use a starter all the time, in order to get the curds in condition to leave them and go out to the farms to look after the milk in the evening, and in many cases its use gave better conditions in the curds from gassy milk than if no starter had been used.

No effort was made to do experimental work regarding methods of manufacture. All the curds were handled carefully, as nearly alike as possible, and according to the best methods in practice in our cheese factories.

The cheese were kept in the factory curing-room from 12 to 15 days, then shipped to the Ottawa cold-storage. The average temperatures in the curing-room were, in June 71, July 72, and August 68 degrees. The cheese were scored for flavor just before being shipped, and again on September 21st, in the cold-storage.

Although we have considerable information relating to the number of pounds of milk required to make a pound of cheese in the different experiments, we feel it is scarcely reliable, on account of the small quantities of milk we used.

Flavors in the milk, and flavors and texture in the curds and cheese, may be secured equally as well from small quantities as from large, but to get reliable results in regard to the losses in manufacturing, we believe it is necessary to do the work in the large factory vats. This we hope to do another year.

FEBRUARY 18, 1909

LOCATION OF THE MILKSTANDS WHERE THE MILK WAS AERATED AND COOLED.

Lantern slides were used to illustrate the utensils used at the farm and the position of the milkstands. The first slide showed Mr. Hyslop's milkstand. To the right is the corner of the barn, the cow stable being nearer the stand at the end of this barn. This stand is 60 feet from the cow-stable door, and the space between is in grass, and fairly free from manure or dust. On the other side of the stand is the orchard and back yard of the house. The barnyard is on the opposite side of the stable. All the manure was hauled out early in the season. Fault may be found with the location of this stand. It is probably a little too close to the stable, and the buildings and orchard prevent getting the full benefit of the wind from all directions, yet it is better situated than hundreds of milkstands through the country. Everything around it was kept clean and tidy. Notwithstanding the apparently favorable location of this stand, 38 per cent. of the curd tests from milk dipped or run over an aerator here were gassy, and not clean in flavor.

The second slide showed the milkstand at Mr. Condie's. It is at the end of the woodshed, in the corner of which is stored the ice. A roadway runs between it and the house; the horse stable is about 40 feet distant, directly in front of the stand, and the barnyard and cow stable on the other side of this about 136 feet from the stand. A hogpen is situated 88 feet from the stand, a short distance from the other end of the woodshed. This stand may be considered in a good location, as there is good circulation of air and not much dust surrounding it, yet 61 per cent. of the curd tests from milk dipped or run over aerators here were gassy, and not clean in flavor.

The third slide showed a splendid gas-producing situation, the wagon standing in the barnyard, not far from the hogpen door. Milk exposed to the air, or left open all night here, never failed to give gassy and floating curds in the curd test, as well as gassy flavors and gas holes in the curds.

The fourth slide showed the method of cooling the milk, without aeration, at the Hyslop farm. The tub is part of a gasoline barrel which cost \$1.25, and made a tub for each farm. The custom was to fill this tub with water from the well before milking commenced, and set the milk can in it, and as the cows were milked the milk was strained into the can. The investigators found that 180 to 200 pounds of water was all that was necessary to cool one-half of the milk from 18 cows. This milk was not stirred or dipped. The only agitation it received was to stir it with the thermometer to get the temperature, and, as soon as milking was finished, the cover was put on the can and left sitting in the water all night. The water used came from the well at 46 degrees temperature. The average temperature of the water in the tub when we left it (about five minutes after the milking was finished) was 59.6 degrees, and the milk at the same time was 77.3 degrees. The average temperature at the factory the following morning was 66.5 degrees, and only 6.6 per cent. of the curd tests from milk so treated on this stand were slightly gassy and not quite clean in flavor.

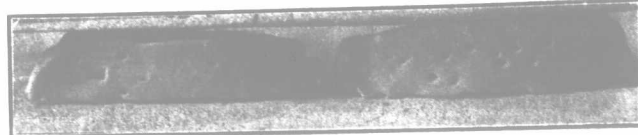
The fifth slide showed where the milk was cooled by setting the milk can in a tub of water at Mr. Condie's. This platform is in the corner of the barnyard; a corner of the horse stable is seen to the right. The cow stable is directly in front of this, though about 96 feet distant. All around this trough is bare ground, where the cows often stood both before and after milking, and in dry weather it was very dusty. The manure pile from the horse stable is about 52 feet from this platform.

The pump is situated behind the horse stable, 93 feet from the trough, and the water piped underground to the trough. A gas pipe was put into the upright pump-log to carry the water to the tub at the end of trough, and a spout put from the tub into the trough. All the water pumped for the stock had to pass through this tub, flowing out at the top into the trough. By this arrangement, not five minutes were required to take care of the milk, for, when enough water was pumped to water the cows, the milk was cooled enough to leave as soon as the milking was finished. This milk was not aerated in any way. The cover was put on the can as soon as milking was finished. The temperature of the milk and water was practically the same as at the other farm, and the curd tests from this milk showed the same results, also; only 6.6 per cent. were slightly gassy and not quite clean in flavor.

The curd tests from the milk aerated by dipping or running over an aerator at this platform gave 71 per cent. gassy and not clean in flavor, some of them floaters.

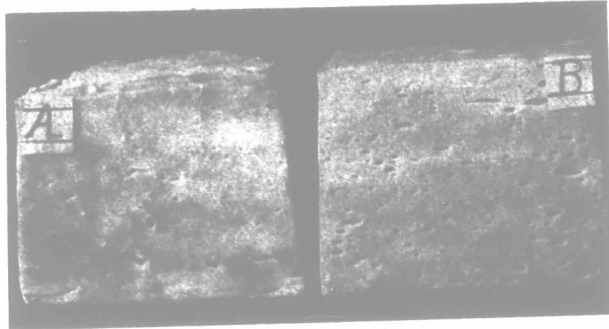
We did not go to very much expense in arranging to cool the milk as I have stated, but the results were so satisfactory that I would strongly recommend patrons of cheese factories who have a good water supply to construct such a tank as

shown in the illustration. It should be placed between the pump or water supply and the watering trough, and all the water used for watering the stock would pass through this tank, and cool the milk while doing so. The important point to observe in connection with such a tank is the overflow must be at or near the top of the tank, so that the water, which is warmed by the milk, may overflow into the watering trough. The warmer water is always at the top in a tank. Such an arrangement will practically guarantee sweet, clean-flavored milk, with a little or no time spent on it, which is quite a consideration



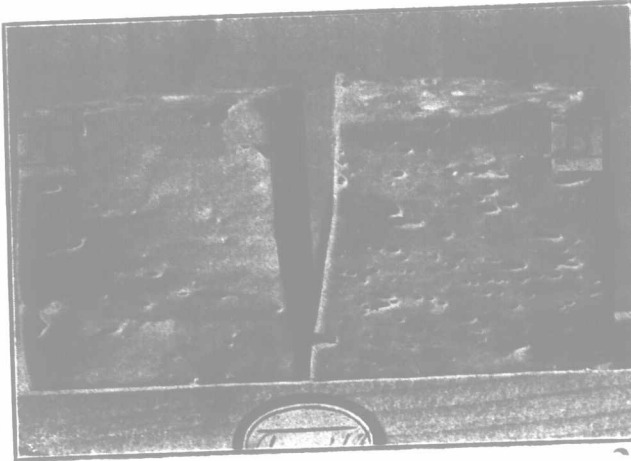
Bad Effect of Dipping Milk.

These two curds are from the same milk, divided into cans A and B. The curd on the left is from milk in can A, which was set in a tub of water, the milk receiving no aeration. The one on the right is from milk in can B, also set in a tub of water and cooled exactly the same as A, and dipped for about 15 minutes. Note gas holes in this curd and the flavor was not quite so nice as in the other.



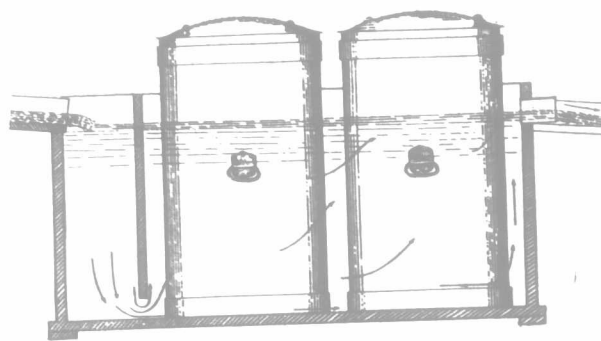
Milk Divided into Cans A and B.

A—Milk cooled in a tub of water. No aeration.
B—Milk put into rusty cans. No cooling.



Cooling versus Aeration.

B—Milk run over an aerator; temperature when milking was finished, 86 1/2 degrees.
A—Milk cooled to 86 1/2 degrees as soon as possible after milking was finished, without aeration. Covers put on both cans at the same time, about 15 minutes after milking was finished.



Tank for Cooling Milk in Cans.

during the busy summer months on the farm. When ice is used, the water in the tank should not be changed, as it would only waste ice.

A number of illustrations were given showing the condition of the curd tests and curds, from milk aerated, and aerated and cooled, compared with curds from the same milk cooled without aeration. They all showed that the milk exposed to the air gave curds full of gassy openings, while those from the milk cooled with as little exposure to the air as possible were free from gas.

The following table shows the defects in the curds and cheese in the different groups of experiments:

Cheese		Milk aerated by dipping.		Milk run over an aerator.		Milk aerated and cooled.		Milk cooled with water in shotgun can.		Milk cooled in tub of water.	
No. of Curd Tests.....	18	No. of Curd Tests.....	18	No. of Curd Tests.....	22	No. of Curd Tests.....	18	No. of Curd Tests.....	10	No. of Curd Tests.....	30
Not Clean Flavor.....	83.4%	Not Clean Flavor.....	83.4%	Not Clean Flavor.....	68.2%	Not Clean Flavor.....	44%	Not Clean Flavor.....	10%	Not Clean Flavor.....	6.6%
Gassy Texture.....	77.8%	Gassy Texture.....	77.8%	Gassy Texture.....	68.2%	Gassy Texture.....	44%	Gassy Texture.....	20%	Gassy Texture.....	6.6%
Not Clean Flavor.....	88.9%	Not Clean Flavor.....	88.9%	Not Clean Flavor.....	50.0%	Not Clean Flavor.....	40%	Not Clean Flavor.....	00	Not Clean Flavor.....	00
Gassy Texture.....	77.8%	Gassy Texture.....	77.8%	Gassy Texture.....	50.0%	Gassy Texture.....	20	Gassy Texture.....	00	Gassy Texture.....	00
Cheese not clean in flavor.....		77.8%		75.0%		60%		20%		13.3%	
				15%							

EXPERIMENTS ON THE CARE OF MILK. Defects in Curds and Cheese.

It will be readily seen from the above figures that by far the best results were obtained from milk cooled by setting the milk cans in water and putting the covers on the cans immediately after milking was finished. This particular method of treating the milk was carried on during the very hottest weather in July and August last, and the milk arrived at the factory in practically the same condition every morning, sweet and clean in flavor. If all milk for cheesemaking was handled in this manner, and the milk cans and pails kept perfectly clean, I believe we would practically do away with all gassy curds. The cheesemakers would have shorter hours, they would make more cheese per hundred pounds of milk, and have very few, if any, bad-flavored cheese.

Prevention of Milk Fever.

As the season is approaching when the majority of cows will freshen, a word of precaution for the prevention of so-called milk fever may be seasonable and serviceable. In the first place, it may be said that the common name of the ailment is a misnomer, as there is practically no fever accompanying it. It is a partial paralysis, and is properly named parturient apoplexy, or parturient paresis, and is generally the result of milking the udder empty too soon after calving. It has been noticed that, in the case of cows calving on the range, where the calf does the milking from the first, and takes but a little at a time for the first few days, milk fever is unknown. The same is true, as a rule, in the case of the beef breeds, where the cows are allowed to nurse the calves. The content of the udder at calving is colostrum, a very different substance from normal milk, a substance which is intended by nature for a specific purpose—the moving of the bowels of the calf—and this, if suddenly removed, causes a collapse of the tissues and glands, causing a paralysis of the system. In proof of the correctness of this theory, it is only necessary to recall that, in numerous cases, where the cows had been down, and unconscious for hours, and even days, the simple filling of the udder with air has restored them to health, without the help of any medicine. And in ordinary cases a complete cure has been effected within two or three hours. Prevention is, of course, better than cure, and if the calf is taken from the cow, to be raised by hand, the udder should be only partially milked out for the first three days. It is better for the calf that it be allowed to suck for that time, but not necessary if the dam's new milk be given it in small quantity, and warm. There is very little danger of the udder being spoiled by nature's provision for the occasion, the colostrum contained. It will be noticed that, when in such case the udder is very large and caked, it is cold, and gives no symptoms of fever, and, by oiling and rubbing it, the caked condition usually gives way in the course of a week or two. Furthermore, it is seldom, if ever, that milk fever occurs in the case of a caked udder. It rarely occurs in the case of a heifer with her first calf, and seldom in a cow younger than four years. The proper course, therefore, is to prevent the trouble, by partial milking for three or four days. And if this precaution has been neglected, and the ailment occurs, a bicycle pump, or a rubber-bulb syringe with a teat tube, disinfected by immersion

in boiling water, should be used to fill each quarter full of air, tying the teats with tape, and massaging the udder with the hands to force the air up into the system. A bicycle pump is the most effective, as it does the work quickly and thoroughly. Do not allow dosing with medicine, as, when paralyzed, the cow cannot swallow, and the medicine will almost surely go into the windpipe and lungs, surely causing death. Hundreds of valuable cows have been killed by dosing under such circumstances. The use of pure oxygen or sterilized air for filling the udder is doubtless safer than common air, but if care is taken in disinfecting the milk tube, and gently placing it in the teat, there is very little risk of damage to the udder.

Wide-awake Dairymen.

Editor "The Farmer's Advocate":

Replying to your request regarding our dairy herd, whose record has been sent you by J. H. Grisdale, of the Experimental Farm, Ottawa, we may say that we have received the blank record sheets from Prof. Grisdale for two years past now, and returned him a summary of our work.

A small history of our herd would be acceptable, we think. During the winter of 1906-07 we became quite dissatisfied with our old herd of "native" cattle, which usually returned about \$40 per cow per annum. We decided to sell them, and called an auction on Feb. 28th, 1907, selling our nineteen head, due to freshen in the spring; also, considerable hogs, etc. We at once purchased nine pure-bred Holstein-Friesian females and a sire, the breeding of Mr. Richardson, of Caledonia; also two lovely Holstein grades, which make up the herd of eleven, the returns of which Prof. Grisdale sent you.

The cattle we bought were somewhat thin and out of condition, but were of good breeding. During 1907, however, they gave 7,000 pounds average per cow (six of the eleven being two-year-olds). It takes a year, however, to build up the constitution of a cow, and last year they advanced over a ton of milk each. It was a dry season with us here, and water was scarce. They certainly would have done better had the season been favorable.

We have exhibited at two of our local fairs here in Grenville for two years, and were successful in getting sixty prizes on our live stock.

Our cattle have a good home, a stable which is well ventilated, with water always before them. We provide a good supply of roots and silage for winter feeding; also try to supply the cows with the necessary protein to balance their rations.

We like clover hay, silage and roots for roughage, and the best by-products of the starch and oil factories and breweries, together with oats and peas, grown on our own farm.

We have never done any official testing, but have weighed every cow's milk, individually, for two years past. We consider it the only business way to do. It has paid us well to keep records. We know our individual cows now. It teaches us considerable in feeding, and reveals many things to us we in no other way would be able to find out. If a cow is ailing, it is sure to indicate it. Before a man who does not weigh continually would be aware he had a sick cow, we, perhaps, would have ours better again.

We subjected our cattle, individually, to butter-fat tests at stated intervals throughout the season. We consider this even more important than weighing. According to our personal considerations, we estimate that they have produced over 300 pounds of fat each in 1908.

At present we have 24 head of pure-bred cattle, made up of 13 head due to freshen in the spring, 11 head of young heifers and bulls, all of which are in the pink of condition.

We use a system of soiling crops the same as they use at the Central Experimental Farm, Ottawa. Thanking you, Mr. Editor, for this privilege, and hoping it may help some other stockman.

R. CONNELL & SON.
Grenville Co., Ont.

J. N. Lemieux, of St. Hyacinthe, speaking before the Huntingdon, Que., Dairymen's Association, gave an interesting talk on the advantage of cool-curing of cheese to maintain the texture, quality and flavor of the cheese, resulting in a higher grade and quality. Cheese put through the cool-curing rooms, he said, sold for a higher price, and there was less shrinkage. All these points taken together would give an average of about 5 cents per cwt. of milk each season, which, in the aggregate, would mean larger profits to Quebec dairymen.

The work of cow-testing is as much a part of up-to-date farming as potato-spraying or other methods now in vogue to get the best results from the land. F. Whitley.

Cheese Business in Alberta.

"The Farmer's Advocate" had the privilege of an interview last week with T. B. Millar, the well-known Western Ontario cheesemaker, who went to Alberta three years ago. Mr. Millar first settled on the land, but a year's time found him again manipulating the curds, having now two cheese factories under his proprietorship in the sunny Province. The cheese business is of small proportions in Alberta, there being but eight factories in the Province, with an aggregate output of only about one hundred tons of cheese during the whole season. Co-operative dairying runs more to buttermaking, there being twenty-four Government creameries and a number of private ones. However, Mr. Millar saw no reason why the Province should not be supplying its own home demand for cheese, and two years ago he commenced making at Burnt Lake, about fourteen miles west of Red Deer. The factories, of course, are small, but prospects for development seem to warrant embarkation in the enterprise. Cheese sells for 12½ to 13½ cents wholesale. The milk is purchased from the patrons at prices ranging from 85 cents to \$1.00 per cwt., according to the locality of the factory and the season of the year. The patrons do the hauling. Each factory receives milk from a radius of 4 or 5 miles, numbering ten or fifteen patrons to a factory. The patrons average \$40 to \$60 and \$75 a month for milk, an odd one running up to \$100.

During the season of 1908 Mr. Millar has been pasteurizing the whey, raising it to a temperature of 155 degrees, and the patrons find that, by adding a little chop, they can raise pretty good calves. Good sweet whey contains a little more fat than skim milk, and all the other elements of skim milk except the casein. If the whey is sweet, and returned to the patrons with a normal percentage of fat and milk sugar, there is no reason why it should not make good feed. By cleaning the tanks once a week, they were easily kept in good condition, and the whey was good enough to drink. They never had a drop of sour whey all season. Both proprietor and patrons are much pleased with pasteurization of whey.

Mr. Millar has no regrets at having cast his lot in Alberta. There are, he points out, 162,265,600 acres of land in that Province. Deducting the 62-odd millions of grazing land, rivers and lakes, it still leaves a hundred million acres available for settlement, of which area only about 7,112,000 acres were cropped in 1907. Central Alberta he classes as a mixed-farming country, and Northern Alberta as more of a grain-growing section, with stock-raising and dairying an important adjunct. Fall wheat is succeeding well, authenticated yields of 64 bushels per acre having been reported. A sample of Dawson's Golden Chaff, submitted for inspection, indicated a fine sample of grain—plump, and quite hard for the variety. The country is well watered with mountain streams, more particularly west of the Calgary-Edmonton line. Homestead land, however, is not available in his section within less than 40 to 60 miles from the railway. As for the West generally, it has been recently estimated that there is more good land north of the Grand Trunk Pacific than is now under cultivation west of Winnipeg.

Benefits of Dairy-herd Competition

Editor "The Farmer's Advocate":

I have taken much interest in the letters that have appeared in your columns of those who were in the dairy-herd competition. Having been the first one to win the silver medal, I have followed the competition with more interest, perhaps, than I otherwise would have done. I cannot help but note the great interest that is being taken in this neighborhood, and the great progress many farmers have made since the dairy-herd competition was made part of the programme of the Western Dairymen's Association. Where there used to be herds with 4,000-pounds averages for the season, there are now 7,000 and 8,000 pounds, and some exceptional individual records are made, owing to the use of scales, where each cow's milk is weighed and recorded. I cannot help but feel, in the face of the great progress the dairymen are making, that dairying is yet in its infancy. I might state that, in the 1907 and 1908 competitions, I met personally nearly all the competitors, and it will be encouraging to the dairy instructors to learn that they were nearly all young men; and, with the young men becoming so interested, and making such progress, we cannot help but feel that there is a bright future for the dairy industry of Canada. We have been unable to take any active part in the last two dairy-herd competitions, owing to sending our milk and cream to Toronto, but we have successfully taken part in the dairy competition at the Guelph Winter Fair. Hoping the year 1909 will show even greater progress than 1908.

M. L. HAILEY,
Oxford Co., Ont.

87 Cts. to \$1.10 Per Cwt. for Milk.

Editor "The Farmer's Advocate":

The annual meeting of the patrons of Connolly's Cheese Factory, East Nissouri, Oxford Co., was held at the factory on February 3rd. The secretary's report showed that 1,524,592 pounds of milk was received, from which was manufactured 138,386 pounds of cheese. The average price was 11.851 cents, and the number of pounds of milk required to make a pound of cheese, 11. The prices netted each month by the patrons per 100 pounds of milk were as follows: April, \$.8873; May, \$.8726; June, \$.9354; July, \$.9106; August, \$.9502; September, \$1.0644; October, \$1.1095; November and December, \$1.08.

The meeting was well attended, the patrons well pleased with the profits of the past season, and the outlook for the coming season is very bright.

B. J. CONNOLLY.

POULTRY.

Mating and Feeding Breeding Stock.

Editor "The Farmer's Advocate":

Being a reader of "The Farmer's Advocate" for some time past, I find some very interesting articles on poultry, which help me a great deal, so I thought I would send some of my experiences, which may be a help to others.

I have been a breeder of Barred Plymouth Rocks, Single-combed Brown Leghorns, and Single-combed Black Minorcas for a number of years, and have found from experience in handling one or all of these breeds, that you get more healthy chickens from pullets mated to a yearling cock bird, or from hens mated to a cockerel, than from pullets mated to a cockerel, or hens mated to a cock bird. In no case use birds in the breeding pen that are not well matured, and in all cases use the healthiest birds. I always like to keep the sexes separated until a month before mating.

Some people say to breed from your best-laying hens, in order to get good laying stock. This may be true, but I find that you get more fertile eggs from hens that do not lay many eggs during the winter months.

I feed a pen of twelve hens of the Leghorn breed a pint of wheat in the morning and a pint of oats and barley at noon. This grain is given in deep litter. I give them a mash at night, composed of two parts corn meal, one part chopped oats, one part wheat bran, the whole mixed with just enough milk or water to make it stick together, but not sloppy. Give as much of this mash as the fowls will eat in about 15 minutes. Some people prefer feeding the mash in the morning, but if fed at this time, I think it makes the hens lazy. For the Plymouth Rock and Minorca breeds, give one-quarter pint more grain. I always keep a beef head, oyster shells, and a road-dust bath, before the hens.

There are two ways of hatching chickens, the natural way and the artificial way, but I am only going to give my experience of the natural way, which, I think, is the best way to hatch a small number of chickens. When a hen becomes broody, do not get in a hurry; let her sit a few days, until she is sure. Meanwhile, I get the nest ready, which I put in a coop about two feet and a half square and a foot and a half high. This coop is made of inch lumber, except the front, which is poultry wire. Any person with a hammer and saw can make one. I like a cheese-box or an old half-bushel basket for a nest. I set the box in a back corner of the coop. I then go and get a sod to fit the nest. I hollow the sod out so as to make it comfortable, and cover it with a little fine straw. I then put a few china eggs in the nest for 24 hours to try the hen. If she sits, I put the genuine eggs under her. I should say that, previous to this, I dust both hen and nest with insect powder. I look at the eggs every morning, and if any has been broken I wash the dirty eggs in lukewarm water, and dry them quickly.

After the chickens are hatched, I do not feed them for at least twenty-four hours. For the first few days I give them hard-boiled eggs, some breadcrumbs and a little oatmeal. After they are two weeks old I feed wheat screenings and a little cracked corn. I do not advise feeding a mash to chickens, as it is apt to cause bowel trouble. Always keep the drinking vessels clean. A little green stuff, in the form of finely-chopped cabbage, is good. If you look at the top of the head of the little chaps, you are almost sure to find some gray lice. If you do, put a little grease on their heads.

R. S.
Wellington Co., Ont.

What the Records Showed.

Editor "The Farmer's Advocate":
Like others, I have awakened to the fact that there is money in keeping poultry, but, before I learned this, I was curious to know whether I was feeding the hens for nothing, or were they feeding me. So, to satisfy this curiosity, I started, last year, 1908, to keep an accurate account of all the eggs they laid, and all the poultry we sold, charging up to them their feed as we bought it; and I might say that, as a result of my investigations, I found myself a considerable sum in pocket.

Our hens are three-quarters White Leghorn, and one-quarter White Rock. We cross them every other year, thus keeping up the size. In the autumn we kill off our old ones, leaving none but the pullets and yearling hens for our winter layers.

I have tried, and with no evident bad results, to force them to moult about the latter part of September, and I believe it a good plan, for you then get earlier winter layers, they set earlier the next year, and you have early chicks for the following year—the pullets for laying, and the cockerels for market.

We kept 30 hens and one cockerel, and never had eggs to hatch better. For feed, they get barley and corn, fed morning and evening, with mash and scraps for noon, plenty of good water being before them at all times. In summer they do not get the mash, for then they have the grass. I think they have laid well, as the figures below will show:

Month.	Eggs laid.	Price sold at per doz.
January	183	40c.
February	113	38c.
March	343	22c.
April	643	16c.
May	590	16c.
June	402	18c.
July	410	21c.
August	213	23c.
September	158	25c.
October	170	27c.
November	140	32c.
December	140	38c.

Total selling price, \$64.36; chickens sold, \$7.50; total, \$71.86. Cost of feed, \$26.35; giving a gain of \$45.51. This gives us, as it were, \$1.50 per head clear. W. B. W. Wentworth Co., Ont.

Grains for Poultry.

Of all grains corn appears to be most palatable to poultry, and as a fattening food it is hard to beat where a yellow-colored carcass is not objected to. It should not, however, be fed in unlimited quantity to layers, particularly to hens, as the tendency is to produce excessive fat rather than to stimulate egg production. Wheat is the best single grain for laying hens or pullets. It ranks about next to corn in palatability, and is a more nearly balanced feed than corn, besides being better for burying in litter to induce exercise. Corn kernels are so large and conspicuous as to be quickly picked up, even if quite deeply covered. Buckwheat and millet are also good to induce exercise, though not so rich as wheat. Oats may be fed to a limited extent, though on account of their coarse hulls they are not very acceptable to chickens unless pretty hungry. Fed in excess, oats may induce indigestion. While single reliance should not be placed on any one feed, variety being an important consideration, there is little doubt that wheat, even at present prices, is a profitable grain to employ largely in feeding laying hens, particularly in view of the alluring price of eggs. While screenings or frozen wheat should be used where available, in the interests of economy, when these are not to be had it will pay to use a proportion, at least, of good marketable wheat. A feed of corn is good to fill up the crops at night, and barley has a recognized place in the poultry feed bin.

Poultry Notes.

Make up your mind to raise more and better chickens this year.

If using an incubator, give it a thorough cleaning before using it. Wash it out with a solution of Zenoleum or some other disinfectant, and so have it sweet and clean. Run the machine a few days empty, so as to see that everything is right. No use wasting eggs.

Most farmers use hens for hatching out the chicks, with various degrees of success. Put the sitting hen in a pen by herself, and supply plenty of food and water, and a dust box, and the hen will do the rest.

Get out some early chicks. The cockerels will bring good prices for early broilers, and the pullets will make good layers next fall and winter.

Ducks can be marketed at two months old, and make a good side-line for the farmer. Y. N. DOTTE. York Co., Ont.

Dusted Lime for Mites.

Editor "The Farmer's Advocate":
To clean mites out of henhouse, I never found anything equal to air-slacked lime. Put the hens out; close the house up tight; take four or five handfuls of lime and throw up to the ceiling. I tried nearly everything, but never found anything to equal it. Repeat in a week or ten days. Perth Co., Ont. W. A. K.

GARDEN ORCHARD.

O. A. C. Short Course in Fruit-growing.

Much that is of interest and value to those engaged in fruit culture was discussed at the short course in horticulture, held at the Ontario Agricultural College, Guelph, recently. Among the popular topics were: Co-operation; Cover Crops; Nursery Practices; Canning; Fruit-judging; Tree Thinning of Fruit, and the Marketing of Apples.

The question of cover crops for orchards was discussed at some length. They must be used according to climatic conditions. The food of the tree must not be used up by other crops during its growing season, and the growth of the tree must be checked early in order to ripen the wood well for the winter season. It takes two years to grow an apple—one year to grow, store up food, lose moisture, and ripen the foliage and fruit buds, and the next year to grow the fruit. The rule is to cultivate as early as possible in spring, and continue the operation to conserve moisture, make available plant food, keep down weeds, then to cease cultivating and sow a cover crop, according to the climate of the locality. In the St. Lawrence Valley they cease cultivating the first week of June; farther south they continue later. The general practice is to leave the cover crops on the ground until the following spring, when they are plowed under.

Harold Jones, Maitland, Ont., gave the following as a good rotation for the first six years' cultivation of a young orchard. The following crops may be removed, if manured heavily with potash and barnyard manure, in the following order: Potatoes, corn, clover, potatoes, corn, clover. The clover is cut when just beginning to bloom, and then the second crop is left, to be plowed down the following spring. Use a low-growing variety of corn.

NURSERY PRACTICES.

The stocks for apple trees are grown in France. Probably the chief reason for the use of French stocks is because of their slight cost, the work in France being done largely by cheap female labor. The young trees are transplanted when about three inches high, and have their taproot cut off. The root system is thus improved. The stocks are imported and grafted in winter. They are mostly sold when the graft has grown for two years in the nursery row. Growers who want low-headed trees can purchase them from the nurserymen as one-year-olds, and head them low for themselves. Nurserymen customarily practice certain deceits upon unknowing purchasers. For instance, when an apple tree is not sold at the end of the second year, it may be cut back, and sold the following year as a two-year-old.

When grafting on roots, it is customary to make one or two grafts on the strong central roots, and several grafts on the small outer roots. Those on the large roots are grown on for two years, and sold as two-year-old stock, while the smaller ones are bedded for a year, and then grown similarly to the others. The nurserymen claim that the tree is not harmed by this method. Professor Macoun protested, "It would not do to starve an animal!" But he got for an answer, "A starved old cow, fattened, makes good beef!"

Many other practices in growing peaches, plums, cherries, grapes and pears in the nursery were outlined. It was strongly advised to purchase trees in nurseries of similar climatic conditions to the grower's own locality. The practice, too, of nurserymen, in continually choosing their grafts from the nursery row, must, after a few generations, be detrimental to the productiveness of the tree. The grafts are only chosen because of their vegetative functioning. It would be better for large growers, especially, to graft their own stocks, choosing the grafts from the best-bearing trees in the orchard.

STRAWBERRIES FOR THE CANNING FACTORY.

"The canning business has made extensive fruit-growing possible," said S. H. Rittenhouse, of Jordan Harbor, an expert strawberry-grower. Carloads of strawberries now leave Jordan station, and growers have not to leave their fields to sell the luscious fruit. Mr. Rittenhouse had 2½ acres in 1906, and 1,000 crates, which brought \$1,250 gross returns. In 1907 he had 4½ acres, 1,820 twenty-four-box crates, at \$3,240, and in 1908, 3½ acres, 1,140 crates, at \$1,375. The

cost of cultivation, excepting harvesting, he estimates at \$50 an acre.

The system of work in strawberry culture is to obtain a rich soil, in good physical condition, and free from weeds, for planting on. Two heavy coats of manure in the year preceding the strawberry crop is not too much. It is impracticable to apply manure after the planting, because of the weeds it would sow. The planting is a very important and difficult work. The crown of the plant must not be covered, nor the roots exposed. An extremely important practice is to select good plants. The whole row should be dug up, and only the best and strongest plants chosen. The usual practice is to choose plants from the outside of the matted row, but that custom must soon result in deterioration, as those plants are weaker. The Jordan Harbor people all grow one variety of strawberry, viz., Williams. This variety is not a good table kind, but is preferred by the canners because it lasts a long time in cold storage, and it is held together when cooked by the green tip. Good advice given by Mr. Rittenhouse, in closing, was: "Whatever you grow, whether of grain, potatoes or strawberries, get the community together, and grow only one good variety."

JUDGING FRUIT.

"A uniform system of judging fruit should be established in Canada," said W. T. Macoun. The position of a judge of fruit is a difficult one. He must know a great many varieties, compared with the judge of animals, who has only several to learn. Judges of one section cannot well judge the apples of another section, as fruit varies with climate. Huron and Norfolk Spies do not look alike. If the exhibitor and the judge keep prominently in mind the two thoughts following, they cannot go very far wrong: First, how would the sample be on a fine dining table? Second, how would the apples look in a shop window? The scale of points suggested by Mr. Macoun for judging plate samples is as follows: Form, 10 per cent.; size, 10; color, 20; uniformity, 20; quality, 15; freedom from blemishes, 25; total, 100 per cent.

PRUNING.

Eight good purposes of pruning were given:

1. To induce growth.
2. To lessen growth, by summer and root-pruning.
3. To change the shape of the tree.
4. To promote the formation of fruit buds.
5. To enlarge the size of fruit.
6. To heighten the color of fruit.
7. To adjust the relationship between the branches and the roots.
8. To remove injured branches and eradicate diseases.

Four reasons for top-working of fruit trees:

1. To replace a poor variety with a good one.
2. To increase fruitfulness.
3. To induce earlier fruitfulness.
4. To get a better trunk.

Tolman Sweets, McMahon's White, Pewaukee and Haas are good trees for top-working.

USES OF COVER CROPS.

The uses of cover crops were well summarized by Supt. H. S. Peart, of the Horticultural Experiment Station, at Jordan Harbor, as follows:

1. To conserve leaching nitrates when plants are not taking them up in July and August.
2. To turn the crop into the ground in spring, thus returning the food elements and adding humus.
3. Checking growth, by taking up moisture.
4. Holding snow.
5. Providing a winter blanket to keep the frost out of the ground.

How to cultivate an orchard on a hillside is a difficult problem. If the rows of trees run across the hill, alternate rows can be cultivated, one year in sod and one year to clover, sown in the summer, after clean cultivation.

The advantages of low heading are more and more marked as years come and go. The trees are lowering foot by foot, and inch by inch. Low-headed trees are more easily pruned, picked and sprayed. One whole day was devoted to the preparation of the important insecticides and fungicides, and the discussion and critical examination of the substances prepared. The spraying derrick, as manufactured by Waddell Bros., Norfolk, was on hand, and demonstrations of its efficiency given.

A preference among the fruit-growers in favor of arsenate of lead as an insecticide is quite manifest. It adheres better than Paris green, and does not injure the foliage. Co-operative associations obtain their fungicides and insecticides at a very low cost.

A general discussion on the varieties worth growing brought out some valuable points. Growers and buyers are unanimous in the belief that the biggest mistake sections make is in growing too many varieties. Several varieties, instead of sixty or seventy, as generally found, is much to be preferred, and, in fact, necessary, if a given

district is to succeed in growing apples. Also, every locality must grow the fruit adapted to that locality. Baldwin is the best in Norfolk County, but it winter-kills in Northumberland. A list given by Mr. Johnson, of Norfolk, was as follows: Snows, Greenings, Baldwins, Spies and Blenheims. A list by Mr. Carey, of Northumberland, was: Blenheims, Alexanders, Wolf Rivers, Gravensteins, Hubbardstons, Spies and Greenings. A list for the colder St. Lawrence Valley included McIntosh Reds, Snows and Baxters.

Enough was demonstrated by Messrs. Gilbertson and French to show that thinning fruit on the tree is profitable. It is interesting, in this connection, to note that in British Columbia, Washington and Oregon everyone thins, in this way they produce their uniformity of size and good color, to a large extent. The practice, moreover, saves time in the busy harvesting season.

CO-OPERATION.

All day Friday, February 5th, was given up to co-operation. The various managers spoke, one after another, on each of the following topics:

1. Does co-operation pay?
2. The forms of organizations.
3. Systems of management.
4. Selling methods.
5. The next step in the evolution of co-operation.

It is impossible to picture adequately the inspiration the fruit-growers received from these discussions. It was the unanimous opinion that the meeting on co-operation was the most inspiring, instructive, and best-conducted meeting ever held on fruit-growing in Ontario. The short, pithy addresses on one topic at a time, the grand record of the societies, and hope for the future; the broad representation of speakers, and their earnest, modest and enthusiastic manner betokened to the listeners and questioners that co-operation is a movement which is destined to transform Ontario, at least, into a much greater fruit-producing country. Production, buying and selling prices, and the farmer's education, are all favorably affected in every instance by co-operation.

Can we overproduce apples in Canada? No; there is no chance of meeting the demand in the next twenty years. America produced only 23,000,000 barrels last year—not one-half the number produced some years ago. The quality of Ontario's apples was demonstrated to be better than that of the apples of the much-advertised West. The one necessary step for success seems to be co-operation, in order, particularly, to obtain the intelligent marketing of the fruits.

J. W. JONES.

Cultivation of Dandelions.

The cultivation of dandelions for market is becoming an important industry in New England, where considerable areas are now devoted to raising them for purposes of salad. They yield a reasonable profit when sold at 50 cents per bushel, and they often bring a higher price. Of course, only the leaves are eaten, and these are handled in much the same way as spinach. Some dandelion growers have learned how to blanch the leaves, like celery, by covering them with boughs or boards. This plan has been pursued for a long time in Europe, where "greens" of the dandelion variety have for many years been popular in the form of salad.

The blanching process has two advantages. It makes the leaves tender, and it reduces their bitter flavor to such an extent that a salad made of dandelion alone is palatable.

There are several recognized varieties of the dandelion plant, the best known being the French Garden and the Improved Thick-leaved.

By cutting off each growth just below the surface of the ground, the vitality of the dandelion is not injured, but, upon the other hand, every top thus cut off sends up from two to half a dozen new crowns. This process, therefore, is a desirable one to adopt in cultivating the plant for food purposes.

If seed is used to start a field of dandelions, it should be sown in early spring in shallow drills, and in the following spring the leaves will be fit for the market. LAWRENCE IRWELL.

No Second-rate Goods.

I received the knife all O. K., and am certainly well pleased with it. I consider it the best farmer's knife I ever saw, and it shows very plainly that your premiums are not of second-rate value. A. W. CROW.

For 1893 I had 15 of egg masses of the Tussock moth, which were gathered from trees in the City of London, this winter.

THE FARM BULLETIN

To Our Club-raisers.

There are thousands of farmers who do not know what they are losing every year through not being subscribers to "The Farmer's Advocate and Home Magazine." Therefore, we want all readers of "The Farmer's Advocate" to act as club-raisers this year, and send us large lists of NEW SUBSCRIBERS.

If you send us two new names and \$3.00 to cover same (each new subscriber paying \$1.50), we will mark date on your paper forward one year as remuneration to you; or, for each single NEW NAME, accompanied by \$1.50, we will advance the date of your address label six months. Cash commissions or premiums, as preferred, for larger lists of new names.

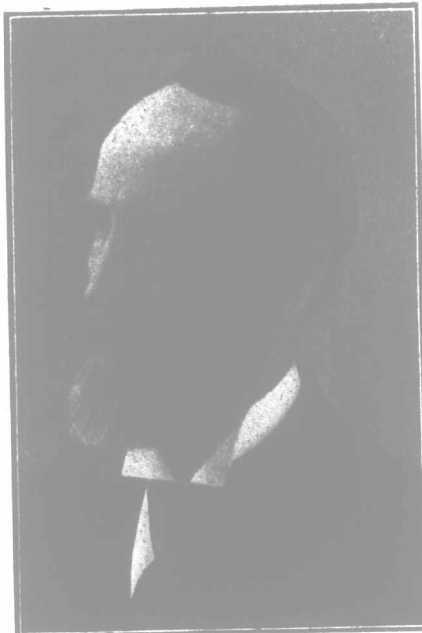
In clubs of FOUR RENEWALS OR OVER, we will accept \$1.25 each.

Premiums not included in club offers.

Start raising your club immediately. Get "The Farmer's Advocate and Home Magazine" into every household in your locality.

Death of John Morgan.

The death of Mr. John Morgan, of Kerwood, Middlesex County, Ontario, which took place at his home last month, in the 72nd year of his age, has removed from the scene of earthly activities a prominent agriculturist, who was well and widely known by stockmen throughout the Province. Mr. Morgan was born in Lambton County in 1837, but in the next year his parents moved to Adelaide Township, where he resided up to the time of his death. In 1879 he established a herd of Shorthorn cattle on a good foundation of Cruickshank blood, on which were used bulls



The Late John Morgan.

bred by the Watts, of Salem, and the Millers, of Pickering; and, in the period between 1890 and 1900, when he had a herd of nearly 100 head, he had a considerable trade with United States breeders. In the spring of 1899 he suffered a heavy loss from the burning of his buildings, and was under the necessity of disposing of the bulk of his herd, although a few choice breeding animals were retained to continue the herd, now maintained by his son, Truman C. Morgan. Mr. Morgan was a prominent man in the district in which he resided. He was of a cheerful and liberal disposition, and took an active interest in all movements having for their object the improvement of conditions of the community in which he lived.

British Shows for 1909.

February 23 to 26—Shire Horse Show, London.
 March 3 to 5—Hackney Horse Society's Show, London.
 May 26 to 31—Bath and West of England Show, Exeter.
 June 5 to 15—International Horse Show, Olympia, London.
 June 22 to 26—Royal Agricultural Society's Show, Gloucester.
 July 20 to 23—Highland Society's Show, Stirling.
 December 6 to 10—Smithfield Club Show, London.

Eastern Ontario and its Winter Fair.

Editor "The Farmer's Advocate":

On reading your editorial, entitled, "Eastern Ontario Winter Fair," I began to wonder what part of Eastern Ontario, particularly the Ottawa Valley, the writer was familiar with. It is news to me to learn that many of the farmers, who you say differ somewhat from those of the Western part of the Province, as regards interest in agricultural education, are engaged part of the time in lumbering, or perhaps have, during recent years, transferred their attentions from lumbering to soil cultivation and dairying. Permit me, as a soil cultivator and dairyman, who has spent most of his life in the Ottawa Valley, and a little of it in Western Ontario, to give what I believe to be the true reason why the Winter Fair at Ottawa is not more largely patronized. We will admit, in the first place, that many in Eastern Ontario, in common with Western Ontario, or any other country, for that matter, have not yet realized the true value of demonstrations and discussions, and the inspection of animals and products of superior quality. A much smaller proportion of the land in Eastern Ontario is of good quality than in Western Ontario, consequently the farmers are not as prosperous; and I think you will agree that it is not always the man who feels his need of knowledge, but the man with money in his pocket, who attends such gatherings. Another reason is that it is very inconvenient for a dairyman, especially one who is trying to follow the teachings of such papers as "The Farmer's Advocate," to leave his stock for two or three days at this season of the year. Yet another, and, I believe, one of the chief reasons, is one which one of your correspondents a few weeks ago gave as the reason for the decline of the Farmers' Institute. It is simply that the farmers have no faith in many of the speakers at such gatherings. I believe this does not apply so much in recent years, but many of the men prominent in agricultural and dairying associations are not, nor ever have been successful farmers, although some of them make good money in handling dairy and farm produce. Therefore, many of us who would like to attend such gatherings have to stay at home, and get along as best we can with the help of "The Farmer's Advocate" and other agricultural papers. With regard to the horse-racing proclivities of the people, the Brockville Fair has decided to eliminate one day of the fair which was devoted to this sport, because of lack of patronage. At another time, if you will allow me, I will discuss (more briefly, I hope) your suggestions for the improvement of the Ottawa Winter Fair and agriculture in Eastern Ontario, which I thoroughly appreciate.

Leeds Co., Ont.

CULTIVATOR.

South Perth.

The past summer seems to have been one of blasted hopes in this part of the Province. Not that nature has not been as generous to us as to others, but that certain undertakings which loomed high on the industrial horizon have faded into comparative insignificance. We had high hopes of riding to town on the electric car, and have rejoiced at the prospect of getting big prices for flax for making binder twine, while watching the pulling machine turning it out tied in sheaves as fast as a team could walk; and had seen (in our mind's eye) the golden dollars coming in payment for milk at the big creamery, when they would commence using the separated milk for harness oil, or something of that kind; and revelled in the prospect of spending a week or the shore of the mighty Lake Huron, via C. P. R. But all, for the present, at least, is left in abeyance, and classed with the "might-have-beens." But not all of the embryonic propositions of last season are to be placed in this category. Happily, much progress has been made. The C. P. R. has been extended from Woodstock to St. Mary's, under the nominal management of a local company, after numerous delays and difficulties, passing under the Grand Trunk at St. Mary's through a concrete viaduct. Then, of probably no less importance, we have the adoption of a modified good roads system in the Township of Blanchard. In brief, the plan pursued was that the council of the said township purchased a stone crusher, which was placed successively in the gravel pits throughout the township, and, by hiring steam engine, men and teams, the gravel and stones were put through the crusher, and placed on the roads without rolling. The work was continued till stopped by frost, and though still regarded somewhat as an experiment, the confidence of the ratepayers is evidently not greatly shaken, as all the councillors were re-elected by acclamation. A portion of the Provincial grant is supposed to have been used in this system. In contrast to this is the case of Oxford County, where the ratepayers are "up in arms" against the macadamizing system, which is said to have increased the taxes \$13 on some 100-acre farms in one season, without deriving one cent of benefit from it, as the millage improved was too

small and too remote. The past season also saw the establishment of two new factories in the town of St. Mary's; also a new post and customs office, several stores and a grain elevator. We are also in line for the Niagara electric power. But what has all this to do with agriculture?

some may ask. Well, don't forget that it spells progress, and probably prosperity, not only for the town, but the surrounding country. In spite of the temporary financial depression which we have just passed through, the prices of farm produce, on the whole, did not suffer any ap-

preciable diminution. We appear to have obtained a grip on that valuable home market, which has been the long-promised Messiah of the manufacturers; and as long as it stays as now, the farmer can live. J. H. B.

Fairs and Exhibitions Delegates Deliberate.

Greater efficiency in rural constabulary, and an increased grant to agricultural interests in Ontario, were two demands made prominent at the ninth annual convention of the Ontario Association of Fairs and Exhibitions, held last week in the City Hall, Toronto. Other questions that received attention comprised law reform, responsibilities of railway companies in regard to level crossings, entry fees at fall fairs, wet-weather insurance, and the reinstatement of plowing matches as valuable features in agricultural education. In some cases strong champions lined up on both sides. In addition, able addresses by Professors G. E. Day and C. A. Zavitz, of Ontario Agricultural College, Guelph, contained sound advice and valuable suggestions as to the duties of judges of stock and the work the agricultural societies could afford to take up for encouraging improvement in farm crops.

At the evening session, the convention was honored by the presence of Hon. J. S. Duff, Minister of Agriculture, in the chair. Over two hundred delegates, from all parts of Ontario—from Algoma, Glengarry and Essex Counties, and districts within the triangle formed—were in attendance. The enthusiastic support of these delegates, as well as the rapid development in every particular during the past year, as shown by the annual report, proved that the Department of Agriculture made a change that meant much for Ontario's greatest industry when J. Lockie Wilson was selected as Superintendent. From divers sources came congratulations on the success of the Field-crop Competitions in standing grain, while the returns for 1908 showed an increase of fifty per cent. in gate receipts throughout the Province, and of forty per cent. in number of articles exhibited. Further, when Superintendent Wilson, in strong terms, denounced gambling at fairs, and warned those in charge for 1909 that all wheels of fortune and games of chance must be eliminated, he was heartily applauded.

By all, it was pronounced the greatest convention in the history of the Association. Four sessions, filled with vigorous and, as a rule, broad-minded discussions of matters that relate to agricultural-society duties, were opened by an anecdote from the "Spice of Life" columns of "The Farmer's Advocate," and closed by a handsome contribution to the Sick Children's Hospital. Wm. Laidlaw, of Guelph, the genial president, was in the chair, and, considering the fact that, at times, enthusiasm prompted half a dozen delegates to give their views on a subject at the same time, performed the duties in a creditable manner. In some instances the discussions became rather animated, because those taking part did not take into consideration the fact that it was necessary to make allowance for conditions altogether different from those which prevailed in their societies.

OPENING ADDRESS.

The rapid development of Canada was referred to by President Laidlaw in the opening address. A nation's greatest asset, he said, was her people, and education played a great part in directing that development. Those men who took advantage of every opportunity that meant education were the men who held high positions in banks, in offices, and in legislative halls. Farmers were urged to widen their knowledge of affairs, and be in a position to assume new duties. It was the privilege of the agricultural societies, by means of exhibitions and other features, to educate those of rural districts.

Dealing with the question of money grants for exhibition purposes, the president hoped for a liberal increase from the Ontario Government, and also, at least part of the \$50,000 that the Federal Government had turned over for Dominion Fair purposes during recent years.

REPORT OF SECRETARY WILSON.

After thanking the secretaries of the 360 societies in all parts of Ontario for their co-operation, J. Lockie Wilson proceeded with his most-encouraging annual report. In almost every case officials had been prompt in sending returns for 1908. A few societies would be obliged to lose the grant, because their secretaries had been dilatory. Every department of the annual fall fairs showed advancement. Receipts at the gates were 50 per cent. larger than in 1907. The number of exhibits had increased 40 per cent. In addition, educational features were more in evidence.

Some delegates had suggested further organization. Mr. Wilson's opinion was that it was useless to attempt more. All that was necessary was to make better use of what organization now existed. Not only should these local societies be

utilized for electing officers and holding shows, but every detail affecting agricultural work should receive consideration. The popularity of field-crop competitions showed what could be done by launching out along new lines. For the first year, only ten societies were attracted by the offer. Last year it had developed to 47 societies, including about 650 farmers, and taking in over 6,000 acres of oat land. Those taking part were rewarded by sales of seed grain at double the market price, and in some cases at \$2.50 per bushel. The work would be continued, he said.

Coming to the question of special attractions, the secretary said that next year every possible effort would be made to drive gambling devices and wheels of fortune from Ontario's fall fairs. Directors who permitted it were liable to heavy fine, and also to the loss of the Government grant. In many cases special attractions did not pay for themselves. Boys and girls got no lasting benefit from them. It would be much better to be satisfied with smaller gate receipts, and give demonstrations of value to the young.



H. J. Gould, of Uxbridge.

President Ontario Association of Fairs and Exhibitions.

The demand for Government judges had increased. In 1907, 178 had been sent out. Last year, 224 requests were met. Seed fairs had become a success, increasing 400 per cent. last year.

Looking to further improvements in 1909, Mr. Wilson had approached the manager of the Canadian National Exhibition, at Toronto, with the object of getting special prizes for a display of grain in sheaf from the field-crop competition areas. His mission was successful. It was possible, too, that several societies would take steps to revive plowing-matches. Insurance against wet weather on fair days, too, had been suggested. Taking the returns for the past three years as a basis, he found that there were fifteen societies whose gate receipts fell below \$200. If every society contributed \$5, a fund of \$1,800 would be provided annually to recoup the unfortunate fairs.

In the discussion that followed, many important features of agricultural-society work were brought up. Some found fault with the Government-judge system. D. Evans, of Strathroy, advocated having them transferred from one district to another, because exhibitors knew their placing without entering the ring when they had attended a fair or two in a locality. A. C. Griffin, of Waterdown, said trouble had ensued over the judges not being present on time. With S. Egan, of Bolton, the complaint was that they were finished too early in the afternoon. One of the judges, J. Brockbank, of Paris, urged that steps be taken to provide enclosures in which stock could be judged, so that the crowd would not be in the way. In reply to a suggestion that score-cards should be used, and the score placed on each animal or article, Mr. Brockbank said he had done that once, and never would attempt it again. He was willing to point out defects to the owner privately, but not in public.

Although many delegates favored some system of wet-weather insurance, the prevailing sentiment was that each society should manage its own finances and keep sufficient money ahead to meet expenses. If they did not do so, they should be obliged to pay out of their own pockets. It was pointed out that insurance companies handled such business. The executive was empowered to deal with the problem.

ENTRY FEE ON EXHIBITS.

In discussing the advisability of charging an entry fee on exhibits at fairs, J. E. Roxburgh, of Norwood, said that, just as children pass from Public to High Schools, and on to the University, so do exhibitors develop from the township fair to the county fair, and later to the larger central Provincial or Dominion exhibitions. To have best results at the smaller shows, it was necessary to have the boys interested, and in most cases the entry fee could be done away with to advantage. Some societies, levying entry fees, made prize-money larger, but the net sums paid to exhibitors was not larger than they could have paid without the fee.

That the present system of dividing the Government grant would prove unfair to societies not charging entry fees, was the opinion of Wm. Hickson, of Bobcaygeon. Directors wished to make the prize-money as big as possible, so as to get more out of the Provincial grant. While an entry fee kept out undesirable exhibits, it also kept away some desirable ones, and it looked bad to see empty stalls and benches. R. Vance, of Millbrook, thought it was unfair that one man could make 20 or 40 entries on his membership fee of \$1.00, while another member had only one entry. Large exhibitors should pay extra. D. Evans, of Strathroy, claimed that, since there was a tax on gate and grand-stand, in order to swell the receipts, so there should be one on entries. He had known men to enter horses for exhibition, in order to avoid paying at the gate. Encouragement for amateurs was the aim of R. E. Cowan, of Galt, who urged protection against professional exhibitors. Local directors were left to use their own judgment in the matter.

USING GOVERNMENT GRANTS.

To the questions, Is the present method of distributing the Government grant satisfactory, and should the grant be increased? Dr. McGuire, of Waterford, answered doubly in the affirmative. In order to prevent professional exhibitors from carrying away the lion's share of the prize-money, he suggested two classes, so that professionals could not compete against non-professionals. An effort should be made to have the Government grant increased from \$70,000 to \$100,000. In distributing the extra \$30,000, Dr. McGuire suggested that it be given on a percentage basis to those societies that owned their buildings or grounds. Many delegates opposed special aid to societies already strong, and wanted the basis of distribution for the entire grant left as at present. After thorough discussion, R. H. Leary, of Peterboro, introduced a resolution asking that a delegation wait on the Government, and ask that the grant to agricultural societies be increased to \$100,000, and that this be distributed among the societies according to the amount spent for agricultural purposes.

The resolution carried, and on Thursday a large delegation, with H. J. Gould, R. E. Cowan and David Evans as spokesmen, waited on Hon. Jas. Duff, Hon. Col. Matheson and Hon. Dr. Reaume. The Ministers considered the demand for an increased grant a reasonable one, and promised that it would receive serious consideration at the hands of the Government.

PLOWING MATCHES.

In introducing the question, Should plowing-matches be revived and encouraged? J. W. Sangster, of Toronto, referred to the straight furrow, with the fine comb, so common a few decades ago, the object being economical preparation of a desirable seed-bed. Later, the presence of grasses and weeds led to the popularity of a flat furrow. Dairy farming then came into prominence in many parts of Ontario, and soon fancy plowing and annual matches fell into disrepute.

The revival of the plowing-match, Mr. Sangster claimed, would arouse enthusiasm, and be of great benefit. Present-day farmers wanted a visible, practical lesson. As a rule, the man who plowed well also was thorough in other operations on the farm.

It was pointed out by J. W. Wheaton, of Toronto, that of late years the aim was to turn over the land as quickly as possible. Plows

were constructed on the same principle as they were many decades ago, and since so much depended on the skill of the plowman, it was advisable to resurrect the plowing-match as a training school.

That it was difficult to induce a farmer to allow competitors to plow his field, was the complaint raised by Jonathan Gould, of Markham. A. C. Griffin, of Waterdown, said that plowing-matches were a worthless relic of the past. The introduction of implements such as the disk harrow and the spring-tooth cultivator made it no longer advisable nor profitable to do scientific or fancy plowing. Thorough cultivation after the plowing was more important.

A motion-suggestion that the Convention urge on the Minister of Agriculture the expediency and importance of making a special grant to assist in conducting plowing-matches, under the auspices of societies that wished to take up that line of work in demonstrating better methods of soil cultivation, was lost by a small majority.

RURAL CONSTABULARY.

That Ontario's rural constabulary system is considered altogether inadequate, was shown by the loyal support of a resolution demanding more efficient service in rural parts of the Province. When the subject was introduced, A. J. Russell, of Cobourg, outlined what had been done in Northumberland County to impress on the Ontario Government the importance of a change in the constabulary system. Letters from insurance companies, county crown attorneys, and "The Farmer's Advocate," were read, in which the suggested changes were supported. Several delegates cited instances of where criminals got away. J. M. Young, Wellington Co., said they were planning a system for their county whereby fees would be paid that would make it worth while to do duty in capturing miscreants. Many favored a change of system to something similar to the Northwest Mounted Police. G. L. Miller, of Jarvis, thought better management of the present system would fill the bill. The following resolution, moved by A. J. Russell, of Cobourg, and seconded by R. A. Stokes, of Sombra, was carried unanimously: "Whereas crime in rural districts, committed chiefly by vagrants, is inefficiently coped with by our system of counties constabulary, we respectfully advise the adoption of either a rural mounted-police force for the Province of Ontario, or that the present system should be supplemented in such manner as may best attain better rural-police protection; and that a copy of this resolution be forwarded to the Provincial Attorney-General, at Toronto.

OTHER RESOLUTIONS.

A resolution dealing with accidents at railway crossings urged the Federal Parliament, now in session, to pass legislation by which railway companies would be held responsible for damage done at level crossings.

Suggestions by the Attorney-General, in regard to law reform, were approved. It was considered that one court of appeal was sufficient, but no suggestion as to limiting the number of judges on the appeal case was made.

A motion to increase the number of directors of fair boards to at least 24 was left over for a year. Secretary Wilson promised to do what he could to meet the desires of societies that wanted an increased number of directors.

SECURING QUALIFIED JUDGES.

"Qualified judges are developed by training and practice," said R. S. Hamer, B.S.A., of Perth, in discussing the best way to secure qualified judges. Others, he said, were simply strong in some particular line. It was a mistake to call Government judges experts. The main object in providing these judges was to secure outside parties to make awards. The most satisfactory men were found where they had experience. Constant association with a particular class made them acquainted with type and other requirements. Mr. Hamer did not think it possible to arrange examinations and grant certificates. Much could be done by the Superintendent to improve the calibre of the judging staff, by culling out those who did not give satisfaction, and by accepting suggestions from competent men already in the work.

JUDGES AND IDEALS.

Three qualifications essential to satisfactory placing of awards mentioned by Prof. G. E. Day, were: (1) Thorough knowledge of the class; (2) absolute honesty, and (3) tact. With regard to honesty, it was pointed out that there was not one-tenth the dishonesty among judges that many tried to imagine. Too many criticisms were made by those who did not know, or who were not in position to pass judgment. Tact was necessary in talking to an exhibitor who had not been blessed with a first prize. Such men often were grieved, and deserved consideration. Type was described as an elusive term, and, while it was essential, should not be given too much prominence. The more a man studied judging, the more he felt that others could disagree with him. Just as long as there were intelligent and honest judges; so long would they differ in selecting winners.

ENCOURAGE FIELD CROPS.

After pointing out that the value of field crops

annually amounted practically to the same as that of live-stock in Ontario, Professor Zavitz regretted that, for years past, sufficient attention had not been given to improving farm conditions. Among the points that demanded attention were drainage, rotation of crops, economy of plant food, thorough cultivation, use of better varieties, and the sowing of large, plump, sound seed at the proper time and in the proper way. Experiments had shown that early sowing was the best. There was an appreciable decrease in the yield of every crop for each day's delay after the first week of seeding weather.

Fairs, declared Professor Zavitz, did not take advantage of their opportunities to assist in improving crops of the farm. Entries gave no names of varieties, and little of an educational value was in evidence. Exhibits should be placed in uniform receptacles, and made more attractive. Special prizes should be offered for the particular variety that it was deemed advisable to encourage in that district. A class, also, should be opened for alfalfa hay, and accompanying notes on how it was grown. Further suggestions were that special prizes be offered for secretaries of societies who presented at the fall fair the most attractive and most instructive display of farm crops, and that the Ontario Association appoint a special committee to hold a conference regarding attractiveness and arrangement of the products of the field.

Success throughout the Province was reported by John Farrel, of Forest, President of the Western District, and P. S. Ewing, of Warkworth, President of the Central District.

OFFICERS ELECTED.

Before steps were taken to select officers, Secretary Wilson urged that only live men be appointed, and requested that those who were not prepared to "take of their coats" refuse to accept a position. It was also agreed to do away with the office of corresponding secretary, and elect a treasurer and a secretary-editor.

The new officers are: President, H. J. Gould, of Exbridge; First Vice-President, Dr. J. U. Simmonds, of Frankford; Second Vice-President, Geo. E. Lee, of Highgate; Secretary and Editor, J. Lockie Wilson, of Toronto; Treasurer, Alex. McFarlane, of Ottawa. Directors—John D. Orr, of Meadowvale; Wm. Laidlaw, of Guelph; J. W. Sheppard, of Cayuga; J. Thos. Murphy, of Simcoe; R. E. Cowan, of Galt; R. H. Leary, of Peterboro; and John Farrel, of Forest. Auditors—R. Agnew, of Meaford, and Wm. Collins, of Peterboro.

Ontario Corn Association Organized at Essex.

Again and again it has been said that corn is king in south-western Ontario. But if that be true to-day, who can forecast what is in store for this great cereal ten years hence in these favored counties, or the advantages that will accrue directly and indirectly to the country generally as an outcome of the great corn convention and exhibition held last week in the Town of Essex? Provincial statistics for 1907 credit Essex County with a corn crop of 5,887,390 bushels, and Kent, 5,065,265 bushels, approximately one-half of the whole corn crop of the entire Province. But in all directions the corn-growing area is extending, because of the value of corn for ensilage purposes, fodder and feed grain. With the spread of dairying, hog and cattle feeding, the corn crop becomes more and more the reliance of the Canadian farmer; hence through the eastern and northern sections of Ontario, throughout Quebec and elsewhere, comes an increasing demand for early and reliable seed corn, which south-western Ontario is peculiarly well adapted to supply. In combination with other grains, such as oats, barley, and the by-products of wheat, it is well-nigh indispensable to the feeder, and thus plays its part in sustaining soil fertility. A glance at the imports of Canada discloses at once the imperative need for corn for feeding purposes, and the possibilities of expansion. In addition to something over 900,000 bushels for distillation, we are actually importing from the United States some 10,000,000 bushels, valued at \$5,500,000 per year, while a far larger quantity than is now fed could be utilized with profit. The opportunities for the corn-grower are, therefore, almost limitless, and as Prof. L. S. Klink, of Macdonald College, so clearly indicated at the sessions of the Essex convention, the pathway of progress is along the line of improved seed, and better methods of culture and crop handling. What can be accomplished was very aptly illustrated in a paper by T. S. Bigger, of Walkerville, on the achievements of corn-growers' associations and corn clubs in the United States. Through such agencies the quality of the seed and the profits of the Wisconsin corn crop have been transformed from a yield of 20 bushels per acre in 1901 to 41½ bushels in 1907, and in the same period an addition of about 20 per cent to the value of the crop from practical

But this is the century of Canada, and the Canadian farmer's turn has come in the evolution of things. He is getting busy about corn along the Lake Erie counties, and the first exclusive corn conference and exhibition of this country held at Essex proves it.

The magnitude, earnestness and enthusiasm of the gathering was a revelation to the people. They had not dreamed of it. To think of spending four days talking and looking at corn seemed incredible. No such display of corns, yellow and white, dent and flint, was ever seen at once in Canada before, and this, too, without any special preparation last autumn, for the idea of holding the show did not take shape till the present winter, so growers had to select from the stocks on hand. The Ontario Colonization Department have requested the use of part of the prizewinning corns to send an exhibit to England. H. Walker & Sons, who contributed \$100 to the prize-list, desire a portion of the exhibits for a display. A proposal which met with great favor was to reserve a big exhibit for the Toronto and London exhibitions next fall, and the Ontario Provincial next winter.

For the next show, corn-growers will all be on the alert in the fields. In all there were no fewer than 295 entries, including 45 for the single-ear championship, and 37 in the judging competition, with over 2,000 ears shown by 113 exhibitors, though the prize-list was necessarily limited in the initial effort. But the attendance was the remarkable feature of the event. The forenoons were devoted mainly to a sort of judging school, conducted by Prof. Klink. The three or four long tables, extending down the hall of the big municipal building, were lined on each side with men, young and old, intently studying the types, maturity, vitality, color, shape and general characteristics of kernels and ears spread before them. From 150 to 200 were engaged in this work, while in the afternoons the auditorium was packed with from 400 to 500 persons, listening to and sharing in the practical discussions of the programme, lead by Prof. Klink and Prof. Zavitz, of the Ontario Agricultural College, who discussed rotations and clover, upon the great value of which he laid special emphasis as a means of improving the fertility and mechanical condition of the soil. Prof. Klink's intimate knowledge of

corn-growing and the corn plant, and his lucid and common-sense presentation of the subject, captured the audience. Again and again men were heard saying: "Well, I never dreamed there was so much to learn about corn."

The interest aroused in the cornfields next summer, coupled with the work of the Ontario Corn-growers' Association, inaugurated at the meeting, will, in ten years' time, at a reasonable estimate, add millions to the value of the corn crop. One could not wonder then that when J. A. Auld, ex-M.P.P., Dr. J. W. Brien, and other speakers, paid tribute to A. McKenney, B.S.A., the Essex County representative of the Ontario Department of Agriculture, to whom the credit of the convention is due, their remarks were received with enthusiastic applause. During the couple of years Mr. McKenney has been in the county he has acquainted himself thoroughly with its conditions, and has this season an enthusiastic agricultural class of 18 young men in the Essex High School, who shared in enjoying the benefits of the convention and exhibition. In studying the possibilities of agriculture in Essex and Kent, Mr. McKenney became seized of the conviction that the immediate key to the situation was progress in corn-growing, and the splendid rally and exhibition was the result of his courage, enthusiasm and hard work. When at the Thursday afternoon session he suggested the formation of an organization to crystallize the results of the gathering and perpetuate the work of improvement, the proposal instantly met with an approving reception, resulting in the election of officers and a directorate, representing the different municipalities. The annual membership fee was fixed at 50 cents, and a very large number availed themselves of the privilege before the convention closed. The objects of the association are to secure better methods of growing, selecting and caring for seed corn, improvement of varieties, holding an annual convention, giving instruction in judging, issuing certificates good for three years to expert judges, publication of information, and the organization of local clubs. The annual meeting will be held during the annual convention and exhibition. Membership is open to anyone interested in corn. Candidates for certificates must take the course of instruction at the annual convention. In later issues of "The Farmer's Advocate" a report will

be given of the salient points brought out in the addresses and discussions. To the Deputy-Minister of Agriculture for Ontario, C. C. James, who shared in the closing session, the magnificent success of the convention must have been a cheering revelation.

Enthusiastic votes of thanks were passed to Prof. Klinck and Mr. McKenney, for their efforts in promoting the success of the convention.

OFFICERS ELECTED.

President, J. O. Duke, Ruthven, Ont.; 1st Vice-President, Harrison Smith, Ruthven; 2nd Vice-President, Patrick Mareintette, Walkerville; Secretary, A. McKenney, B.S.A., Essex; Treasurer, Harry Coatsworth, Ruthven.

THE PRIZE-LIST.

Prof. L. S. Klinck made the awards as follows, 10 ears being shown in each class:

1. Best 10 ears Bailey, Butler and Howey—1, R. Rogers, Kingsville; 2, Geo. Arton, Olinda; 3, Jas. Martin, Amherstburg.
2. Leaming, Pride of the North, King of the West, Yellow Gourd Seed—1, A. L. Arner, Arner; 2, Jas. Martin; 3, P. J. Wigle, Kingsville.
3. Reed's Yellow Dent, Iowa Gold Mine—1, A. H. Woodbridge, Kingsville; 2, Wm. Woodbridge, Kingsville; 3, Prideau Wigle, Kingsville.
4. Any other distinct variety, Yellow or Red Dent, not mentioned in this list—1, J. H. Coatsworth, Ruthven; 2, P. J. Wigle, Kingsville; 3, S. Gunning, Ruthven.
5. White-cap Yellow Dent (large)—1, George Coeghill, Kingsville; 2, E. E. Wismer, Essex; 3, A. E. Wismer, Essex.
6. White-cap Yellow Dent (small)—1, A. E. Wismer; 2, E. E. Wismer; 3, P. Fox, Leamington.
7. White Gourd Seed, Silver Mine, any other distinct variety of White Dent—1, C. J. Neville,

- Ruthven; 2, J. O. Duke, Ruthven; 3, B. Cohoe, South Woodslee.
 8. Eight-rowed Flint, White, Yellow or Red—1, John Jones, Leamington; 2, M. G. Brunner, Olinda; 3, Walter Thompson, Dresden.
 9. Twelve-rowed Flint, Yellow or White—1, Ed. Smith, Ridgetown; 2, Wm. Copeland, Kingsville; 3, Harry Matthew, Kingsville.
 10. Best single ear of corn in the show, any dent variety—1, J. H. Coatsworth, Ruthven.
- Corn-judging competition, open to farmers and farmers' sons—1, Alvin Bunn, Ruthven; 2, Fred Ure, North Pelton; 3, J. H. Coatsworth, Ruthven.

Forthcoming Events.

Winnipeg Industrial Exhibition—July 10th to 17th, 1909.

Instructive Sessions at Poultry Institute.

The importance of a thorough knowledge of the poultry industry was made clear at the Poultry Institute, held at Ontario Agricultural College, Guelph, last week. The programme comprised scientific men and practical poultrymen. The talent was highly expert, and the long lists of questions asked at the various sessions brought answers that left no doubt as to a genuine knowledge of the subject.

All that was wanting to make this one of the most valuable meetings in the interests of poultry-raising was a large audience of those who could make larger profits than they are making, if they but had a wider knowledge of their business. Space does not permit of a complete report in this issue of "The Farmer's Advocate." Future issues will contain a more lengthy digest of addresses, and the accompanying discussions.

To those who are acquainted with expert exponents of poultry lore, the value of the sessions is made evident on mention of the names of those who took part. The list included Miss M. Yates, of the O. A. C., an adept at fitting birds for market, as well as trussing and packing; Dr. George Morse, one of the leading men in America on animal diseases, now connected with the Bureau of Animal Husbandry, Washington, D. C.; T. F. McGrew, a successful poultryman, of Scranton, Pa.; Prof. Chas. K. Graham, brother of the O. A. C. Professor, and in charge of the Poultry Department at Hampton Agricultural Institute, Hampton, Va.; Victor Fortier, of the Poultry Department at the Central Experimental Farm, Ottawa, Ont.; Geo. A. Putnam, Superintendent of Farmers' Institutes, Toronto, Ont.; and such practical men as Wm. McNeil and Richard Oke, of London, Ont., and Wilbur Bennett, of Peterboro. L. H. Baldwin, of Toronto, made an acceptable chairman, while Prof. W. R. Graham was always on hand to ask pertinent questions of interest to those engaged in raising poultry, or to enlighten those who wished to know of the results of investigations carried on at the O. A. C. The evening meetings were made exceedingly interesting by the free use of lantern slides, while, at the morning and afternoon sessions, specimens and demonstrations made the problems dealt with as clear as is within human reach.

However, despite the presence of scientists and experienced practical men and women, the problem of white diarrhea in chicks is still unsolved. All were forced to admit it was commonly found, and few doubted that the damage was done by coccidiosis germs, but no satisfactory explanation was offered as to the differences in loss of chickens from similar eggs when hatched under different conditions. Speaking from a scientific standpoint, Dr. Morse maintained that there was no possibility of artificial incubation giving a greater percentage of loss than was found in hen-hatched eggs, though practical poultrymen averred that such was the case.

Attention to poultry, with the object of high average egg production, at the expense of quality for table purposes, was pronounced by Miss Yates as one of the hindrances to greater profits from poultry-raising in Canada. Culls and uncommonly inferior birds composed the bulk of the marketed stock. It seemed to be forgotten that all birds did not make good eating. Just as there are dairy and beef breeds of cattle, so are there nervous and lean birds, and others of a plumper form, and more easily fattened. In Canada there was a growing market for such table delicacies, at high prices. In order to meet this demand, it was necessary to have a meat variety, and to study methods that gave profitable returns. In outlining how excellent birds could be raised for market at low cost, Miss Yates recommended free use of crumbs and waste from the table and kitchen. Too many farmers gave their flocks to the hogs. She advised inducing a neighborhood to take up a particular breed, and by subsidizing the kind the high-class trade demand, and being able to meet an order sent by telephone on short notice, to make the district profitable for the production of such birds. Co-

operation was as essential in raising chicks as in other branches of the farming industry.

Q.—How are these table breeds as layers?

A.—Some of the very best table fowls make a very poor showing in egg production. A flock averaging 125 or 140 is good, but many have to be satisfied with 100 eggs in a year, or less.

Demonstrations in killing, plucking, shaping, trussing and carving were given by Miss Yates. While the work was done in comparatively short time, the prevailing opinion was that, for the average individual, such methods would be inadvisable. When the Canadian demand for neatly-dressed poultry becomes keen, and prices are increased accordingly, no doubt poultrymen will rise to the occasion.

Q.—Do chickens, after being killed, improve with age, the same as a leg of lamb or a ham?

A.—Yes, probably for a week. I would not want to eat them too soon after being killed.

Mr. McGrew.—Our rule is to eat fowl within twenty-four hours after killing, or not for three days or more.

Diseases of poultry, with special reference to liver diseases and what is generally known as white diarrhea, were dealt with by Dr. Morse. It was pointed out that there were two ways of disposing of such subject: One, the diplomatic, which he was not capable of adopting; and the other, a square discussion from practical and scientific knowledge. He did not hesitate to charge poultrymen who worked on the theory that overfeeding and improper feeding were the cause of the increasing mortality from liver diseases in poultry as being obstructionists. Scientific men had located the germ that caused these diseases, and, as long as practical men refused to recognize the fact, so long would the diseases continue to increase. Any disease which affected the liver affected the whole body, because, in addition to producing bile, that organ manufactured enzymes, the purposes of which were the dissolution, transformation, precipitation and destruction of toxins brought by the blood largely from the intestines to the liver.

Q.—What are toxins?

A.—Chemical poisons that result from life-changes in organisms. They have the same effect as if poison were introduced into the system.

The importance of keeping the liver strong and the birds healthy, in order to combat disease germs, was discussed, and diseased livers of various natures displayed in alcohol. The coughing of diseases in poultry was deplored. No man could diagnose from data ordinarily supplied. It was necessary to make a microscopic examination of tissue and germs. Among the disease germs that might be found were tuberculosis, coccidiosis (white diarrhea), cercomonadosis, leukemia, sarcomatosis, carcinomatosis, aspergillosis, and the non-infectious disease, gout. All of these are necrotic liver ailments.

The condition of the poultry industry in Quebec was outlined by Mr. Fortier, who urged early hatching and special attention to selection, and who gave the results of experiments conducted at Ottawa.

By means of lantern slides, Mr. McGrew traced out the origin of our common fowls, claiming that, instead of all varieties springing from Galus Bankiva, as Darwin maintained, there were three races intermixed. The vast improvement of common breeds during recent years was shown.

Less expensive poultry houses than were commonly advised by poultry experts, and the absence of the dropping-boards, and daily cleaning of pens, was the trend of remarks by Prof. C. K. Graham. Many people erred in having too much cash locked up in buildings and equipment. He was not sure that winter egg production was the most profitable. "You have to hatch in March," said Prof. Graham, "to catch the best market. Then, why hatch an egg because you hope to make double profits in a few months, when you can sell immediately at double what it has cost to produce the egg." It was claimed that, on the average, it took four eggs to produce one chick.

Ideal pens of cheap construction, and on the fresh-air system, were shown on canvas, and instructions given as to the building of houses that would meet the requirements of the average farmer or a man on a small piece of land.

G. A. Putnam, Superintendent of Farmers' Institutes, Toronto, dealt with the development of poultry-raising on the farms throughout the Province. Until recently the Farmers' Institutes had not paid much attention to the discussion of poultry questions; in fact, prominent members of institutes had at times expressed a distinct aversion to the discussion of such trivial subjects. Recently, however, the poultry spirit has developed among the farmers. Many of them have become enthusiastic poultry-raisers, and now many institutes have special poultry meetings, at which expert poultrymen or women lecture on some phase or phases of the poultry industry. This has caused a rapid improvement of the farm poultry business, but still greater improvement may be looked forward to in the near future. Through the Women's Institutes already organized, and the local Farmers' Clubs, which are being organized in different parts of the Province, the best methods of housing, breeding, feeding, marketing, etc., are kept before the people. It is doubtful if poultry-raising as an exclusive business would be a success on most of the Ontario farms, but each farmer should receive a large profit from a flock of 100 or 150 hens treated as a side line. The work of caring for poultry is light, and can be performed by children who oftentimes have no other regular employment, and who will nearly always develop a love for the work if they are given sufficient interest in it. The profits from farm poultry may be greatly increased by co-operation in buying and selling stock and products.

A most encouraging address was delivered by Wilbur Bennett, of Peterboro, Ont. Mr. Bennett is but a young man, working on his father's farm, but he has achieved success with poultry. His conditions are similar to those on the average Ontario farm, and his success should be an inspiration to the farm boys of Ontario. After attending the short course in poultry at the O. A. C. three years ago, he decided to go more extensively into poultry-raising at home. When he returned home he took with him some pure-bred Buff Orpington eggs. He utilized his home stock and buildings, which were but ordinary, and raised some pure-bred stock of high quality. The next year he built some cheap new houses, installed some incubators and made some brooders, gradually increasing his stock as his means permitted, until last year he kept 350 birds, and made a profit of \$450. He spends about three hours a day caring for his poultry, and the rest of his time at general farm work. He aims to have his hatching all done by the first of May. He hatches a sufficient number of fowls to obtain enough pullets to replenish his stock. The cockerels are sold at Montreal as broilers and roasters. The latter he crate-fattens and sells in the late fall and early winter, receiving 10c. to 12c. per pound, live weight, f.o.b. Peterboro. He receives enough from the sale of all his cockerels to pay the cost of rearing his pullets. Eggs are shipped regularly to Montreal, this winter bringing as high as 50c. per dozen.

The poultry occupies only five acres of land, and is producing more than the other 95 acres of his father's farm, while most of his time is spent at farm work. This is an experience which should attract the attention of the average farm boy, and an example which is worth copying by boys in similar situations throughout the Province.

T. F. McGrew, from Scranton, Pa., gave some timely hints to poultrymen in an address entitled, "How to Succeed with Poultry." To succeed in any business a man must obtain as much education as possible along the line he intends to follow, and the poultry business is no exception. Perhaps the most valuable asset which can be possessed by a poultryman is a liberal amount of what is known as "common sense." A poultry-

man, above all others, must be in love with his business, and possess the happy faculty of making his birds fond of him. Push and industry are indispensable. He must be wide-awake, alert, and constant in his attention to detail. The poultry business is a round of details which must be performed 365 days in the year. A successful poultryman must be honest with himself. There are many opportunities for a dishonest poultryman to deceive customers in selling products, but it is a sure road to failure. The unfortunate thing about a dishonest man is the fact that he drags honest men down with him. Let a poulterer furnish first-class produce, and guarantee it to be exactly as he represents it, and he will always find a ready market at high prices for all he produces.

In hatching eggs, Mr. McGrew believes that better hatches will be obtained with incubators, where the eggs are turned only partially over each day, instead of turning completely, as is usually practiced. When choosing eggs to hatch, he advised selecting from hens at least two years old, and never from pullets. The eggs of pullets are never so fertile as the eggs from hens, and the chicks they produce are not, as a rule, as vigorous and thrifty.

In feeding, every man has his own method, and perhaps no one is any better than any other, but each individual must use his judgment and feed according to his conditions.

The kind of fowl, the price of various kinds of feed, and the object aimed at, namely, whether eggs or meat is to be produced, are factors to be taken into consideration. Poultry buildings may be of various designs, but the main essentials are: good ventilation, abundance of light, absence of moisture, and dry floors. Plenty of room should be allowed the birds, and they should not be kept too warm. Different materials may be used for the construction of the walls, but board walls have so far proven to be the most satisfactory. The floors may be constructed of earth, cement or boards, but great care must be taken to keep the floor absolutely dry. If cement is used, a liberal amount of litter must be furnished to prevent the hens wearing their toe nails down by scratching. The ideal floor is one made of cement and covered with boards, but it is rather expensive.

A great deal of discussion took place regarding the errors of the poultry standard, and a meeting was held at which resolutions were drafted, embodying the changes desired in the standard, and which are to be forwarded to the revision committee.

Forestry Problems Discussed.

That at least a few Canadian citizens are anxious regarding the future of Canada, particularly as to her forest areas, was clearly demonstrated at the Convention of the Canadian Forestry Association, in Convocation Hall, University of Toronto, last week. Special attention was given to the farmer's wood-lot, on the one hand, and to the extensive timber limits, on the other. On the former, it was made clear that education along the lines of preservation and reforestation was necessary. For the larger areas, it was a case of fire protection and judicious cutting. Sales of timber limits, or even ten or twenty year leases, were condemned. It was pointed out that the usual lack of popular interest in a problem that does not concern the present was the main cause of forest neglect.

Among the speakers who presented valuable papers were Dr. B. E. Fernow, Dean of the Faculty of Forestry, University of Toronto; Aubrey White, Deputy Minister of Lands and Forests for Ontario; F. C. Whitman, President of the Western Nova Scotia Lumbermen's Association; R. B. Miller, M. A., M. F., Department of Forestry, University of New Brunswick; Abraham Knechtel, Inspector Dominion Forest Reserves; E. J. Zavitz, B. S. A., Forester, Ontario Agricultural College, Guelph; J. B. Miller, Vice-President Canadian Lumbermen's Association; Carl Riordan, representing the Canadian Manufacturers' Association; Elwood Wilson, A. T. Drummond, and others. President Snowball, of Chatham, N. B., occupied the chair. Others who took prominent part in the discussions included, Jas. M. Macoun, formerly Assistant Naturalist, of the Geological Survey of Canada; R. H. Campbell, Dominion Superintendent of Forestry; A. Bergevin, of the Quebec Fish and Game Protective Association; Thos. Southworth, of Toronto; Hon. W. C. H. Grimmer, Surveyor-General of New Brunswick; and Senator Edwards, of Rockland, Ont. His Excellency Earl Grey, and Hon. Sydney Fisher, Dominion Minister of Agriculture, expressed their interest in forestry problems, while Hon. Frank Cochrane, Ontario Minister of Lands, Forests and Mines, requested suggestions as to changes in legislation pertaining to the preservation of forest areas, and promised to act according to sound advice from such a reliable source.

That is not all, when the average Canadian citizen reads the papers and discussions. Dr. Fernow, Mr. White, and Mr. Campbell, called attention to the importance of the wooded areas.

now too scarce in the older parts of the Province, and urged the planting of waste and uncultivable tracts. Mr. Zavitz, in considering reforestation as a financial investment, with white pine as a basis, and taking into account rate of interest, cost of land, cost of planting material, cost of management and protection, and taxation, showed that, in 60 years, the net profit per acre would amount to \$439.66, or a sum equal to \$2.25 per acre per year. Reforestation was urged, then, because it was a satisfactory financial investment, and, in addition, assured a wood supply, protected headwaters of streams, provided breeding-ground for game, supplied object lessons in forestry, and prevented citizens from developing under conditions that could end only in failure.

by developing their own resources, and having high protective duties to keep the manufacturers in their country. If Canada wishes to become great, she must do the same. The Canadian Government seem to be afraid to place high duties on goods coming or going to the Republic, lest the latter might think the act unfriendly. On the other hand, the American Government places whatever duties it deems advisable, without regard for friendship. We Canadians seem to be slow to act in matters of this kind.

In conclusion, I would say that all countries would be benefited by free trade, but Canada would not be benefited if there was merely free trade between herself and the United States.

Ontario Co., Ont. R. H. MALYON.

Successful Incubator Experience.

Editor "The Farmer's Advocate":

Being much interested in the poultry section of our paper, "The Farmer's Advocate," and being in a country new to us, but having come from a land and neighborhood where poultry was the mainstay of the district, we thought we would try our hand in Canada, so bought an incubator and brooder from a firm that advertises in "The Farmer's Advocate." We bought eggs enough to fill it, 120, from a near-by farmer, and the result of the first hatch was 76 chicks, and they were strong, and grew, and have done well. We had used other makes of incubators before, but not the make we bought; and when the chickens were 12 weeks and 4 days old we killed two average-sized ones, and they weighed seven pounds all but three ounces, which we thought was good work. We set the machine five times, and raised 296, after losing from 20 to 30 very small and 3 large ones by a skunk or rat. The first lot of eggs was set March 31st, 1908, and all the pullets were retained. Several began to lay early in November, but as some 50 were sold, I cannot give an account of how many eggs were laid. The youngest hatches laid also equally early, according to their age, as the first hatches, for six dozen in December were sold at 33 cents per doz., and they are still laying.

Their feed has been only oats and barley, whole, from a farmer's grain bin, but they have had plenty of sharp flint and grit, and this day are in good condition and laying, and they have never been near a hen, and some in June were raised without a brooder. On December 6th, 15 that were crate-fattened weighed over 90 pounds dressed. Two of the best were heavier than 16 pounds, or 8 pounds apiece, and were sold by auction. Ten realized to me, after all charges were deducted, \$9.85; they were Barred Rocks and mixed-bred, and up to Christmas had eaten, all the lot combined, 31 cwt. of food—some chopped, some whole—oats and barley, and bread-crumbs and oatmeal when quite young. The land was perfectly fresh, as I am told no poultry had run on it for at least 15 years. We never had young chickens do better or grow faster and pay better than these have. Poulterer.

Wentworth Co., Ont.

Ontario Vegetable-growers.

In addition to electing officers and taking on a new name, the Ontario Vegetable-growers' Association, in annual convention at Toronto last week, suggested amendments to the Fertilizer Act. A creditable banquet, tendered by the Toronto Branch of the Association, at which enthusiastic addresses were a feature, formed a popular winding-up of the convention.

The Fertilizer Bill was condemned as being unworkable, as it was impossible to give satisfaction in keeping them up to the standard, by taking samples yearly and analyzing them. Some claimed that manufacturers should be prosecuted when their goods fell below the standard. A deputation will wait on Hon. Sydney Fisher in regard to having the matter remedied.

A resolution endorsed proposals for more protection for small fruit and vegetables. A notice of motion was introduced, by which the name of the Association will be changed to "The Ontario Vegetable and Small Fruit Growers' Association."

Officers were elected as follows: President—T. Delworth, Weston; First Vice-President, G. F. Fuller, London; Second Vice-President, W. W. Parsons, Sarnia; Secretary-Treasurer, J. Lockie Wilson, of Toronto. Executive—R. H. Ellis, Hamilton; E. E. Reeves, Humber Bay; the President, and the Secretary.

Address Lacking.

If the person signing himself "A Subscriber," who writes from Wellington County, Ont., asking a legal question will send his name and address, his inquiry will receive attention, providing his name proves to be on our list. Inquiries will not be answered through "The Farmer's Advocate" unless asked by a subscriber in good standing, who sends full name and address. The name is not necessarily for publication; we prefer answering to initials, but a nom de plume may be appended, instead, if the inquirer so requests.

Quality Counts.

A paper which people read, study and preserve, which commands the confidence of its subscribers, and which draws a large, bona-fide, paid circulation from a well-to-do and progressive class of farmers, who take it, not because it is cheap, but because they esteem it most highly, is the paper which makes the best advertising medium. As instancing the estimation in which "The Farmer's Advocate" is held by Canadian advertisers, we insert the following letter, recently received from a prominent advertising agency:

My Dear Mr. Weld:

I have much pleasure in handing you herewith schedule and order for 54 full-page advertisements for the London "Farmer's Advocate," and 39 full-page advertisements for the Winnipeg "Farmer's Advocate," which we purpose using on behalf of such well-known firms as:

The Manson Campbell Co., Limited.
The Cockshutt Plow Co., Limited.
The Northern Electric & Mfg. Co., Ltd.
The Pedlar Metal Roofing Co.
The Lee Manufacturing Co., Ltd., etc.

This is the best evidence as to our opinion of your paper, which opinion is based on the experience of our clients.

Wishing you all success, I remain,

Yours very truly,

J. J. GIBBONS.

Higher Protection for Canada.

Editor "The Farmer's Advocate":

In looking over the columns of your valuable paper, I have seen much about the advisability of free trade, or of higher protection, for the welfare of Canada. This is a very important question, because it bears directly on the advancement of our country. I think that there should be free trade among all countries. Why should nations not exchange their goods, without charging a duty? Free trade will never be successful until all nations agree to exchange their goods, without a duty being charged.

When Canada tried free trade with the United States, she simply made herself a dumping-ground for her neighbor. She soon found out that the United States would pour in her manufactured goods, and our manufacturers were not able to compete with the Americans. If we would notice the effects of having duties on goods coming to Canada, and going out, we would soon be convinced that protection to home resources is a necessity. There are many examples of this. Let us see what happened when Ontario put an embargo on sawlogs cut on Crown Lands. Within a year's time, sawmills run by Americans were buzzing in all our northern woods. In this way Canada's wood product came to be manufactured within her boundaries. Thus, her wealth was increased.

Let us consider another case, namely, the duty Canada has placed on manufactured articles coming into the country. If there were no duty on agricultural implements, there would be no big International Harvester Company at Hamilton, manufacturing implements in our own country. On the other hand, the company would have been manufacturing them at Chicago yet. The two foregoing examples are only two of the few that could be mentioned to illustrate how duty is bringing Canada wealth and prosperity.

One of the writers, in the issue of December 17th, said that "A protective duty on imports artificially increases the price." The price is only raised until the manufacturers come across the line to manufacture their goods in this country, thus increasing our industries, and consequently our wealth. The excess amount we have to pay for our goods is counterbalanced by the extra prosperity of the country.

The United States have made themselves great

JOINT SAVINGS ACCOUNTS
AT THE
Bank of Toronto

are proving to be a very great convenience to many of our friends. With these accounts—

Either of two persons of the household may deposit or withdraw money.

Interest is paid on all balances twice a year.

In the event of the death of either party the survivor may withdraw the money.

CAPITAL	\$4,000,000
RESERVE	4,500,000

HEAD OFFICE: TORONTO, CANADA.

MARKETS.

Toronto.

LIVE STOCK.

At West Toronto, on Monday, February 15th, receipts were 51 cars, consisting of 1,107 cattle, 41 hogs, 113 sheep, 10 calves, 90 horses. Exporters easy, space being scarce. Steers, \$5 to \$5.40; bulls, \$4 to \$4.40. Butchers' firm; picked lots, \$5 to \$5.15; good loads, \$4.50 to \$4.90; medium, \$4 to \$4.40; common light cattle, \$3.50 to \$4; cows, \$3 to \$4.25; milkers, \$35 to \$60; calves, \$3 to \$6.50 per cwt. Sheep, \$4 to \$4.50; lambs, \$5.50 to \$6.60 per cwt. Hogs, lower; \$6.60, fed and watered; \$6.40 to drovers at country, f. o. b. cars.

REVIEW OF LAST WEEK'S MARKET.

Receipts of live stock at the City, as well as at the Union Yards, for last week, were not nearly as large as for some weeks past.

The total receipts of live stock were 248 carloads, consisting of 3,585 cattle, 5,284 hogs, 1,670 sheep, 299 calves, and 112 horses.

Trade in fat cattle opened up dull at the Union Yards, but closed brisk, with prices stronger at the City market at the close of the week.

Exporters.—Owing to shortage of ocean steamship space, and prices being lower at the British markets, trade in export cattle was not nearly as good, with prices 15c. to 20c. per cwt. lower. In fact, there were few exporters wanted, and few on sale. Many of the 1,200 to 1,250 lb. cattle, which lately have been taken for export, were bought by the local abattoirs for butcher purposes. Export steers sold at \$5.25 to \$5.50, with one load of selected steers at \$5.60, bought to send to Bermuda. Bulls, \$4 to \$4.50 per cwt.

Butchers.—Prime picked lots sold at \$4.80 to \$5.15; loads of good, \$4.50 to \$4.75; medium, \$4 to \$4.40; common, \$3.75 to \$4; cows, \$3 to \$4.25; canners and inferior cows, \$1.50 to \$2.60; light butcher bulls, \$3 to \$4.

Stockers and Feeders.—Receipts light, with a good demand for those of good quality. Best feeders, 900 to 1,000 lbs. each, at \$3.70 to \$4.15; heavy steers, 1,150 to 1,250 lbs., for distillery or short-keep purposes, \$4.75 to \$5.25 was paid for a limited number; best stockers, 700 to 800 lbs., \$3.30 to \$3.70; medium stockers, 600 to 800 lbs., \$3 to \$3.50.

Milkers and Springers.—The main feature of the live-stock markets last week was the extraordinary demand from the Eastern cities for choice milkers and springers. Good to choice milkers and springers sold from \$55 to \$74 each, one extra quality cow at latter price, but there were several at \$70 and over; medium cows sold from \$40 to \$55; common, \$30 to \$37.50 each. There were two buyers each, from Quebec, Montreal and Ottawa, on Tuesday, Wednesday and Thursday.

Veal Calves.—A fair supply of veal calves sold at steady prices, from \$3 to \$6.75 per cwt., with a very few of choice quality at \$7 per cwt.

Sheep and Lambs.—Light receipts of sheep and lambs met a stronger market at the latter end of the week. Export ewes, \$4 to \$4.50 per cwt.; rams, \$3 to \$3.50 per cwt.; lambs, \$5.50 to \$6.40 per cwt.

Hogs.—Packers, seemingly, were determined that hog prices had to be lowered last week, and, on the whole, prices were a little easier, although there were all kinds of prices quoted from various parts of Ontario. Selects sold at \$6.75 to \$6.80 per cwt., fed and watered at the market, and \$6.60 to \$6.65, f. o. b. cars at country points. Drovers report a scarcity of hogs in many parts of Ontario. So great has the competition in the country been, amongst the drovers, that many of them exceeded the price limit given them by the packers, the result being that several of the drovers had their hogs left on their hands, and were offering them at prices paid the farmers, losing freight and expenses.

Horses.—There was a fair trade in horses at the Union Horse Exchange last week. Manager Smith reported sales of one carload to go to Brantford, two carloads to Manitoba, and one to Peterboro. Besides the above, Mr. Smith received several orders for horses to go to other points in the Dominion, amongst which was one for 100 horses for the Northwest, and another for 80, to go to Nova Scotia. There is a good demand for horses at current prices, but farmers are holding for more money. Prices quoted are as follows: Drafters, \$160 to \$190; general-purpose, \$140 to \$190; wagon horses, or expressors, \$160 to \$210; drivers, \$100 to \$160; serviceably sound, \$40 to \$90.

BREADSTUFFS.

Grain.—Prices for wheat and oats are firmer. Wheat—No. 2 white, \$1.02 outside, bid; No. 2 red, \$1.02 to \$1.02½; No. 2 mixed, \$1.02 to \$1.02½, outside. Manitoba—No. 1 northern, \$1.12½; No. 2 northern, \$1.09, at Georgian Bay ports. Rye—No. 2, 71c. sellers, outside, Peas—No. 2, 87c. outside bid; 90c. outside sellers. Oats—No. 2 white, 44c. bid, outside; No. 2 mixed, 42c., outside. Barley—No. 2, 58½c., outside sellers; No. 3X, 57c., sellers; No. 3, sellers outside, 51c. Corn—No. 3 yellow, American, 70½c. to 71c.; Canadian, 65c. to 66c., Toronto freights. Buckwheat—No. 2, 59c. to 60c., outside. Flour—Ontario 90 per cent. patents, \$3.75 to \$3.80, buyers' sacks, outside; Manitoba patent, special brands, \$5.50; second patents, \$5; strong bakers', \$4.80. Bran—Scarce, \$22, in bags, track, Toronto. Shorts—Scarce, \$23.50 to \$24, in bags, track, Toronto.

COUNTRY PRODUCE.

Butter.—Receipts larger than for some time, especially of the inferior quality. Prices are lower for all grades, even the best creamery is coming down in price. Quotations were as follows: Creamery pound rolls, 26c. to 27c.; creamery solids, 25c. to 26c.; separator dairy, 24c. to 25c.; store lots, 21c. to 22c.

Eggs.—New-laid, in case lots, 29c. to 30c.; cold storage, 26c. to 27c.

Cheese.—Market steady; large, 13½c.; twins, 14c.

Honey.—Market steady. Extracted, 10½c. to 11c.; combs, \$2.25 to \$2.75 per dozen sections.

Potatoes.—Car lots of Ontarios, on track, Toronto, steady, at 60c. to 65c.

Beans.—Market a little firmer; primes, \$1.80 to \$1.85; hand-picked, \$1.90 to \$1.95.

Hay.—Baled, on track at Toronto, at \$10.50 to \$11.

Straw.—Baled, in car lots, on track at Toronto, \$6.50 to \$7.50.

Poultry.—Receipts light; prices firmer, as follows: Turkeys, 22c. to 24c.; geese, 15c.; chickens, 14c. to 15c.; fowl, 11c. to 12c.

HIDES AND WOOL.

E. T. Carter & Co., wholesale dealers in wool, hides, etc., quote prices as follows: Hides—No. 1 inspected steers, 60 lbs. up, 11c.; No. 2 inspected steers, 60 lbs. up, 10c.; No. 1 inspected cows, 10½c.; No. 2 inspected cows, 9½c.; No. 3 inspected cows and bulls, 8½c.; country hides, 8½c. to 9c.; calf skins, 12c. to 14c.; horse hides, No. 1, \$2.75; horse hair, per lb., 30c. to 32c.; tallow, per lb., 5½c. to 6½c.; sheep skins, each, \$1. Raw furs, prices on application.

SEED MARKET.

The seed market is exceedingly quiet, little or nothing doing. Prices are un-

changed, as follows: Alsike, fancy, \$7.25 to \$7.60; No. 1, \$6.90 to \$7.20; No. 2, \$6 to \$6.50; red clover, \$4.50 to \$5.75; timothy, \$1.30 to \$2.

MARKET NOTE.

Four "Dorset" spring lambs that dressed 40 lbs. each, sold at \$14 each, at the St. Lawrence market on Wednesday last week. A farmer named Campbell, of Norval, raised them. They were beauties, and were, no doubt, hothouse lambs.

Montreal.

Live Stock.—Local markets were firm. Prices were 5½c. to 5¼c. per lb. for choice steers, 4¼c. to 5c. for fine, 4¼c. to 4¼c. for good, 3¼c. to 4c. for medium, 2¼c. to 3c. for common, and about 2c. for inferior. Sheep and lambs were in good request; supplies limited; prices firm. Choicest lambs sold at 6c. to 6¼c. per lb.; good, 5¼c. to 5¼c., while best sheep sold at 3¼c. to 4c., and culls 3¼c. to 3¼c. per lb. There was a good demand for calves, with prices firm, at \$3 to \$12 each. Receipts of hogs were light, and, as prices were high, demand was not quite so keen. Quotations: 7½c. to 7½c. per lb. for selects, weighed off cars.

Horses.—Heavy draft, 1,500 to 1,700 lbs., \$225 to \$300 each; light draft, 1,400 to 1,500 lbs., \$185 to \$240 each; good blocks, 1,300 to 1,400 lbs., \$175 to \$200 each; small or inferior, 1,000 to 1,100 lbs., \$100 to \$150 each; broken-down animals, \$50 to \$75 each, and choice saddle or carriage animals, \$300 to \$500 each.

Dressed Hogs.—10c. to 10¼c. per lb. for fresh-killed, abattoir-dressed stock, 9½c. to 9½c. per lb. for Manitoba-dressed, and 8½c. to 9½c. for country-dressed. Cured meats of all kinds were selling well. Hams, over 18 lbs., smoked, 13c. per lb.; under 18 lbs., 13½c. per lb. Green bacon, 11c. to 12c. per lb., covering all weights, the higher price being for boneless. Smoked bacon, select boneless, 15c.; best backs, 16c.; thick boneless, 14½c., and some inferior grades ranging down to 10¼c. per lb. Compound lard, 9c. to 9½c. per lb., pure, 9c. to 9½c. per lb. Barrelled pork, \$21 to \$25.50 per bbl., and in fair demand.

Poultry.—19c. to 20c. per lb. for finest fresh-killed turkeys, and 17c. to 19c. for frozen. Choicest fresh-killed chickens, 14c. to 15c. per lb., and frozen 12c. to 14c., that being also the range for ducks. Fowl and geese, 10c. to 11c. per lb.

Potatoes.—Market firm. Quebec white stock, 75c. per 90 lbs., carloads, on track; Green Mountains, 80 to 82½c. Add about 5c. for smaller lots.

Eggs.—There appeared to be an easier tone in the market for eggs last week, the reason for which was not very evident. In the United States, prices are said to be high, being 40c. for fresh-laid stock, while here it was possible to make purchases at 35c. In fact, some were quoted at 2c. less. This is for single cases. Of course, the receipts are mixed, No. 1 limed or cold-store stock was available at 26c., and selects at 28c. to 29c. Prices stiffened on Monday.

Butter.—The market for butter continued weak for this time of year. The cause is said to be a discovery that holders of dairy butter throughout the country had possession of greater stocks than was generally supposed, and that as soon as they began to market them, the market became affected all round. Merchants were able to get all the dairy rolls they wanted in the West at 20c. per lb., and were selling them here at 21c. to 22c., while for tubs they were getting 20c. to 22c., Manitoba dairies being quoted at 20c. per lb. Prices: 23c. to 24c. per lb., while fall-made goods held around 26c. or 27c. per lb., the inferior goods being fractionally less.

Cheese.—Export demand is slightly better, but prices held steady, at 12½c. to 12½c. per lb. for Quebecs and Townships, and 12½c. to 12½c. for Ontario white, and 12½c. to 12½c. for colored.

Grain.—Market for oats was much stronger. Prices: 48½c. to 49c. per bushel, carloads, store, for No. 2 Canadian Western; 48c. to 48½c. for No. 1 extra feed; 47½c. to 48c. for No. 1 feed; 47½c. for No. 2 Ontario; 46½c. for No. 3, and 45½c. for No. 4. No. 2 barley being 63½c. to 65c., Manitoba feed barley, 55c. to 55½c., and No. 2 peas, 94c. to 95c.

Flour.—Manitoba grades, \$5.60 per bbl., in bags, for first patents, and \$5.10 for

seconds. Ontario flours were higher, at \$5.20 to \$5.45 for patents, and \$4.80 to \$4.90 for straight rollers.

Millfeed.—Market for bran was exceedingly strong. Some quotations were given out at \$21 per ton, in bags, for Manitobas, others being \$22. As a matter of fact, straight bran could not be had at any figure, apparently, and buyers, to get advantage of \$22, must take at current prices, twice as much flour as bran. That is, a car would have two-thirds flour and one-third bran. Shorts were \$24 to \$25, oil cake \$32, and cottonseed \$33, prices being uncertain.

Hides.—Prices were down everywhere, partly on account of quality. Quotations: 9c., 10c. and 11c., for Nos. 3, 2 and 1, per lb., whether city or country take-off. Calves were up to 12c. for No. 2, 14c. for No. 1, lamb skins being up to 90c. each. Horse hides, \$1.50 and \$2; tallow, 1½c. to 3¼c. for rough, and 5½c. to 6c. for rendered.

Chicago.

Cattle.—Steers, \$4.60 to \$7.15; cows, \$3 to \$5.50; heifers, \$3 to \$5; bulls, \$3.40 to \$3.90; calves, \$3.50 to \$3; stockers and feeders, \$3 to \$5.40.

Hogs.—Choice heavy shipping, \$6 to \$6.75; butchers', \$6.60 to \$6.70; light mixed, \$6.40 to \$6.55; choice light, \$6.55 to \$6.60; packing, \$6.50 to \$6.65; pigs, \$5.25 to \$6.40; bulk of sales at \$6.45 to \$6.65.

Sheep and Lambs.—Sheep, \$4.25 to \$5.50; lambs, \$6.25 to \$7.75; yearlings, \$5 to \$7.

Buffalo.

Cattle.—Prime steers, \$6.25 to \$6.50. Veals—\$7 to \$10.

Hogs.—Yorkers, \$6.75 to \$7; pigs, \$6.60 to \$6.75; dairies, \$6.60 to \$6.90.

Sheep and Lambs.—Lambs, \$5 to \$8.10, a few \$8.15; wethers, \$5 to \$6.

British Cattle Market.

London cables cattle 12½c. to 13½c. per lb., dressed weight; refrigerator beef, 9½c. to 10½c. per lb.

TRADE TOPIC.

LIKES METAL ROOFING.—A contractor from the States, on his first visit to Canada recently, said that he could not help noting the extensive use of metal roofing on Canadian residences and barns. He said that he did not see why it should not be in even more general use, and predicted that a few years would see metal shingles adopted very largely in his own country. "The advantages of metal shingles," he said, "are, that when galvanized so as to meet British Government specifications, rust cannot attack it in a lifetime. Such a shingle, looking on all four sides, and so constructed that nails are protected from weather, is practically indestructible. We Americans like to think that Franklin discovered in the lightning-rod a protection against lightning for all buildings. That honor really belongs to the metal roofing, however, because the lightning-rod does not always protect, while in my experience I have never known a building completely covered with metal roofing to be destroyed by lightning." It is interesting to note that the "Safe Lock" metal shingle, manufactured by the Metal Shingle & Siding Co., of Preston, Ontario, completely fills the requirements of a perfect roofing as outlined above. The manufacturers say that it is the only thing that locks with a positive grip on all four sides, protects the nails from weather, and meets with British Government specifications for Admiralty and other public work. As for protection against lightning, the company gives a free lightning-insurance policy, protecting every building covered with Safe Lock shingles. As spring, with its heavy storms, will soon be here, this protection cannot fail to attract the attention of all builders. Further facts can be gleaned from a booklet, "The Truth About Roofing," which will be sent free to all who write the Metal Shingle & Siding Co., Queen Street Factory, Preston, Ontario.

Three registered Clydesdale stallions, rising four years, and one registered mare, in foal to imported sire, are advertised in this paper for sale, by R. T. Brownlee, Hemmingford, Que.



Life, Literature and Education.

Those who are unaware of the danger of promiscuous spitting may possibly be awakened to it when they learn of the strenuous crusade against it which has been begun in New York. During the first day, 150 men, caught spitting on the platforms of the subway and elevated railways in that city, were arrested, a very pointed way of apprising a few careless people of the fact that this filthy and disgusting habit is a menace to the health of the public.

Mr. Henry Farman, perhaps the most noted aviator, next to the Wrights, says: "By reason of its development as a sport, the aeroplane is bound to have a very serious influence on the automobile. Certainly, long-distance touring, with costly, high-powered cars will fall off in popularity at a very early date." And now the farmer is beginning to wonder which his horses will "scare" most at, the automobile or the aeroplane.

Whatever be the reason, the harm wrought by lightning is perceptibly increasing. Even in the winter time safety against its destructiveness is not assured. On the 24th of January last a barn was struck and burned in Southern Ontario, and several cattle were killed—an occurrence not altogether phenomenal in Canada at this season; while in March of every year a fire record from the same cause is to be looked for as regularly as during the summer months, the barn losses at this time usually being severe, since the stock is sure to be stabled. Well-put-on lightning-rods have been proven a safeguard, and the farmer who neglects having them placed on his buildings must be prepared to run the risk of his neglect. Homemade ones are as good as any, and much cheaper. Instructions have often been given in "The Farmer's Advocate." See last year's files.

That the question of woman's suffrage has passed beyond the stage of being regarded as a mere joke in Great Britain, notwithstanding the derision with which the tactics of the Suffragette division of Suffragists have been received, is evident from the fact that the British statesman, Lord Cromer, who for twenty-four consecutive years filled the position of administrative adviser to the Khedive, is about to take an active personal part against it, having accepted the Presidency of the newly-formed Men's League for Opposing Women's Suffrage. He believes that politics is not the proper sphere for woman, and that her influence, if exercised in that direction, would not be for the good of the Empire. Among other prominent men who are also interested in the League, is the Poet Laureate, Alfred Austin.

A writer in Everybody's makes the

statement that, "In the United States, the number of women at work in gainful occupations outside their homes is increasing. The United States," he continues, in fine satire, "has been a primitive, undeveloped country. It is still far behind the more completely-finished countries of the world (such as England) in the relative number of its women compelled, or permitted, by the growth of urban, manufacturing, commercial life, to pass from their old work in the homes to their new work outside their homes." The observation does not apply exclusively to the unmarried women who can be spared to such outside work, but also to the married women who, in all too many instances, go out to "gainful labor," leaving the home to get on somehow, anyhow, so long as the dollars to meet a constantly-increasing expense of living come into the household coffers.

Canada has never taken kindly to this practice, although there are whispers that in some of the canning districts a housewife here or there is being lured away of late, even from the farming districts, to "the factory," for more or less of her time; nor is it to be hoped that the fashion may appreciably spread. A housewife's place is ostensibly in her home, where there are usually duties in plenty to claim her full attention. Where abject poverty has to be faced, there may be a good excuse for her going out to work; but when the going out is done for the mere purpose of putting on a little more "style" in house or clothing, there is none whatever. Better far to simplify, to dispense with the fine garments and furniture than that the home itself shall be sacrificed.

There is an old-fashioned idea in Canada that the married woman with an able-bodied husband, who goes to "gainful occupations" outside of her home, belittles herself, and, still more, her husband. This is a good, wholesome idea, both as regards the home and the needy unmarried woman whom the married worker thus possibly supplants. May it be long in dying out among us.

The three terrible tragedies, due to the frenzy of epileptics and people of unsound mind, which have been investigated during the past month in Ontario, should be sufficient warning as to the utter foolishness of trusting people who are mentally unstable. Symptoms of insanity always indicate disease, a peculiar species of disease, which the asylum physician has made a subject of special study, and which it is his business to cure, if cure is possible. As a consequence, a short residence under the care of such a physician is often sufficient to restore the patient thus afflicted to his normal mind, so that he can again go about his business as before. It is a great pity that unreasonable prejudice against the insane asylum should exist in the minds of so many people. The insane man is only a sick man—a very, very sick man. There is no disgrace in sending him to an asylum for treatment, but there is infinite danger in expecting him to be at large. His actions are not to be counted upon.

Accommodation in Local-option Towns.

Editor "The Farmer's Advocate":

I noticed your article, re "Local Option and Accommodation" in local-option towns. Now, you say the commercial travellers are doing most of the kicking, as they say accommodation, as a rule, is not as good as in licensed houses. You also suggest that the travellers have certain rights, and deserve a certain amount of consideration. Now, first let us look at the reason generally given by the anti-option people, as to why the accommodations are not as good. They say, for the most part, that the proprietor of any house cannot furnish a first-class table and beds at the price usually charged, and make the business pay, without the bar; or, in other words, the proceeds of the bar help to furnish a first-class table.

Now, here is where the rights and consideration of the traveller come in. If he is getting a meal worth, say, 35 cents, in a licensed house, and only paying a quarter for it, some poor drunkard, with a half-clad wife and barefooted children, is paying the other ten cents for him.

Now, were I in the traveling business, I would rather tramp bread into a bag to carry with me, and eat in some fence-corner, than have any poor homeless wretch help pay my way.

Now, let me suggest a remedy: Let the travellers who are complaining, when they strike a local-option town, pay the ordinary fare, plus the drunkard's share, and I am sure he will get as good accommodation as he ever got in any licensed house.

Meaford. WM. H. PRITCHARD.

[Those concerned about the above question will be interested to know that it will probably be dealt with in the early future in an Amendment to the Liquor License Act. By this Amendment, licenses, altogether apart from the present tavern license, and involving no privilege to sell or dispense intoxicants, will be granted to temperance houses. If adopted, a standard will be set for such places of accommodation, and the result will, no doubt, be the establishment of a series of first-class temperance houses throughout the Province.

People, Books and Doings.

Over 12,000,000 cubic yards of material were excavated on the Panama Canal last year.

The first gold coinage to be turned out of the Ottawa mint will be British sovereigns, from Larder Lake gold.

The pictures, "Sunset After Rain," by A. M. Fleming, and "Spring Morning," by W. E. Atkinson, which were much admired at the art exhibit of the Canadian National, have been presented to the City of Toronto by the Exhibition Board. It is hoped they may form the nucleus of a permanent civic art gallery.

The annual convention of the Dominion Alliance for the Suppression of the Liquor Trade will be held in the Elm St. Methodist Church, Toronto, on Wednesday and Thursday, March 23 and 24th.

Senator Woodcock is to be awarded the next Nobel Peace Prize.

Simplified phonetic spelling, upon the lines advocated by President Roosevelt, is to be introduced in the public schools of France by M. Doumergue, the Minister of Public Instruction.

Mrs. Jessie Clay, who died a few weeks back, at Ambleside, Devonshire, at the age of ninety-four, was a friend of Wordsworth, of Lord Tennyson, and of Hartley Coleridge, the son of the great poet and philosopher. Wordsworth wrote the following lines in her album on Jan. 1st, 1835:

Small service is true service while it lasts;

Of friends, however humble, scorn not one,

The daisy, by the shadow that it casts,

Protects the lingering dewdrop from the sun.

One of her most treasured possessions was a sketch showing her as a baby in the arms of Hartley Coleridge, and another was a drawing of a group on a vessel in the Mediterranean, which included Lord Tennyson, his friend Arthur Hallam, and herself.

Lincoln.

Once in a great while a miracle happens. It is one hundred years ago, the twelfth of February, and there is born in a miserable hovel in the wilds of Kentucky, of parents ignorant, illiterate, and coarse, a babe, within whose tiny form nestle the germs of a transcendent greatness. The babe grows, hurried from place to place, from hovel to hovel, each worse than the last, and finally starts out in life for himself, a youth gaunt and awkward, apparently notable only for his excessive homeliness. He splits rails, digs ditches, tends cattle, and finally becomes clerk in a country store. In the bottom of a discarded hogshead he finds a set of Blackstone. He has scarcely had a year's schooling, but he devours this new treasure, for in the Illinois wilderness he had taught himself to read. After that, ceaseless study out of working hours, and finally the year 1837 arrives, and he is admitted to the Bar. . . . Another turn, and the gaunt, awkward youth has become "the first American" President of the United States, and not only that, but a statesman, "holding his own with the statesmen of Europe, making and unmaking generals and admirals, carrying on his bosom the greatest war of history . . . affixing his signature to a document that gave liberty to four millions of the human race, saving an empire to itself and to the cause of liberty."

After that, martyrdom and canonization, in the hearts, at least, of the countless millions of posterity. Orator, statesman, a virtual king, yet Abraham Lincoln never lost the simplicity of manner, the tenderness of heart which made him once and always beloved. The problems for whose solution he strove and died have not all been settled. One of them, the race problem, still threatens, and no man can know the end thereof. But to-day, on this his centenary, who but will uncover his

head in recognition of the true greatness which has glorified his name.

A Mistake Corrected.

"One in Earnest" explains that Lowell's, not Churchill's, "Crisis" was meant in her letter on "Literature and Art," in our issue of February 4th.

She Has Outlived Her Usefulness.

In the course of a most interesting discussion which took place during the late annual meeting of the National Council of Women, held at Ottawa, in October last, upon the various phases of the philanthropic side of its work, as carried on through its local branches, the distressing statement was made, and confirmed by the experience of workers amongst the Institutions and Homes for the Aged and Friendless of our land, that a very large proportion of their inmates were made up of poor old folks, whose sons and daughters were in a position to take care of their parents, but who either deliberately refused to do so, or who evaded their duty by some transparent excuse.

As a result of this discussion, and in response to a special request for its publication, a member of the National Council has, in memory of her mother, amongst whose memoranda the following touching little incident has been found, presented a printed copy of the same to every Local Council from the Atlantic to the Pacific. The title of the little booklet is, "She Has Outlived Her Usefulness."

"Not long since," says the narrator, "a man in middle-life came to our door, asking for the minister. When informed that he was out of town, he seemed disappointed and anxious. On being questioned as to his business, he replied, 'I have lost my mother; and as this place used to be her home, and as my father lies here, we have come to lay her beside him.' My heart rose in sympathy, and I said, 'You have met with a great loss.'

"Well, yes," he replied, with hesitancy; "a mother is a great loss in general, but our mother had outlived her usefulness. She was in her second childhood, and her mind had grown weak as her body, so that she was no comfort to herself, and was a burden to everybody. There were seven of us, sons and daughters, and we agreed to keep her among us a year about. But I have had more than my share of her, for she was too feeble to be moved when my time was out, and that was three months before her death. But then, she was a good mother in her day, and toiled very hard to bring us up."

"Without looking at the face of the heartless man, I directed him to the house of a neighboring pastor, and returned to my nursery."

"I gazed on the merry little faces which smiled or grew sad in imitation of mine—those little ones to whose ear no word in our language is half so sweet as 'Mother,' and I wondered if that day would ever come when they would say of me, 'She has outlived her usefulness. She is no comfort to herself, and a burden to everyone else.' And I hoped that before such a day should dawn I might be taken to my rest. God forbid that I should outlive the love of my children! Rather let me die while my heart is a part of theirs, that my grave may be watered with their tears, and my love linked with their hopes of heaven."

"When the bell tolled for the mother's funeral, I went to the sanctuary to pay my only token of respect to the aged stranger; for I felt that I could give her memory a tear, even though her own children had refused to shed."

"There was a good mother in her day, and toiled hard to bring us up—she was no comfort to herself, and a burden to everybody else!" These cruel, heartless words rung in my ears, and I saw the coffin borne up the

aisle. The bell tolled long and loud, until its iron tongue had chronicled the years of the toil-worn mother. One—two—three—four—five. Now, clearly and almost merrily each stoke told of her once peaceful slumber in her mother's bosom, and of her seat at nightfall on her weary father's knee. Six—seven—eight—nine—ten—rang out the tale of her sports upon the greensward, in the meadow and beside the brook. Eleven—twelve—thirteen—fourteen—spoke more gravely of schooldays, and little household joys and cares. Sixteen—seventeen—eighteen—sounded on the enraptured visions of maidenhood and the dream of early love. Nineteen—brought before us the happy bride. Twenty—spoke of the young mother, whose heart was full to bursting with the new, strong love which God had awakened in her bosom. And then, stroke after stroke told of her early womanhood—of the loves and cares, and hopes, and fears and toils through which she passed during those long years, till fifty rang out harsh and loud. From that day to sixty, each stroke told of the warm-hearted mother and grandmother, living over again her own joys and sorrows in those of her children and children's children.

"Every family of all the group wanted grandmother, then, and the only strife was who should secure the prize. But hark, the bell tolls on! Seventy—seventy-one—two—three—four. She begins to grow feeble, requires some care, is not always perfectly patient or satisfied; she goes from one child's house to another, so that no place seems like home. She murmurs in plaintive tones that, after all her toil and weariness, it is hard she cannot be allowed a home to die in; that she must be sent, rather than invited, from house to house. Eighty—eighty-one—two—three—four. Ah! she is a second child—now 'She has outlived her usefulness, she has now ceased to be a comfort to herself or anybody'; that is, she has ceased to be profitable to her earth-craving and money-grasping children."

"Now sounds out, reverberating through our lovely forest, and echoing back from our 'hills of the dead,'—eighty-nine! There she lies now in the coffin, cold and still; she makes no trouble now, demands no love, no soft words, no tender little offices. A look of patient endurance—we fancied, also, an expression of grief for unrequited love—sat on her marble features. Her children were there clad in weeds of woe, and in irony we remembered the strong man's words, 'She was a good mother in her day.'

"When the bell ceased tolling, the strange minister rose in the pulpit. His form was very erect, and his voice strong, but his hair was silvery white. He read several passages of Scripture expressive of God's compassion to feeble man, and especially of His tenderness when gray hairs are on him and his strength faileth. He then made some touching remarks on human frailty and of dependence on God, urging all present to make their peace with their Master while in health, that they might claim His promises when heart and flesh faileth them. 'Then,' he said, 'the eternal God shall be thy refuge, and beneath thee shall be the Everlasting Arms.' Leaning over the desk, and gazing on the coffin-form before him, he then said, reverently, 'From a little child, I have honored the aged; but never till gray hairs covered my own head did I know truly how much love and sympathy they have a right to demand of their fellow creatures.'

"Now I feel it. The mother who now lies in death before us," he added, most tenderly, "was a stranger to me, as are all of these her descendants. All I know of her is what her son has told me to-day—that she was brought to this town from afar sixty-nine years ago, a happy bride, that here she passed most of her life, toiling only as mothers have strength to toil, until she had reared a large family of sons and daughters; that she left her home here clad in the weeds of wid-

Diamond Dyes

SOLVE DRESSING PROBLEMS.

Every woman who has any pride wants to dress well, and dressing well is always a hard problem.

Look over the clothes that you are wearing, or those that you haven't worn for some time. You will be sure to find some waists, or a skirt, or a dress not worn out, just old looking, spotted, faded, or a little out of style.

"Making over" an old dress, and changing the color to a fresh, new shade, with the help of Diamond Dyes, gives all the variety of something new that could not look a bit prettier. A woman dislikes to wear "last year's things," and there's no need to. Diamond Dyes do magical things with last year's clothes. You can dye waists, skirts, dresses without ripping, or you can rip and choose a new color and make over. There are ribbons and laces and trimmings that can be made bright and new again with Diamond Dyes.



"I Thought Our Dresses Were Ruined."

"A very dear friend of mine was spending the day with me, and I awkwardly upset a big ink-stand, and spilled the ink on her skirt and mine. I could have cried, but she was so nice about it, and said, 'Don't worry, it isn't a new skirt anyway, and now I am going to dye it a navy blue with Diamond Dyes.' I said I would color mine too, so the next day we had a Diamond Dye party, and both colored our skirts. Mine I dyed black, and, really, after it was all over, we were both glad it all happened. The skirts, after they were pressed, looked so nice and so like new. I shall never forget how Diamond Dyes got us out of our trouble."

"ISABEL McDERMOTT, Buffalo, N. Y."

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Beware of imitations of Diamond Dyes. Imitators who make only one kind of dye claim that their imitations will color wool, silk or cotton ("all fabrics") equally well. This claim is false, because no dye that will give the finest results on wool, silk or other animal fibres can be used as successfully for dyeing cotton, linen or other vegetable fibres. For this reason we make two kinds of Diamond Dyes, namely: Diamond Dyes for Wool, and Diamond Dyes for Cotton.

Diamond Dyes for wool cannot be used for coloring cotton, linen or mixed goods, but are especially adapted for wool, silk, or other animal fibres, which take up the dye quickly.

Diamond Dyes for cotton are especially adapted for cotton, linen, or other vegetable fibres, which take up the dye slowly.

"Mixed Goods," also known as "Union Goods," are made chiefly of either cotton, linen, or other vegetable fibres. For this reason our Diamond Dyes for cotton are the best dyes made for these goods.

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A REMARKABLE GROWTH

If you have no local telephone service, write us and learn the way many others have built and now own and successfully operate their own telephone systems. There has been a remarkable growth in rural telephone companies during the past year, and the indications are that there will be a still larger increase during the present year. You cannot afford to be behind the times.

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owhood, to dwell amongst her children—till health and strength left her. God forbid that conscience should accuse any of you of ingratitude or murmuring on account of the care she has been to you of late. When you go back to your homes, be careful of your example before your own children; for the fruit of your own doing you will surely reap from them when you yourself totter on the brink of the grave. I entreat you, as a friend, as one who has himself entered the evening of life, that you may never say in the presence of your families or before heaven, 'Our mother has outlived her usefulness; she was a burden to us.' Never, never! a mother can never live as long as that! No; when she can no longer labor for her children, nor yet care for herself, she can fall like a precious weight upon their bosoms, and call forth, by her helplessness, all the noble, generous feelings of their hearts.

"Adieu, then, poor toil-worn mother; there are no more days of pain for thee. Undying vigor and everlasting usefulness are thine inheritance."

But for many brave, confirmatory facts laid before us at our National Council meeting, in Ottawa, and also from my own personal knowledge of an almost parallel case in one of the charitable institutions of the city in which I live, I should have hesitated to pass on the sad little incident related above to the readers of our "Home Magazine," believing and hoping that it must be of a very exceptional nature. I do so, however, trusting that, should it find its way into the hands of some now prosperous son or daughter, who has either carelessly or wilfully forgotten the loving ministry of the mother of their childhood's days, and has thought or said, "Our mother has outlived her usefulness," conscience may be awakened, and the lesson learnt that, "As we sow, so, also, shall we reap." H. A. B.

The Quiet Hour.

Acceptable Giving.

"I asked for alms!
He flung a coin at me
Contemptuously.
Not without sense of shame
I stooped and picked it up.
Does this fulfil
The Master's will
To give a cup
Of water in His Name?"

"I asked for bread!
He handed out to me
Indifferently
A ticket for some food.
It answered to my need.
Was this the way
On that great day
Christ stopped to feed
The hungry multitude?"

"When we shall wait,
After this mortal strife,
And to His presence go
As supplicants indeed,
Will it be thus
He will on us
In our great need
His priceless gift bestow?"

Many people seem to think that anything will do to give to God, and that no care is necessary in presenting their offerings. If they are preparing a Christmas gift for a friend, they are careful to choose something that will give pleasure, and to wrap it up in dainty fashion with a few words of love to enhance its value. Why should we be less thoughtful and courteous in presenting our gifts to our Father?

The Bible is full of warnings against the common idea that God will certainly accept everything that is professedly offered to Him. I say "professedly" because much of the money which professes to be a gift to God is really offered on the altar of self-love, or used to silence the accusing voice of an offended conscience.

"It matters little what I drop
Into the blessing plate;
'Tis God's acceptance that doth make
The smallest offering great."
And yet does it not sometimes happen

that the size of the coin dropped into the plate depends to some extent on the person sitting beside the giver? When a subscription list is carried round, many of the sums marked on it are very much larger than they would have been if only God—"ONLY GOD!"—knew the names of the donors! When you rummage your closets for things to put into a missionary box, or to give to a poor neighbor, don't you sometimes seek for things that you will be glad to get out of the way, rather than for suitable gifts which you really think will be acceptable to the recipient?

If only we always remembered that God is looking out hopefully for our gifts, we might lay at His feet some, at least, that are really consecrated. No one is too poor to give Him a gift that is pure gold. The poor widow who cast her last farthing into the treasury, thinking that only God would know about her great sacrifice, filled the heart of the King with wonderful gladness. That farthing was not copper, but pure gold, through and through. And I don't think it was so valuable because it was her last coin, but because it was the gift of love. The tiniest child can walk in her footsteps. No one is too poor or too rich to offer an acceptable gift to God. A millionaire has no advantage over the poorest laborer, as far as the value of his offerings in God's sight is concerned. We must get rid of the idea that God is poor enough to need our money, and that His work can't be accomplished without the help of man. He holds all the riches of the universe in His hand and can make men rich or poor according to His will. He does not need our gifts, but we need to give, and are urged to give gladly for our own sakes. God wants to make us rich, but loves us too well to let our souls' growth be stopped by earthly lists.

Let us be always on guard against that insidious foe—the love of money—which is like a deadly weed creeping quietly over the garden of the soul and, smothering the natural instincts of brotherly love before they have blossomed out into kindly actions. God's deep, wise love sometimes forces Him to deprive a man of the gold he has worked hard to win. Let the man himself be truly loved and loved in a way that will not hurt his sense of honor. Let him be a true man, and he will give of his own accord. It is not scientific, and it is not really kind to overwhelm a poor family with Christmas good cheer and leave it

A real "gift" can never be offered in the hope of a return. We must try to consecrate our offerings, not sell them for the applause of men, or even in the hope of winning a reward from God. Consecration is a difficult and glorious duty. The lower motives, which we hate, are continually trying to gain the dominion over our actions. How disappointed God must be when we lay a gift on His altar and He finds it impossible to accept it because it contains no love, because it is inspired only by a desire to win something for ourselves. And how pleased He is when even a cup of cold water is held out, clear and sparkling with purity of intention—a true gift of love. Every day we have the opportunity of thus gladdening the heart of our Father by little deeds of kindness and golden words of love. Let us form the habit of catching these opportunities on the wing.

But "giving," like other things, is a sacramental thing, having its outward and visible side, as well as the side which is known only to God and the giver himself. The inward and spiritual part of it is the first and vital consideration, but the outward part must not be left entirely to look after itself. This is a practical age, as we are often told, and "charity" is not now a baphazard thing, but is—or should be—scientific and up-to-date in its methods. In the November Number of "Charities and the Commons" there is an article on "Christmas Basket Giving," written by the manager of St. Louis Provident Association. He says that during the last three years about twenty-two thousand dollars has been raised and expended in that city for "Christmas giving." That sounds well, but he goes on to express his opinion that "this Christmas giving is more for the benefit and self-satisfaction of the donors than the recipients, for the Christmas spirit calls for a personal interest between giver and taker. The transient sensations felt by donor and donee are of little lasting benefit to either." He seems to think that many families who are usually self-respecting are degraded and pauperized by this indiscriminate giving, not to speak of the fact that many people who subscribe to this annual Christmas distribution seem to think they have settled their claims for the whole year. It is not scientific, and it is not really kind to overwhelm a poor family with Christmas good cheer and leave it



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A Woman's Sympathy

Are you discouraged? Is your doctor's bill a heavy financial load? Is your pain a heavy physical burden? I know what these mean to delicate women—I have been discouraged, too; but learned how to cure myself. I want to relieve your burdens. Why not end the pain and stop the doctor's bill? I can do this for you and will if you will assist me.

All you need do is to write for a free box of the remedy which has been placed in my hands to be given away. Perhaps this one box will cure you—it has done so for others. If so, I shall be happy and you will be cured for 2c (the cost of a postage stamp). Your letters held confidentially. Write to-day for my free treatment. S. F. E. CURRAH, Windsor, Ont.

SEED BARLEY In 1908 field competition won by 94 points over county, and 2 points over Province. Very clean, heavy, strong strawed. One dollar per bushel. S. F. E. CURRAH, Fairview Farm, Windsor, Ont.

to struggle along unaided and unthought-of for the other 364 days of the year.

The Secretary of the Washington Associated Charities takes the same attitude and says: "The public, generally speaking, gives without thought, here, there, and everywhere. It seems almost impossible to teach the public the folly of casting its gifts broadcast, without first investigating, and then in a sane way giving those things that the individual or family most needs. This unguided giving provides a family with plenty for a day, usually a dinner and a few useless toys. The next day it is again hungry."

Of course, the outward value of gifts to the recipient depends largely on the spirit inspiring the giver. If he is anxious to save himself trouble in the matter, his style of giving is not likely to be first-class. If he is inspired by a true love of God, burning to pour itself out in the service of God's children, he will try to discover their real needs, so that he may give real help, not a machine-made "charity," but a brother's helping-hand.

When our Lord tried to help the woman at Jacob's well, He did not reach out to her in a hurried, superficial fashion, but encouraged her to show—through the ordinary channel of a friendly conversation—where she most needed help. Those who wish to lay out their lives to good purpose must be really interested in their comrades, and show that they are interested.

"A heart at leisure from itself, to soothe and sympathize," is greatly needed in these days of hurry and strenuous living. Let us always bear in mind that those who are making a success of this time of testing are the ones who are more bent on giving than getting. Let us see to it that the sad accusation of Mal. i., 10, is not repeated in this question: "Who is there even among you that would shut the doors for nought? neither do ye kindle fire on mine altar for nought. I have no pleasure in you, saith the Lord of hosts, neither will I accept an offering at your hands."

HOPE.

The Golden Dog (Le Chien D'Or.)

A Canadian Historical Romance.

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CHAPTER VIII.—Continued.

Bigot, to do him justice, felt as sincere a regard for this beautiful, amiable girl as his nature was capable of entertaining. In rank and fortune she was more than his equal, and left to himself, he would willingly have married her. Before he learned that his project of a marriage in the Colony was scouted at Court he had already offered his love to Caroline de St. Castin, and won easily the gentle heart that was but too well disposed to receive his homage.

Her trust went with her love. Earth was never so green, nor air so sweet, nor skies so bright and azure, as those of Caroline's wooing on the shores of the beautiful Bay of Minas. She loved this man with a passion that filled with ecstasy her whole being. She trusted his promises as she would have trusted God's. She loved him better than she loved herself—better than she loved God, or God's law; and counted as a gain every loss she suffered for his sake, and for the affection she bore him.

After some months spent in her charming society, a change came over Bigot. He received formidable mis- sives from his great patroness at Versailles, the Marquise de Pompadour, who had other matrimonial designs for him. Bigot was too slavish a courtier to resent her interference, nor was he honest enough to explain his position to his betrothed. He deferred his marriage. The exigencies of the war called him away. He had triumphed over a fond, confiding woman; but he had been trained among the dissolute spirits

of the Regency too thoroughly to feel more than a passing regret for a woman whom, probably, he loved better than any other of the victims of his licentious life.

When he finally left Acadia a conquered Province in the hands of the English, he also left behind him the one true, loving heart that believed in his honor and still prayed for his happiness.

The days of Caroline's disillusion soon came; she could not conceal from herself that she had been basely deceived and abandoned by the man she loved so ardently. She learned that Bigot had been elevated to the high office of Intendant of New France, but felt herself as utterly forgotten by him as the rose that had bloomed and withered in her garden two summers ago.

Her father had been summoned to France on the loss of the Colony; and fearing to face him on his return, Caroline suddenly left her home and sought refuge in the forest among her far-off kindred, the red Aben- aquais.

The Indians welcomed her with joy and unbounded respect, recognizing her right to their devotion and obedience. They put upon her feet the moccasins of their tribe, and sent her, with a trusty escort, through the wilderness to Quebec, where she hoped to find the Intendant, not to reproach him for his perfidy—her gentle heart was too much subdued for that—but to claim his protection, and if refused, to die at his door.

It was under such circumstances that the beautiful, high-born Caroline de St. Castin became an inmate of Beaumanoir. She had passed the night of this wild debauch in a vigil of prayers, tears and lamentations over her sad lot, and over the degradation of Bigot by the life which she now knew he led. Sometimes her maddened fancy was ready to accuse Providence itself of cruelty and injustice; sometimes, magnifying her own sin, she was ready to think all earthly punishment upon herself as too light, and invoked death and judgment as alone adequate to her fault. All night she had knelt before the altar, asking for mercy and forgiveness—sometimes starting to her feet in terror as a fresh burst of revelry came rushing from the great hall above and shook the door of her secret chamber. But no one came to her help, no one looked in upon her desolation. She deemed herself utterly forgotten and forsaken of God and man.

Occasionally she fancied she could distinguish the voice of the Intendant amid the drunken uproar, and she shuddered at the infatuation which bound her very soul to this man; and yet, when she questioned her heart, she knew that, base as he was, all she had done and suffered for him she would infallibly do again. Were her life to live over, she would repeat the fault of loving this false, ungrateful man. The promise of marriage had been equivalent to marriage in her trust of him, and nothing but death could now divorce her from him.

Hour after hour passed by, each seeming an age of suffering. Her feelings were worked up to frenzy; she fancied she heard her father's angry voice calling her by name, or she heard accusing angels jeering at her fall. She sank prostrate at last, in the abandonment of despair, calling upon God to put an end to her miserable life.

Bigot raised her from the floor, with words of pity and sympathy. She turned on him a look of gratitude which, had he been of stone, he must have felt. But Bigot's words meant less than she fancied. He was still too intoxicated to reflect or to feel shame of his present errand.

"Caroline!" said he, "what do you here? This is the time to make merry—not to pray! The honorable company in the great hall desire to pay their respects to the lady of Beaumanoir—come with me!"

He drew her hand through his arm with a courtly grace that seldom forsook him, even in his worst

COULD NOT GO TO WORK BACK WAS SO WEAK.

Backache is the primary cause of kidney trouble. When the back aches or becomes weak it is a warning that the kidneys are liable to become affected.

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Light Without Any Shadow. You light and extinguish like gas, you can fill without extinguishing. The only lamp of its kind—the light for country homes. Equals the best light of the city man at a fraction of the cost. You can't know all about it until you use it.

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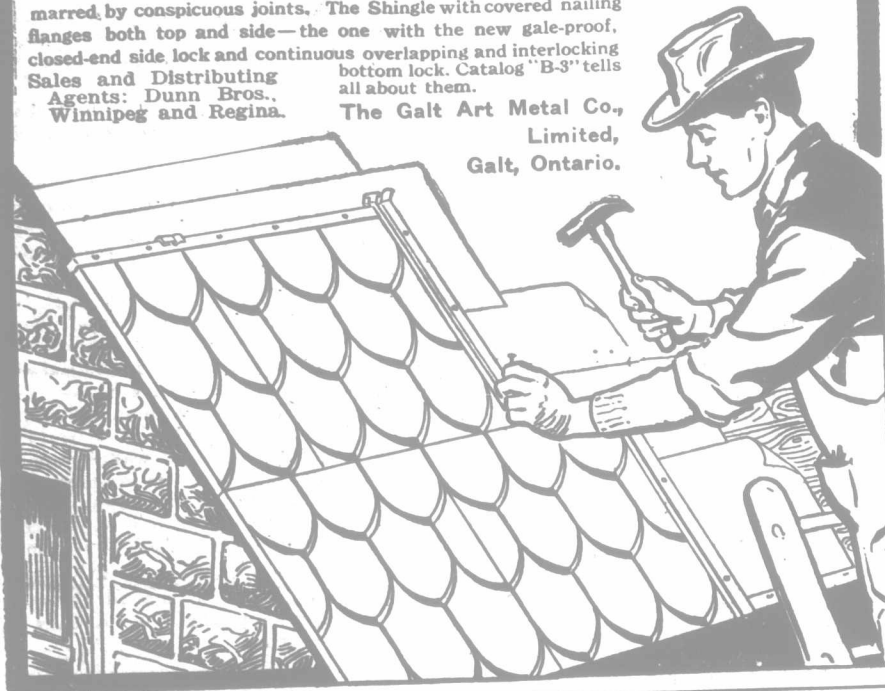
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The **ELECTROPHONE**—A new, scientific and practical invention for those who are deaf or partially deaf—may now be Tested in Your Own Home. Deaf or partially deaf people may now make a month's trial of the Electrophone on payment of a small deposit. This is unusually important news for the deaf, for by this plan the final selection of the one completely satisfactory hearing aid is made easy and inexpensive for everyone.

This new invention renders unnecessary such clumsy, unsightly and frequently harmful devices, as trumpets, horns, tubes, ear-drums, fans, etc. It is a tiny electric telephone that fits on the ear, and which, the instant it is applied, magnifies the sound waves in such a manner as to cause an astonishing increase in the clearness of all sounds. It overcomes the buzzing and roaring ear noises, and also so constantly and electrically exercises the vital parts of the ear that usually the natural unaided hearing itself is gradually restored.

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Please make use of my name in connection with the instrument at any time. I am, Yours faithfully, MRS. M. LAURIE.

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For catalogues and particulars regarding the sales, address the Secretary at the point of sale, or make application to:

LIVE-STOCK BRANCH, Ontario Department of Agriculture, Toronto.

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moments. Caroline looked at him in a dazed manner, not comprehending his request. "Go with you, Francois? You know I will, but where?"

"To the great hall," repeated he; "my worthy guests desire to see you, and to pay their respects to the fair lady of Beaumanoir."

It flashed upon her mind what he wanted. Her womanly pride was outraged as it had never been before; she withdrew her hand from his arm with shame and terror stamped on every feature.

"Go up there! Go to show myself to your guests!" exclaimed she, with choking accents, as she stepped back a pace from him. "Oh, Francois Bigot, spare me that shame and humiliation! I am, I know, contemptible beyond human respect, but still—God help me!—I am not so vile as to be made a spectacle of infamy to those drunken men whom I hear clamoring for me, even now."

"Pshaw! You think too much of the proprieties, Caroline!" Bigot felt sensibly perplexed at the attitude she assumed. "Why! the fairest dames of Paris, dressed as Hebes and Ganymedes, thought it a fine jest to wait on the Regent Duke of Orleans and the Cardinal du Bois in the gay days of the King's bachelorhood, and they do the same now when the King gets up one of his great feasts at Choisy; so come, sweetheart—come!" He drew her towards the door.

"Spare me, Francois!" Caroline knelt at his feet, clasping his hand, and bathing it in tears—"Spare me!" cried she. "Oh, would to God I had died ere you came to command me to do what I can not and will not do, Francois!" added she, clasping hard the hand of the Intendant, which she fancied relaxed somewhat of its iron hardness.

"I did not come to command you, Caroline, but to bear the requests of my guests. No, I do not even ask you on my account to go up to the great hall; it is to please my guests only." Her tears and heartrending appeal began to sober him. Bigot had not counted on such a scene as this.

"Oh, thanks, Francois, for that word! You did not come to command my obedience in such a shameful thing; you had some small regard left for the unfortunate Caroline. Say you will not command me to go up there," added she, looking at him with eyes of pitiful pleading, such as no Italian art ever portrayed on the face of the sorrowing Madonna.

"No," he replied, impatiently. "It was not I proposed it; it was Cadet. He is always a fool when the wine overflows, as I am too, or I would not have hearkened to him! Still, Caroline, I have promised, and my guests will jeer me finely if I return without you." He thought she hesitated a moment in her resolve at this suggestion. "Come for my sake, Caroline! Do up that disordered hair; I shall be proud of you, my Caroline; there is not a lady in New France can match you when you look yourself, my pretty Caroline!"

"Francois," said she, with a sad smile, "it is long since you flattered me thus! But I will arrange my hair for you alone," added she, blushing, as with deft fingers she twisted her raven locks into a coronal about her head. "I would once have gone with you to the end of the world to hear you say you were proud of me. Alas! you can never be proud of me any more, as in the old happy days at Grand Pre. Those few brief days of love and joy can never return—never, never!"

Bigot stood silent, not knowing what to say or do. The change from the bacchanalian riot in the great hall to the silent, pathetic and even of the secret chamber, seemed to have wayed a spell of "the old days" and he found both her hand and heart with a suddenness that he could not but have seen. "I am not proud of you any more, as in the old happy days at Grand Pre. Those few brief days of love and joy can never return—never, never!"

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beast, called you Queen Vashti, and challenged me to show your beauty to them; and I swore not one of their toasted beauties could match my fair Acadienne."

"Did the Sieur Varin call me Queen Vashti? Alas! he was a truer prophet than he knew," replied she, with ineffable sadness. "Queen Vashti refused to obey even her king, when commanded to unveil her face to the drunken nobles. She was deposed, and another raised to her place. Such may be my fate, Francois."

"Then you will not go, Caroline?" "No; kill me if you like, and bear my dead body into the hall, but living, I can never show my face again before men—hardly before you, Francois," added she, blushing, as she hid her tearful eyes on his shoulder.

"Well, then, Caroline," replied he, really admiring her spirit and resolution, "they shall finish their carouse without seeing you. The wine has flowed to-night in rivers, but they shall swim in it without you." "And tears have flowed down here," said she, sadly—"oh, so bitter! May you never taste their bitterness, Francois!"

Bigot paced the chamber with steadier steps than he had entered it. The fumes were clearing from his brain; the song that had caught the ear of Colonel Philibert as he approached the Chateau was resounding at this moment. As it ceased, Bigot heard the loud, impatient knocking of Philibert at the outer door.

"Darling!" said he, "lie down now, and compose yourself. Francois Bigot is not unmindful of your sacrifices for his sake. I must return to my guests, who are clamoring for me, or rather for you, Caroline!" He kissed her cheek and turned to leave her, but she clung to his hand as if wanting to say something more ere he went. She trembled visibly as her low, plaintive tones struck his ear.

"Francois! if you would forsake the companionship of those men and purify your table of such excess, God's blessing would yet descend upon you, and the people's love follow you! It is in your power to be as good as you are great! I have many days wished to say this to you, but alas, I feared you too much, I do not fear you to-day, Francois, after your kind words to me."

Bigot was not impenetrable to that low voice, so full of pathos and love. But he was at a loss what to reply; strange influences were flowing round him, carrying him out of himself. He kissed the gentle head that reclined on his bosom. "Caroline," said he, "your advice is wise and good as yourself. I will think of it for your sake, if not for my own. Adieu, darling! Go, and take rest; these cruel vigils are killing you, and I want you to live in hope of brighter days."

"I will," replied she, looking up with ineffable tenderness. "I am sure I shall rest after your kind words, Francois. No dew of heaven was ever more refreshing than the balm they bring to my weary soul. Thanks, O my Francois, for them!" She kissed his lips, and Bigot left the secret chamber a sadder and for the moment a better man than he had ever been before.

Caroline, overcome by her emotions, threw herself on a couch, invoking blessings upon the head of the man by whom she had been so cruelly betrayed. But such is woman's heart—full of mercy, compassion, and pardon for every wrong, when love pleads for forgiveness.

"Ha! ha!" said Cadet, as the Intendant re-entered the great hall, which was filled with bacchanalian frenzy. "Ha! ha! His Excellency has proposed and been rejected! The fair lady has a will of her own and won't obey! Why, the Intendant looks as if he had come from Quintin's tavern, where nobody gets anything he wants!"

"Silence, Cadet! don't be a fool!" replied Bigot, impatiently, al-though in the Intendant's usual

FIFTY DOLLARS SPENT FOR MY SHINGLES

Adds \$500 to the value of any House or Barn

ANY building good enough to be roofed right is too good by far to be roofed with wooden shingles. No building worth carrying fire-insurance on deserves any roof less good than "Oshawa" Galvanized Steel Shingles. Simply because—

"Oshawa" Shingles, of 28-gauge semi-hardened sheet steel, make the only roof that absolutely and actually will be a good roof for a hundred years. If any "Oshawa"-shingled roof shows the least sign of leaking in twenty-five years, this company will replace that roof with a new roof, free.



Thousands of "Oshawa"-shingled roofs cover farm buildings, residences, public edifices, churches, all over Canada. They make a roof handsome enough for any building whatever,—and it is the most practical of roofs,—for the simple reason that an "Oshawa"-shingled roof can NOT leak.

It can't leak, because, to start with, it is made of extra-heavy, extra-tough steel, special galvanized. The galvanizing makes these shingles wholly proof against rust,—and rust is the only enemy steel has when it's used for roofing.



That Pedlar-process galvanizing makes it needless to paint an "Oshawa"-shingled roof. Long years of weather-wear won't show on these shingles. That one item of paint saved — of the need for painting entirely done away with—saves you the cost of an "Oshawa"-shingled roof in the first few years it's on any of your buildings. And just remember—it will be a good roof for a hundred years.



G. A. Pedlar

Such a roof is not only rain-proof, snow-proof, and fire-proof, but it is wind-proof. It makes any building it covers warmer in winter and cooler in summer—because—

The Pedlar four-way-lock—every shingle locked to adjoining shingles underneath, on all four sides—makes an "Oshawa"-shingled roof practically one solid sheet of steel, without a crevice or a crack.

corrugated iron roofing,—and it's all right, for its kind. Nobody makes any better. But corrugated iron isn't the roof for a farm building,—nor for any building that is meant to stand a long while. It is a good enough roof for structures that are meant to last only a few years,—but only "Oshawa" Shingles are sure to last a hundred years and are good for a century.

Another thing about these shingles:—They make a building lightning-proof,—insulate it far better than any lightning-rod system ever could. Last year lightning destroyed over half a million dollars' worth of farm property. Not a cent of that loss could have happened if the buildings that were struck had been roofed right, which means roofed with "Oshawa" Galvanized Steel Shingles.



Maybe you think the first cost of these shingles is so high as to outweigh all the savings they make and all the merits they have? Would it surprise you to know that you can "Oshawa"-shingle any roof for \$4.50 a square? (A "square" means 100 square feet,—an area 10 by 10 feet.)

Just about the price of Al cedar or cypress shingles—and they'll be rotted to dust before even the first ten years of the Pedlar guarantee have passed. An "Oshawa"-shingled roof will outlast ten wood-shingled roofs—and be a better roof every minute of the time, in every way a roof ought to be good.

Anybody can put on these shingles,—a hammer and a tinner's shears are all the tools necessary. It is impossible to get them on



wrong — you'll see why when you send for a sample shingle and a book about "Roofing Right." Suppose you send for the book and the sample to-day,—now. It will pay you to get at the real facts about the right roof.

Pedlar products include every kind of sheet metal building materials—too many items to even mention here. You can have a catalogue—estimate—prices—advice—just for the asking. We'd like especially to interest you in our Art Steel Ceilings and Side Walls—they are a revelation to many people. More than 2,000 designs. May we send you booklet and pictures of some of them?

"OSHAWA" GALVANIZED STEEL SHINGLES

A new roof for nothing if they leak by 1934

That keeps out the slightest suspicion of moisture—it keeps out the winter winds and keeps in the warmth—and in summer it wards off the sun's rays—won't let them get through.

And "Oshawa"-shingled roofs are fire-proof,—as a matter of course. How could you set fire to a roof of solid sheet steel? The fire-insurance people will make lower rates on a building protected by "Oshawa" Galvanized Steel Shingles. That saving alone will pay for the roof within ten years.

Some think a corrugated iron roof is fireproof and about as good as an "Oshawa"-shingled roof. That isn't so. We make

The PEDLAR PEOPLE of Oshawa ESTABLISHED 1861

ADDRESS OUR NEAREST WAREHOUSE:

- MONTREAL
321-323 St. W.
- OTTAWA
423 Sussex St.
- TORONTO
11 Colborne St.
- LONDON
86 King St.
- CHATHAM
200 King St. W.
- WINNIPEG
76 Lombard St.
- QUEBEC
7-11 Notre Dame Sq.
- ST. JOHN, N. B.
42-46 Prince William St.
- HALIFAX
16 Prince St.

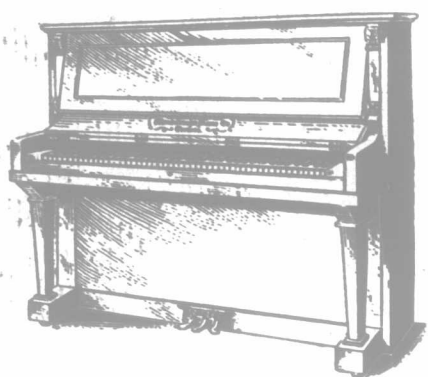
WE WANT AGENTS IN MANY SECTIONS. WRITE FOR DETAILS. MENTION THIS PAPER.

An Advertising Offer!

New Mendelssohn Pianos for \$210

Regularly Priced at \$275

Though various premium offers are frequently made for advertising purposes, we believe that the very best premium a piano-buyer can secure is a direct saving in the price of the instrument purchased. For advertising, therefore, and for increased business in the usually quiet season, we offer a limited number (25) of new Mendelssohn pianos of the regular \$275 style (as per illustration and description) at the reduced price of \$210.



DESCRIPTION

The pianos are manufactured by The Mendelssohn Piano Co., Toronto. They are small and compact in size, and of a simple though very attractive design. They possess a rich, musical tone, and an easy, responsive action, and are substantially built and durable. Nearly 7,000 Mendelssohn pianos are to-day in use, and the enthusiastic satisfaction of their owners is their best recommendation.

The cases are in walnut or mahogany, double veneered on both sides throughout, and handsomely finished. The panels are full length, with flat mouldings. The keyboard is 7 octaves, and the piano is fitted with muffler or practice attachment, operated by the third pedal. In place of this, a mandolin attachment may be substituted, without extra cost, when so ordered.

Height, 4 feet 3 inches.
Depth, 2 feet 2½ inches.
Width, 5 feet 1½ inches.
Weight, boxed, 800 lbs.

TERMS OF OFFER

This special price, \$210.00, is the cash price, and unusually good value. For those who prefer paying in instalments, we have arranged a plan of regular payments, on either monthly, quarterly or half-yearly system. This plan offers the instalment buyer the privilege of buying at a cash price, \$210, plus just simple interest at the rate of six per cent. per annum upon the exact amount owing from time to time. As an illustration of just what this interest totals, we have selected two favorite plans of payment, and give herewith the figures:

Plan A.—Payment of \$10.00 cash and \$6.00 monthly.

Purchase price	\$210.00
Total amount of interest.....	17.15
Total cost	\$227.15

Plan B.—Payment of \$25.00 cash and \$25.00 quarterly.

Purchase price	\$210.00
Total amount of interest.....	11.70
Total cost	\$221.70

WE SHIP ON APPROVAL

That out-of-town buyers may enjoy the same opportunity as city residents, we agree to carefully select a choice piano and ship on approval to any point in Canada. If not entirely satisfactory upon arrival, it may be returned to us, and we will pay the return freight.

A handsome new stool is supplied free, and piano will be safely packed for shipment without extra charge.

OUR GUARANTEE

Every piano is fully guaranteed for five years by the Mendelssohn Piano Co. In addition, the guarantee carries our endorsement, which provides an option of exchange, wherein we agree to receive the Mendelssohn piano at any time in part payment for a new Mendelssohn or Gourelay piano, said new piano to be supplied at the then current net cash rate, and the Mendelssohn piano to be taken back at the present cash price, \$210.00, less a small annual charge of \$10.00 per year for the number of years that have elapsed since its purchase.

A Few Pianos of a Larger Style—Also Underpriced

We are also offering half a dozen larger Mendelssohn pianos at a big cut under regular cash prices. If you are interested we will be glad to send full particulars.

GOURLAY, WINTER & LEEMING
188 Yonge Street, Toronto, Ont.

mood, nothing too gross or too bad could be said in his presence but he could cap it with something worse. "Fool, Bigot! It is you who have been the fool of a woman!" Cadet was privileged to say anything, and he never stinted his speech. "Confess, your Excellency! she is splay-footed as St. Pedaque of Dijon! She dare not trip over our carpet for fear of showing her big feet!"

Cadet's coarse remark excited the mirth of the Intendant. The influences of the great hall were more powerful than those of the secret chamber. He replied curtly, however—"I have excused the lady from coming, Cadet. She is ill, or she does not please to come, or she has a private fancy of her own to nurse—any reason is enough to excuse a lady, or for a gentleman to cease pressing her."

"Dear me!" muttered Cadet, "the wind blows fresh from a new quarter! It is easterly, and betokens a storm!" and with drunken gravity he commenced singing a hunting refrain of Louis XIV.:

"Sitot qu'il voit sa Chiènn
Il quitte tout pour elle."

(To be continued.)

"The Farmer's Advocate" Fashions.



6234 Boy's Knickerbockers and Knee Trousers, - to 12 years.

6234: The quantity of material required for the medium size (8 years) for either knickerbockers or trousers is 1½ yards 27, 1¼ yards 36 or 1½ yards 52 inches wide.



6237 Girl's Sailor Costume, 6 to 12 years.

6237: The quantity of material required for the medium size (10 years) is 6½ yards 24, 5½ yards 32 or 4 yards 44 inches wide, ¾ yards 36 inches wide for the body lining, 5½ yards of braid.

The above patterns will be sent to any subscriber at the very low price of ten cents per pattern. Be careful to give Correct Number of Patterns Wanted. Write only the figure representing the age. Allow from one to two weeks in which to fill order.

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

Mrs Bacon—Wasn't it Admiral Porter who said, "Take no quarter from the enemy?" Naw! It couldn't have been: it was, he's the only porter that I ever saw such a thing.—Truth

St. Valentine's Day.

The "boy god" is out on his mission to-day.
 He will fling forth his arrows and speed him away;
 His darts are all tipped with Love's rosiest balms,
 He wounds but to heal, it will do you no harm.
 He's an archer, a minstrel, a wizard, whose wand
 Discloses your fate without "crossing his hand."
 The song that he sings is the sweet lay of old,
 Like pictures of silver and apples of gold.
 You can welcome him kindly if you do nothing more,
 'Tis but once in the year that he knocks at your door,
 He visits in kindness and offers you joy,
 He's Cupid's own archer—this "god of a boy."
 If his tiniest dart you should dare to disdain,
 It will rankle and fret 'till it causes you pain;
 Then keep him not waiting, but list to his lay,
 There's much to be done on "St. Valentine's Day."
 —Sel.

Current Events.

Captain Amundsen, Norwegian, will make an attempt to reach the North Pole in Nansen's ship, the Fram.

A serious uprising, probably connected with the Nationalist movement, has broken out in Persia.

A volcanic eruption of Mt. Colima, Mexico, accompanied by violent earthquake shocks, took place last week.

Great political importance is attached to the King's visit to Germany.

A bill before the United States House of Representatives proposes a pension of \$12,000 a year for all past Presidents.

The new French tariff against the United States will force many American manufacturers to build in Canada, which gets minimum rates under the new treaty.

A small herd, consisting of six head of yaks, presented to the Dominion Government by the Duke of Bedford, will be brought to Canada under charge of the Department of Agriculture, with a view to ascertaining their suitability for domestication in the northern portions of the Dominion. The yak is a native of the high altitudes of Tibet.

Two causes of national uneasiness in Europe have been removed within the last fortnight. A treaty settling various points of dissension in regard to Morocco, has been signed by France and Germany; and Bulgaria, satisfied that Turkey does not intend to open hostilities, has disbanded her reservists.

TRADE TOPIC.

SEED PEAS AND BEANS.—Mr. W. P. Niles, of Wellington, Ont., whose advertisement appears in this issue, is one of the largest growers of seed peas and beans in Canada, and does a large export business in these lines with France, Belgium, Germany, England, and the United States. At Wellington will be found one of the most complete and up-to-date plants in Canada. All of the machinery and appliances for milling, screening and hand-picking of peas, beans and grain, is of the latest and most approved styles, and of large capacity. In addition to his seed business, Mr. Niles has various other interests, being sole owner of the W. P. Niles Electric Light & Power Co., Sec.-Treas. of the Wellington Packing Co., and President of the Ontario Interurban Railway Co. Mr. Niles also does farming to a considerable extent, having two farms in the vicinity of Wellington, which are worked under his directions.

GOSSIP.

J. & D. J. Campbell, of Fairview Farm, Woodville, Ont., are offering in our advertising columns, a good fourteen-months-old Strathallan registered Short-horn bull. His dam and grandam are good milkers, while he is of the short-legged and full-fleshed sort, and of the kind which matures and breeds well. They are also, in another column, offering good, clean seed barley. Not only did their field win in the County Society competition by 94 points, but it also led in the Province by 2 points. It is, they claim, free from all foul seeds. It is not often that seed so good in quality can be procured. It is worth having a trial.

The first annual meeting of the Connecticut Milch-goat Keepers' Association was held at West Hartford, Conn., on February 2, 1909. The following officers were elected: President, George W. Smith, of Melrose; Secretary, Alfred Dixon, of West Hartford; Treasurer, James A. Smith, of Hartford. President Smith, to compare cows' and goats' milk, made a demonstration analysis for milk-fat and milk-solids, with the following result: Cows' milk, 4.4 per cent. fat, 14.16 per cent. solids; goats' milk, 5.8 per cent. fat, 15.46 per cent. solids. The society is constantly receiving inquiries from various parts of the country, indicating the increased interest that is being manifested in the milch-goat industry. The membership list, though small, is increasing, and already includes residents of seven States of the Union. Professional men, especially physicians, are becoming attracted; and several of the latter have united with the organization. The first annual field meeting is set for July 5th next, at the home of Milo N. Wooding, of Hamden, near New Haven. The Secretary is Alfred Dixon, West Hartford, Conn.

Mr. Robert Davies, of Todmorden, York County, Ontario, has the high distinction of having bred on his Thorncliffe Stock Farm the Clydesdale champion mare, Belrose (formerly Thorncliffe Duchess 2nd), the first grand champion ever foaled in Canada. This mare is of exceptional quality, and, when sold at the Thorncliffe sale three years ago, she was pronounced by very competent judges to be the pick of the sale. On reference to the Clydesdale Studbook, it will be seen that this mare is bred in the purple, her grand-sire, "Prince of Quality," was repatriated to Scotland, while her sire, Lyon Macgregor, was a son of the noted Macgregor, by the great Darnley (222). Belrose's winnings have been considerable. She won the championship at the Canadian National Exhibition last year, and this year, at the Ontario Horse-breeders' Exhibition at the Union Stock-yards, Toronto, she not only won in her own class, the championship for best Canadian-bred mares, but went a step beyond, and won the grand championship against the imported mares. That good judge, Mr. Robert Graham, of the firm of Graham & Renfrew, Bedford Park, as usual, made no mistake when he bought this mare at the Thorncliffe sale, and we learn that he has recently sold her to Mr. Russell Tabor, of Condie, Sask., for a good round sum. But she is well worth it, and Mr. Tabor is to be congratulated upon his judgment in his acquisition. To the master of Thorncliffe, who naturally takes great pride in Belrose's career, the heartiest congratulations must be tendered, together with the thanks of the horse-breeding community of this Province for the pioneer work he has achieved so successfully in demonstrating Ontario as a nursery for the equine stock of Canada.

IMPORTED CLYDESDALES BY AUCTION

At Clyde Park Farm, 2 miles west of St. Thomas, 1/2 mile east of Middlemarch, on Pere Marquette Railway, lot 38, Talbot Road, on

TUESDAY, FEBRUARY 23RD, 1909.

ALEX. F. McNIVEN will sell 7 imported mares from 2 to 6 years old; 4 foals of 1908 from above mares. All that have been exhibited are prize-winners. Registered in Scotch and Canadian Studbooks. A high-class lot. Terms of sale: Six months' credit on furnishing approved joint notes, or 6 per cent. per annum discount for cash. Sale at 1 o'clock p. m.

2 two-year-old imp. stallions at private treaty. Also the farm of 100 acres. Soil clay loam, thoroughly tilled. Good buildings. Brick house, furnace heated. Orchard and small fruits. Never-failing spring at barn.

Lock & McLachlin, Auctioneers, St. Thomas, Ont.

ALEX. F. McNIVEN, St. Thomas, Ont.

Graphic Demonstration of Experiment by the
ONTARIO AGRICULTURAL COLLEGE, GUELPH, ONT.

SUPPORT HOME INDUSTRY.

We don't ask you to take our unsupported word as to the superiority of Home-grown Seeds, we give you FACTS, as demonstrated by experts of the Ontario Agricultural College. To make you acquainted with

R. R. R. S.

Reliable Red Ribbon Seeds

We will send you FREE, a package of Canadian Crown White Icicle Radish, and our new catalogue, if you ask for same. Also kindly send us names of friends who are buying seeds this spring.

ONTARIO SEED CO.,
 King Street, Waterloo, Ont.
 Pioneer Canadian Seed Growers.

DISPERSION AUCTION SALE

Of Pure-bred SHORTHORN CATTLE, the Property of Fitzgerald Bros., Mount St. Louis, Simcoe Co., Ont., on **TUESDAY, MARCH 9TH, 1909** CONSISTING OF 54 HEAD.

40 females and 14 bulls, including herd bull, Roan Lord = 65155, of the Roan Lady family. Such bulls as British Statesman (imp.), Diamond Jubilee (imp.) and Loyal Duke (imp.) have been used in the herd. Sale will commence at 1 p. m. Conveyance will meet trains at Coldwater and Phepston on G. T. R., on day of sale, and at Craighurst, on C. P. R., on night before and day of sale. Terms: Ten months' credit will be given on furnishing approved joint notes; 6 per cent. discount off for cash. We are also offering to lease our farm for a term of years; it consists of 550 acres, 350 first-class farm land, balance pasture and timber land. A lunch will be provided. Catalogues on application. Long-distance phone, Elmvale Central.

J. K. McEWEN, Auctioneer. **FITZGERALD BROS., Mount St. Louis, Ont.**

SEEDS

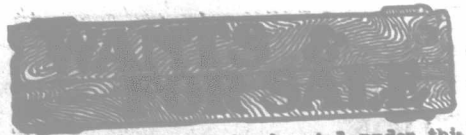
Nothing but the **BEST FOR YOU.**
 Ask for Samples,
 ALSO CATALOGUE.

PRESENT PRICES FOR OUR BEST

"Sun" Brand Red Clover	\$ 7.75 bush.
Ocean " Alsike "	11.00 "
Gold " Alfalfa "	13.00 "
Diamond " Timothy,	3.25 "
Pure. Clean. The Best. Ask for Samples.	

QUALITY **Geo. Keith**

& Sons,
 124 King Street, East,
 TORONTO.



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.

FOR SALE—Cedar posts and shingles, hemlock boards and joists. Can quote close figures delivered on cars at railway stations. Bradley Company, Hamilton, Ont.

FOR SALE—One of the best farms in Elgin Co. 100 acres, 20 acres hardwood timber. 5 miles from St. Thomas. All conveniences. For all particulars apply to Box 79, Fingal, Ont.

FOR SALE—Choice dairy and wheat-growing farms in the Red Deer District. Fall wheat yielding 40 bushels to the acre. Good grass, good water, building material, convenient. Easy terms. Full particulars. Apply: T. B. Millar, Burnt Lake, Alta.

FOR SALE—Fox Terriers. Smooth and wire haired puppies, Norfolk Kennel stock. Also two bitches. These are both young, good breeders, and are soon due in season, \$10 to \$15 each. C. L. Mewburn, 262 Main St., West, Hamilton, Ont.

THREE hundred and twenty acre farm. Splendid soil, all level. Good water. Two hundred acres summer-fallow ready for seeding. Good buildings. Twenty-five dollars per acre. Suitable terms. Communicate or call: Maybery, Moose Jaw, Sask.

WANTED—A situation by a married man on a stock farm. Good milkers. References if required. State wages and privileges. John Bellis, Byron, Ont.

WANTED—To hire with farmer as experienced help by highly respectable single man; willing to go any distance. Disengaged as soon as wanted. Apply first by letter to: A., P. O. Box 386, Brampton, Ont.

WANTED AT THE DELHI TANNERY Hides, Skins and Furs to tan for Robes, Coats and Gauntlets Mitts, etc. Tanned soft and pliable. Never get hard. **B. F. BELL, DELHI, ONTARIO**

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.

BARRED ROCK cockerels at reduced prices. Write for full particulars. W. W. Dods, Alton, Ont.

CHOICE White Wyandotte cockerels and pullets at reasonable prices. W. D. Monkman, Bond Head, Ont.

EGGS—S.-C. Black Minorcas. They are winners of three silver cups and specials at late shows. They are true sitting kind. Eggs per 13, \$2. A. Goebel, Mitchell, Ont.

EGGS—High-class S.-C. Pure White Leghorns; winners every time shown. Winners of silver cups of the late shows. \$2.50 per 15. Young stock for sale. 200 to choose from. Address: Wm. Jacob, Mitchell, Ont.

FOR SALE—Partridge Cochins. Prizewinning pair. First pullet, second cockerel. Hamilton, 07. Murray's strain. B. B. Gagnon, C. L. Mewburn, 262 Main St., West, Hamilton, Ont.

FOR SALE—40 choice Barred Rock pullets. Some laying now. W. A. Bryant, Cairn-gorm, Ont.

FOR SALE—Some choice White Wyandotte cockerels. Apply: Wm. E. Robertson, Everton, Ont.

FREE 1909 poultry catalogue. Describes and prices 45 varieties land and water fowl. S. A. Hummel, Box 23, Freeport, Illinois.

GOLDEN Wyandottes—The Beauty birds; great layers; show cockerels \$2; trios \$4; eggs, \$1 for 15. Rose-comb Minorcas, everybody's favorite. Handsome, hardy. Greatest layers in the world. Make a start in this grand breed. Cockerels and eggs for sale. Write for prices. A. McGugan, Rodney, Ont.

TWO Toulouse ganders cheap for quick sale. Want White or Buff Wyandotte cockerel. Robt Stevens, Petrolia, Ont.

VALUABLE English recipe to keep poultry in health, and to insure abundance of eggs. For recipe and directions send 10c. in stamps.

WHITE Wyandottes for sale. A few pullets from prizewinning stock. Eggs in season. Also Partridge Wyandotte eggs. A. Mutton & Son, Mitchell, Ont.

WANTED—Poultry, all varieties. Correspondence solicited. Address: C. W. Lee, Onondaga.

WHITE Rock eggs for sale, also a few cockerels. Apply to Howard Smith, Winona, Ont.

WHITE Leghorns—For sale: A number of cockerels, show birds; also some very choice pullets. Robt. Hughes, Collingwood, Ont.

Canada's Champion Barred Plymouth Rocks.

At Toronto, 1908, we won 1st, 2nd and 5th cock birds; 1st, 2nd and 5th hens; 1st, 2nd, 3rd and 4th cockerels; 1st, 2nd and 3rd pullets. Two silver challenge cups. Our birds scored 39 points, all others shown only 21 points. One hundred cockerels from our best matings for sale at \$5 each. One hundred pullets \$2 each. **JNO. PRINGLE, LONDON, ONT.**

GOSSIP.

SALE DATES CLAIMED.

Feb. 23rd.—Alex. McNiven, St. Thomas, Ont.; imported and Canadian-bred Clydesdales.

March 4th.—R. H. Reid & Sons, Pine River, Ont.; Shorthorns.

March 4th.—At Woodstock, Ont., H. J. Davis, John T. Gibson, T. E. Robson, and Wm. Waldie; Shorthorns.

March 9th.—Fitzgerald Bros., Mount St. Louis, Ont.; Shorthorns.

March 11th and 12th.—Geo. Rice, Tillsonburg, Ont.; Holsteins and Ayrshires, dispersion.

FITZGERALD BROS.' SHORTHORN SALE.

Fitzgerald Bros., Mt. St. Louis, Simcoe Co., Ont., announce in our advertising columns in this issue, they will sell at auction their entire herd of 54 Shorthorns, 40 females and 14 bulls, on Tuesday, March 9th, at their farm, near Coldwater and Helpston, G. T. R., and Craighurst, C. P. R. Messrs. Fitzgerald Bros. write: Having decided to dissolve partnership, and give up farming for a time, at least, we are going to dispose of our entire herd of pure-bred Shorthorns, and to lease our farm for a term of years. Our herd was founded twenty-eight years ago, by the present owners' father, and has not been broken up since. Special care has been taken to use only first-class sires in breeding and individual excellence.

THE WOODSTOCK SHORTHORN SALE

An attractive and important sale of high-class Shorthorn cattle is that advertised to take place in the heated sale pavilion in the City of Woodstock, Ontario, on Thursday, March 4th, as advertised in this paper. This sale comprises selections from the fine herds of Messrs. H. J. Davis, Woodstock; T. E. Robson, Ilderton; J. T. Gibson, Denfield; Scott Bros., Highgate; J. A. Latimer, Woodstock, and Wm. Waldie, Stratford. The offering includes two imported bulls and a number of excellent young Canadian-bred bulls, besides a choice lot of young cows and heifers in calf and younger heifers. The breeding of the entire offering will commend itself to those familiar with Shorthorn pedigrees, as the catalogue will show. The back of the winter will be broken before the sale date, and the bright prospect for an active demand and improved prices for beef cattle and breeding stock, make this sale a favorable opportunity to secure good seed stock to improve the herd. Among the animals included in Mr. Gibson's consignment is a red ten-months-old bull, got by the Bruce Mayflower bull, Star Prince, and out of a Mina-bred cow, a half-sister to the junior champion heifer at Toronto, 1907. This is a grand-fleshed youngster, and will make something extra. One of the females is an Undine-bred heifer, sired by Imp. Proud Gift, and her dam is also imported. She is a right good one, of splendid conformation, and a grand handler. Another is a Wimple, got by Rosebud Champion. She is a straight, nicely-fleshed heifer. Another is a two-year-old, also by Imp. Proud Gift, dam by a son of Imp. Guardsman. This is probably the pick of the bunch; a show proposition when put in condition. Another is a two-year-old daughter of Imp. Proud Gift, and out of a heavy-milking daughter of Imp. Prime Minister. This offering fully sustains the high-class character of Mr. Gibson's herd, a most desirable quality of the contribution being their grand covering of hair, and their soft, mossy handling. In Mr. Latimer's consignment are the following: Scottish Girl—44644—, an eight-year-old cow, has raised six calves, the last, a good heifer, goes with her, and she is well gone with her seventh. Golden Drop—395588—, a Campbell Golden Drop of rare breeding, bred by Amos & Son, got by their prizewinning Village Captain—39911—, is also a sure and lucky breeder, well gone with her fourth calf, at five years. Lady Robson—72680—, a Cruickshank Mystic, by Rosy Morning, bred by Wm. Duthie, and imported by W. D. Flatt, sire the \$2,500 Merry Morning—81702—, by the Highland champion Pride of Morning—64516—, with such bulls as Vanguard—37139—, a Toronto and London winner, and Green Robe—29296—, next in line. Lady B. son—72680—, is also in calf to Village

DISPERSION SALE!

31 Head Registered Jersey Cattle
19 Head High-grade

AT BRIDGEPORT, TWO MILES FROM BERLIN, ONTARIO.

THURSDAY, MARCH 4TH

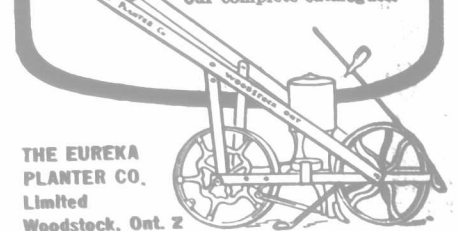
Sale of cattle commences at 1 o'clock. All will be sold without reserve, as the proprietor is giving up farming. Farm implements, dairy utensils, etc., will be sold in the forenoon. Terms: All sums of \$10 and under, cash; above that sum, 6 months' credit on approved security. Catalogues ready Feb. 15th. Cars on the Bridgeport and Berlin R. R. leave Berlin every hour.

Jas. McDonald, Guelph.
J. W. Davey, Berlin.
H. B. Doehring, Waterloo.

Aucts. **R. Reid, Prop., Berlin, Ont.**

The "BACON" Seed Drills and Cultivators.

The only Rear-Wheel Driven Seed Drill on the market. The feed in the "Bacon" handles seed without bruising or breaking, and seeds evenly to the last seed. It admits instantly converted from a regular seed sower into a hill dropper. Feed Cut prevents waste of seed when turning rows. For sowing Sugar Beets, Parsnips, Radishes, Carrots, Onions, etc., the 1908 model of the "Bacon" is unequalled for strength, lightness, easy running and good work. Write for our complete catalogues.



THE EUREKA PLANTER CO. Limited Woodstock, Ont. 2

blistered the stifle twice, but still the trouble exists. Is it stifle trouble? R. T.

Ans.—The symptoms indicate dislocation of the patella (the stifle bone), but it requires the personal examination of a veterinarian to determine with certainty. In these cases a cracking sound can usually be heard when the bone slips into place, but you do not mention such a sound. I would advise the application of a blister to the front and inside of the joint, being careful to not blister the outside. Then keep her in a well-bedded box stall, as dislocation is not nearly as liable to recur as when the animal is tied. Repeat the blister in a month, and again, if necessary. V.

TRADE TOPICS.

MR. THOS. REID, identified as sales manager of The John Bertram & Sons Co., Ltd., for many years past, has moved his headquarters to Montreal, where he will be associated with The Canadian Fairbanks Co., Ltd., the general sales agents of the Bertram Co. On account of the importance of the Montreal machine-tool market, this move is evidently an advantageous one to both the Bertram Co. and The Canadian Fairbanks Co.

MODERN WAY OF BOILING SAP—From the standpoint of quality of product, economy of fuel and labor, and net profits, the modern method of boiling maple sap for the manufacture of sugar or syrup, is far ahead of the arch-and-pan method, while the old iron kettle is so far superseded as to be virtually obsolete. The Grimm Manufacturing Co., 58 Wellington St., Montreal, have laid the syrupmaker under a debt of gratitude by manufacturing and placing on the market their well-known Champion Evaporator, made in 22 sizes. The popularity of this evaporator is assured wherever one is introduced. In a recent letter, they inform us that they will have an increase of at least 15 per cent. in business over the past year, which, in turn, was the best they ever had. Maple-sugar makers are waking up to the fact that they have to purchase up-to-date machinery in order to do their work successfully, which not only means that they are making money, but at the same time making a better class of maple syrup. Intending purchasers would do well to place their orders at once, for the company state that the chances are next month they will be obliged to refuse some business through being unable to make outfits rapidly enough for delivery. The output for the present season is expected to run between 700 and 800 evaporators. Secure a Champion and be up-to-date.

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, \$1.00 must be enclosed.

Miscellaneous.

COW POX.

In your next issue I would like to see a safe and speedy cure for cow pox.

M. E. W.

Ans.—As the disease is contagious, no contact by milker's hands or clothes should be allowed between the diseased and healthy. Dress the affected cow's teats three times daily with the following ointment: Boracic acid 1 dram, carbolic acid 20 drops, vaseline 2 ounces. Mix.

UNTHRIFTY MARE.

I have a driver, six years old. I am feeding her two quarts of oats twice a day, and hay twice a day, and she seems to be getting poor on that, and she sweats very easily and scours a little when I drive her.

SUBSCRIBER.

Ans.—The feeding stated is too light for a driver that is being used on the road regularly. The usual feed for working horses is four quarts of oats three times a day, and what hay they will clean up in half an hour, three times a day. There is a difference in horses in this respect. Some will keep in good condition on less feed than others, and the feed should be lessened when they are idle. The undue sweating and the scouring indicate indigestion. Have her teeth examined by a veterinarian and treated, if necessary, as she may not be treating her food properly.

Veterinary.

DISLOCATION OF PATELLA.

Occasionally, my young ones have difficulty in moving their legs. After a few steps around, they all get into a

CHAPPED FROM FINGERS TO ELBOWS.

Boy's Agony Relieved by Zam-Buk.

If you are suffering from badly-chapped hands, you will be able to comprehend a little of the agony which Henry Walker, of 14 Manufacturers street, Montreal, endured before Zam-Buk gave him relief.

"Henry works with his shirt sleeves rolled up above his elbows, and passing from a warm room to the biting cold, as he was obliged to do, he got the worst case of chapped hands and arms I have ever seen. From his fingers to his elbows was one mass of raw flesh, with bad cracks here and there. Whenever he washed, it brought tears to his eyes, the pain was so acute. He tried several kinds of salves, but nothing relieved him until he tried Zam-Buk. This balm seemed to take away the burning and smarting almost at once.

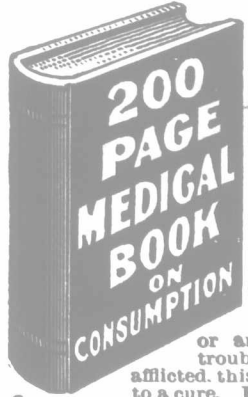
"We have also used Zam-Buk for other emergencies. I sustained a burn on one of my fingers. Zam-Buk took the fire out and healed up the sore. It really seems a wonderful household preparation.

"On one occasion my son Harry had his foot frozen. It was very swollen and discolored, but Zam-Buk both relieved the swelling and removed the discoloration. Zam-Buk is so handy and so effective that we shall always keep a supply handy."

Miss Hattie Bertrand, of Salisbury (Ont.), says: "Every winter I suffered from chapped hands, but I have found a cure in Zam-Buk. Applied at night, it heals the cracks by morning, and takes away all the soreness."

Similar effects follow its use for eczema, scalp sores, blood-poisoning, ulcers, ringworm, children's sores, cuts, burns, and bruises. It also cures piles. All druggists and stores sell at 50c. a box; or post free from Zam-Buk Co., Toronto, for price.

Consumption Book FREE



This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma, or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure.

Write at once to the Yonkerman Consumption Remedy Co., 1260 Rose Street, Kalamazoo, Mich., and they will send you from their Canadian Depot the book and a generous supply of the New Treatment, absolutely free, for they want every sufferer to have this wonderful cure before it is too late. Don't wait—write today. It may mean the saving of your life.

A young lady desirous of buying a silk gown in one of the new "shot" effects recently asked a dry-goods clerk to show her such silks. She did not see the coloring she wished, and said to the clerk: "Will you show me something shot with red?" The man looked somewhat disconcerted for a moment, and then placidly replied: "They ain't shooting them with red this year, ma'am."

Tobacco Habit.

Dr. McTaggart's tobacco remedy removes all desire for the weed in a few days. A vegetable medicine, and only requires touching the tongue with it occasionally. Price \$2.

Liquor Habit.

Mark's results from taking this remedy for the liquor habit. Safe and inexpensive home treatment; no hypodermic injections, no publicity, no loss of time from business, and a cure guaranteed. Address for consult Dr. McTaggart, 75 Yonge Street, Toronto, Canada.

GOSSIP.

PIGS MADE PAYABLE.

At the shortest, it takes the breeder of horses seven or eight years to see the third generation of his stock, but the pig-breeder can see the third generation within two years, and this not in the form of one solitary animal, but in a whole crowd of some 200 or more. At a rough estimate, the first litter may produce five females; these, in their turn, may each produce another five, making twenty-five sow pigs for the second generation. These twenty-five gilts, of exactly the same breeding, may now be mated to four or five different boars, when they will bring fourth, for a third generation, an average of eight pigs each, including the males. Amongst these 200 youngsters there will be likeness and dissimilarity sufficient to absorb the interest of the most studious breeder. So said Mr. Geo. Bruce in Aberdeen recently.

Mr. R. J. Doyle, of Owen Sound, Ont., advertises in this paper red and white building brick, drain tile, and cement chimneys. The brick and tile are made from the celebrated Shallow Lake clays (where the yards are situated), and are in every respect a first-class article. Farmers who intend draining this summer, and live within a reasonable distance from each other, should club together and order in car lots, and have them shipped to their nearest railroad station. The cement chimney was patented in 1899, and is manufactured of Portland cement and fire clay. They are made and shipped in sections from one to two feet long. When erected, and sections are cemented together, the whole chimney becomes one solid artificial stone. They are used extensively in the newer counties, where brick and lime are not available at a reasonable price. Mr. Doyle is also a lover of good Shorthorns, and his herd, although considerably reduced, owing to recent sales, still number about 40 head, among which are several exceptionally fine young bulls that will be priced right.

TROUT RUN AYRSHIRES.

For eighteen years the Trout Run herd of Ayrshire cattle, the property of Mr. Wm. Thorn, of Lynedoch, Norfolk County, Ont., has been acknowledged as one of the best herds in Western Ontario. Selected and bred for production, with a careful weeding out of all that did not show a substantial profit, the herd as it stands is one that is paying the owner big dividends. Last summer, as is well known, was a particularly bad one for pasture, yet the herd, which, by the way, are all young, none being over four years of age, made an average of milk-production per head of 45 lbs. a day, of which the factory and condenser people's test gave 4 per cent. of butter-fat, an excellent showing indeed. Half a dozen of the females are imported, and several of the others are bred from imported stock. The type and quality of the herd are modern and high-class. The main stock bull is Imp. Holhouse Pilot, that as a yearling won first at London, and second at Toronto. He is a grand individual, and is proving a sire of superior excellence, his get showing a remarkable uniformity of type and smoothness. Second in service is Imp. Garclaugh Goldfinder, bred by that noted breeder, Andrew M. Baird. In color this bull is nearly all white, an exceptionally smooth young bull. He is now a year old, and is for sale, as Mr. Thorn cannot keep two stock bulls. Anyone wanting a high-class stock bull should look after this one, as he can be bought well within his value. Another bull for sale is the yearling, Carmen's Hero, by the stock bull, and out of a cow that gave 40 lbs. of milk at her first freshening, and whose sire and dam were both imported. In females for sale are six two-year-old heifers, all in calf to the stock bull; twelve yearling heifers, with imported sire, and younger ones, both bulls and heifers. Mr. Thorn reports inquiries and sales as the best in his experience, and trade continually extending. His stock is right, and his prices moderate. One cow that he sold last summer was tested for one week, and, on ordinary feed, made over 14 lbs. butter. She is a sample of the kind that constitutes the herd of 30 head. Lynedoch is seven miles south-west of Delhi Station, G. T. R.

The seven-year-old imported Hackney stallion, St. Regulus, is advertised for sale in this issue, by James Blackburn, Creemore, Ont.

Mr. Hugh Clark, of Brampton, Peel County, Ontario, whose death occurred last month, is believed to have been the first to import pure-bred Jersey cattle into Ontario, he having made an importation from New York State some forty years ago, of strong, deep-bodied, heavy-milking cows, of broken color, which proved very profitable dairy workers, and the blood of which greatly improved the dairy stock of the district, which has continued to hold an enviable reputation for high-class Jerseys. Mr. Clark was also a pioneer in the introduction of improved labor-saving dairy utensils, some of which he invented, and others imported from the United States. His career as a dairyman was a striking illustration of the influence of a good example in furthering the interests of an important and profitable industry.

Official records of 155 Holstein-Friesian cows were accepted by the American Holstein Association from January 12th to January 25th, 1909. Considered as a herd of 155 animals, of which somewhat less than one-half were heifers with first or second calves, the herd produced in seven consecutive days, 62,384.3 lbs. of milk, containing 2,108.656 lbs. of butter-fat; thus showing an average of 3.38 per cent. fat. The average production for each animal was 402.5 lbs. of milk, containing 13.604 lbs. of butter-fat; equivalent to 57.5 lbs., or nearly 28 quarts of milk per day, and 15 1/2 lbs. of the best of commercial butter per week. The most prominent among the senior four-year-olds is Kiatta Mercedes Wayne, 20,525 lbs. fat, from 598.9 lbs. milk.

SHORTHORNS AT AUCTION.

One of the coming events of the season of interest to farmers and breeders of Shorthorn cattle, is the auction sale of pure-bred Shorthorns by R. H. Reid & Sons, Clover Lea Stock Farm, Pine River, Ont., eight miles from Ripley, on the G. T. R., to be held Thursday, March 4th, next. The offering consists of six bulls, 11 to 15 months; seven heifers, 14 and 15 months, and three young cows, heavy in calf. This herd of cattle, which is well known throughout the country to be one of excellent breeding and character, renders comment almost unnecessary. The young things they are offering are all sired by their stock bull, Golden Cross (imp.), considered by good judges to be one of the best sires in Ontario. He is not only a bull of show quality, but his breeding is gilt-edged. Among these young bulls are individuals with quality enough to head high-class herds. This is a bold statement, but it will be found correct. Consequently, those in the market for a bull will do well to attend the sale. Terms are very liberal; eight months' credit, or 6 per cent. per annum off for cash. Catalogues will be mailed on application.

W. STEWART & SON'S AYRSHIRES.

Year by year a steady improvement is perceptible in the type and producing qualities of the well-known Menie herd of Ayrshire cattle, the property of Messrs. Wm. Stewart & Son, Menie, Ont. The Messrs. Stewart certainly were on their luck when they purchased the grand bull, Queen's Messenger of Springhill, a son of the noted champion, Imp. King of Beauty, and of the no less noted champion cow, Imp. Queen of the Soncies. So richly-bred on winning lines, this bull is proving a sire of a very high order, his get shipped to many points in Canada and the United States giving the best of satisfaction in every case. Just now there are in the herd about thirty, all told, which is considerably below the usual number. Several splendid sales lately have reduced the herd about one-third, four head going to Mr. Gilbert McMillan, of Seattle, Washington Territory; five to Minnesota, two to New York, and others to different parts of Canada, the whole making 1908 a record year for the firm in sales. The milk yield for the herd last summer, despite the shortage of pasturage, was from 45 to 50 lbs. a day, that showed an average test of 4.3 per cent. butter-fat. For sale are females of all ages, and some August bull calves that look like making something exceptionally nice.

ROOFS THAT NEVER WEAR OUT

Sea Green or Purple Slate

is nature's own product—not man made. Quarried from solid rock—split into convenient form for laying, and then in its natural state ready for the roof.

SOLID ROCK CAN NOT WEAR OUT

It can't burn, rust, warp, crack, tear or decay. That's why Sea Green or Purple Slate, Roofs never wear out and never require painting and repairing like all other roofing. Sea Green or Purple Slate Roofs are suitable for any building, new or old. Give perfect protection. Reduce insurance rates because spark and fire-proof. Afford clean, cistern water. Not affected by heat or cold. First cost—only a trifle more than short lived roofing. Settle your roof question for all time. Don't spend more money for poor roofing. Write to us for our free book "ROOFS"—it will save you money. Give name of your local roofer. Write today.

AMERICAN SEA GREEN SLATE CO. Box 3 Granville, N. Y.



Healthy Chickens

A high or low death rate is usually the difference between successful and unsuccessful poultry raising. REX Flintkote ROOFING is used for roofs and sidings on profitable poultry plants, because it keeps the houses warm and dry, with even temperature and humidity.

As a result, fewer chickens are lost and the layers are more productive in poultry houses covered with

REX FLINTKOTE ROOFING

This roofing is fire-resisting, rain and snow-proof, and very durable. REX Flintkote ROOFING affords more kinds of protection to your buildings and their contents than any other roofing. Everything needed in laying comes with roll—any laborer can lay it.

Send for Free Samples

and test them for fire, water, pliability and appearance. We also send a booklet about roofing, full of interesting photos of REX Flintkote roofs everywhere.

"Making Poultry Pay" is a booklet worth many times the postage (4 cents) which is all we ask for it. Send for it.

J. A. & W. BRD & CO. 20 India St., Boston, Mass. Canadian Office: 29 Common Street, Montreal

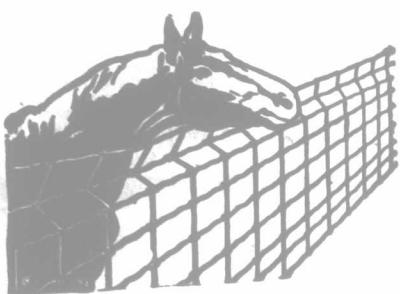
"What have you in the shape of cucumbers this morning?" asked the customer of the new grocery clerk. "Nothing but bananas, ma'am," was the reply.

Little Freddie was told by the nurse one morning that the stork had visited the house during the night and left him a little baby sister, and asked if he would like to see her. "I don't care nothing about the baby," said Freddie, "but I'd like to see the stork."—The Delineator.

Advertisement for MENDETS, a product used for sealing leaks in various materials like brass, copper, granite, etc. Includes an illustration of the product and contact information for Dept. K, Collingwood, Ont.

Winter Feeding of Stock.

The feeding of farm stock requires good judgment, as well as good food. The food given may be of the very best, and the ration properly balanced, but if it lacks the aromatic qualities of a good pasture, the best results cannot be obtained. The best substitute for those qualities is *Herbageum*. It is not a food, and practically has no food value in itself, but given regularly with the ordinary food ration, the very best possible results obtainable from the food given will be secured. *Herbageum* is recommended by the best breeders for dairy cattle, calves, sheep, pigs, poultry and horses.



Horses and cattle have a habit of leaning and pressing down upon the top wire of a fence.

If persisted in, this continual pressure will ere long cause the long stays on the ordinary fence to bend, then break.

And your fence becomes disfigured.

But not so with the

DILLON

Hinge-Stay Fence

Pressure of a horse, or other animal, on the top wire brings the short hinge-stays into action.

As shown in the picture.

When pressure is removed the fence springs back into place again.

And, for the same hinge-stay reason, heavy snows or climbing on the fence do not disfigure or injure the DILLON.

Just write for catalogue containing the whole story of Dillon superiority.

MONARCH

Stiff-Stay Fence

This is an all No. 9 Hard Drawn Steel Wire Fence.

The lock is the twin of one that has been in use for years in the United States, and pronounced the best lock on a stiff-stay fence.

Each end of the Monarch lock is hooked securely over the lateral.

Cannot spread or loosen.

May we send catalogue with full description of this different kind of stiff-stay fence?

FENCE AGENTS

Our agents succeed the best because our line is the most complete.

They have both a hinge-stay fence and a stiff-stay fence to offer prospective customers.

As well as a complete line of ornamental fences and gates.

Just write for our agency plan.

The Owen Sound Wire Fence Co.

LIMITED

OWEN SOUND, ONTARIO.

QUESTIONS AND ANSWERS.

Miscellaneous.

SATISFACTORY ANSWERS— MORE QUESTIONS.

Editor "The Farmer's Advocate":

A short time ago I asked, through this paper, for information on acetylene gas for lighting and cooking purposes, and in a short time received splendid information from J. B. T., Huron County. Many thanks to J. B. T. for his kindness.

I would like to ask you and your readers a few more questions.

1. I wish to seed about eight acres in the spring with alfalfa. Is it necessary to treat the seed? The field never had alfalfa on before, but it has had plenty of red clover.
2. Will a bushel of barley per acre be thick enough to sow with it?
3. Is a sidehill, sloping to the north, any better than a sidehill to the south?
4. Do you and your many readers think that I am losing money by not building a silo? I keep twelve or more cows on one hundred acres, and grow five or six acres of corn, and could grow more.
5. If you consider that I should build a silo, how would it do to build a round stave silo in one corner of the barn, letting it go from the basement up through one corner of the mow to roof? It would empty out into a hallway and be handy to feed from. The silage would not freeze, nor would the silo need a roof. It is hard to get material in this section to build cement.
6. How long would a stave silo last in a barn?
7. What kind of material would you use?
8. Do you know of any company that is making stave silos?
9. What kind of corn should I grow for a silo? W. G. F. Lennox Co., Ont.

Ans.—1. It is not absolutely necessary, but the chances are that inoculation, if carefully attended to, would insure a more vigorous growth and contribute to the success of the seeding. The fact that red clover has grown on this field will not lessen the need for inoculating the alfalfa seed. The bacteria which work on red clover are entirely different from those that work on alfalfa.

2. Yes; it is not necessary to sow the barley at all, but if a crop is wanted, four or five pecks of barley per acre is all right.

3. We do not know that it is.

4. There is not a shadow of doubt in our minds but that you would make more money by building a silo. By doing so, and growing 12 or 15 acres of corn, there is no reason why 18 or 20 cows could not be profitably maintained on 100 acres. Besides the corn, grow clover, and, if possible, alfalfa.

5. As a rule, we favor building a concrete silo, and placing it outside the barn, but in this case, and having in view the district from which our correspondent writes, we should say that if our inquirer has more barn room than he needs, if the silo can be built 25 feet deep or more, and if good drainage can be provided, so as to keep the bottom dry and clean, it might be wise to build as suggested.

6. If set on a cement bottom, the silo would probably give good service for 10 or 15 years, or perhaps more, and might then be taken down, the decayed ends sawn off the staves, and the silo re-erected. Let us hear the experience of readers on this point.

7. Preferably pine, spruce or hemlock. Short material can be used by splicing, taking care to break joints, setting, say, one 12-foot stave on a 14-foot, then a 14-foot stave on a 12-foot one, and so on.

8. There are companies in the United States which make stave silos for sale, and we believe there are one or more firms doing business in Canada. Undoubtedly these would find it to their advantage to advertise in "The Farmer's Advocate."

9. Grow a variety which may usually be depended upon to reach the late-dough stage of maturity. If glazed, so much the better. Longfellow, White Cap Yellow Dent, Compton's Early, and Leaming, are among the varieties most likely to prove satisfactory in your district. It might be well to try some of each, but do not plant them mixed.

"In choosing Wall-paper, like choosing a Wife, it is well to Remember that we must Live With our Selection."

THREE-FOURTHS of what meets the eye in a room is *wall-decoration*.

The Walls therefore supply the key-note to a Home, making it seem cheerful or depressing—restful or irritating—inviting or repellent—elegant or vulgar—according to their coverings.

And, this Wall-created impression cannot be corrected, nor materially compensated for, by the utmost taste in carpets or furniture.

Many people who realize this "Wall-paper Influence" do not know *how* to control it, nor *how* to make use of it.

A book recently published, and aptly entitled "Wall-Paper Influence on the Home," treats this subject in a practical manner—without technical terms.

Any Home-maker who will spend an hour in reading it may master the secrets of—

—Color-effect upon mind and mood,
—Pattern-effect in raising or lowering the apparent height of a room, or in making a room seem larger or smaller,

—Effect of both in making a room "feel" coldly dignified, or invitingly cordial, cosy and comfy.

The Why and How of these Influences are, of course, known to, and practiced by, the Master-Decorators.

But, this little book of Brightling's carries the information to where it is most needed, viz.—to the Owners and Occupants of moderate-cost-Homes, to people of taste and intelligence who cannot afford the services of a Master Decorator, nor the high-priced materials he usually employs.

Neatly bound in Cloth, with a handsome portfolio of "Brightling's Studies" in Color and Design.

The book is well worth a dollar but a limited number will be sold by mail or through your wall paper dealer, at the little price of 25 cents per copy.

Write today, if you want a copy, to the Publishers,—the Watson-Foster Co., Ltd., Ontario St., East, Montreal

YOU CAN BUY THE

Sherlock-
Manning

ORGAN

ON EASY TERMS.

You can arrange to purchase a Sherlock-Manning organ on terms that will best suit your convenience, therefore you should delay no longer in placing one in your home. The Sherlock-Manning pleases and satisfies the eye, ear and pocketbook.

Sherlock-Manning Organ Co., London, Ont.



RAW FURS

100,000 MUSKRAT
5,000 RED FOXES

50,000 COON
20,000 SKUNK

WANTED IMMEDIATELY.

WE ALSO BUY OTHER FURS.

Ship to us at once and satisfy yourself that WE are the VERY BEST buyers of Raw Furs in Canada.

THE MONTEITH, STROTHER FUR CO., 11 & 13 CHURCH ST. TORONTO 1

DRAFT SPRINGS Are Easy on Horses and Extend Their Working Life.

CANADIAN PACIFIC

SPECIAL TRAINS FOR SETTLERS

travelling to the West with live stock and effects will leave Toronto at 10.15 p. m. every Tuesday during March and April.

Settlers travelling alone and with their families should use regular trains, leaving Toronto daily at 10.15 p. m. Colonist and Tourist Sleepers attached. C. P. R. is the only direct and through car line to the West.

Apply to Nearest C. P. R. Agent.

SUBSCRIBE FOR "THE FARMER'S ADVOCATE AND HOME MAGAZINE."

GOSSIP.

Attention is again directed to the advertisement in this paper of the dispersion sale of the entire herd of registered and high-grade Jersey cattle belonging to Mr. R. Reid, of Berlin, Ont., to be sold by auction, at the farm at Bridgeport, two miles from Berlin, on Thursday, March 4th, when 31 registered Jerseys and 19 high-grades will be sold. A rare chance to get good specimens of the butter breed, at the buyer's own price. The terms are easy, and the place easily reached. Sale at 1 p. m.

The elections for vice-presidents for the various Provinces, to the Clydesdale Horse Association of Canada, have resulted as follows: For Ontario (elected at annual meeting), Peter Christie, Manchester, Ont.; Quebec, Robert Ness, Howick, P. Q.; Manitoba, John Graham, Carberry, Man.; Saskatchewan, Alex. Mutch, Lumsden, Sask.; Alberta, J. A. Turner, Calgary, Alta.; British Columbia, F. B. Pemberton, Victoria, B. C.; Maritime Provinces, W. W. Black, Amherst, N. S.

GOSSIP.

Messrs. Stride & Son, of Chichester, Sussex, England, announce in our advertising columns, that on August 18th and 19th, they will sell by auction, South-down ewes to the number of 6,000, and 500 rams and ram lambs, while on September 15th they will sell 4,000 ewes and 500 rams of the same breed.

Mr. John Miller, Brougham, Ont., in ordering a change in his advertisement of Shorthorns, writes: "I never had a better lot of young bulls for sale than at the present time. They are all reds and roans, and of the very best breeding. Now that Shorthorns are beginning to sell again, the first thing breeders should do is to get a good bull. I have a few extra nice two-year-old heifers in calf to the great imported bull, Uppermill Omega, that I will sell at a reasonable price. Mr. Miller's railway stations are Claremont, C. P. R., and Pickering, G. T. R."

VALLEY HOME SHORTHORNS AND BERKSHIRES.

The Valley Home herd of Shorthorn cattle, the property of Messrs. S. J. Pearson & Son, of Meadowvale, Ont., was visited by a representative of "The Farmer's Advocate" a few days ago. It has been our privilege on several occasions in the past to visit this noted herd, and we are pleased to say that on this occasion we found a marked improvement, particularly in the young things, the get of the grand stock bull, Royal Diamond 2nd =58469, a son of Imp. Royal Diamond, and out of Imp. Mina of Kinellar. This bull is one of the kind that goes on improving. He is immensely thick all over, covered with a wealth of natural flesh, evenly put on, and smooth, but his great value lies in his superiority as a sire, his get showing a remarkable uniformity of his low-down, thick-fleshed type. In service, to a limited extent, is a son of his, Royal Luxury =65622, a grandson of King Edward's great bull, Luxury, being out of Imp. Glosterina 9th, by Luxury. This bull is extremely short of leg and extremely thick of body; a right good sort. The herd is now some fifty strong, on blood lines being very strong in Nonpareils, other strains being the Glosterina, Mina, Marchioness, Mina Maid, Jilt, and Rosebud. Their pedigrees show a grand array of top sires of choicest breeding. The Messrs. Pearson are overstocked, and in order to save the trouble and expense of an auction sale, will sell at greatly reduced prices for the next two months, fifteen one- and two-year-old heifers of the above-named families, and sired by the stock bull, and by Royal Scot =49813, a son of Imp. Scottish Pride, dam Imp. Rosie 3rd, a Jilt-bred cow. Here is an opportunity that should not be lost sight of by breeders, as among the lot are some excellent young things that will surely double in price within twelve months. They are also offering at living prices several young bulls that are away the best lot ever bred in this noted herd. Nonpareil Diamond =73993, is a red yearling, by the stock bull, Royal Diamond, and out of Nonpareil 60th, one of the heaviest-milking Shorthorn cows in Canada, whose milk shows a test of 5 per cent. butter-fat, estimated butter-production 15 lbs. in 7 days; and the bull is one of the low-down, thick, smooth kind; a real good one. Another is Nonpareil Banff =73992, by the stock bull, dam Nonpareil 62nd, a daughter of the cow named above. This is a growthy young bull, with a splendidly-fleshed back. He, too, is a red yearling, and a right good one. Another red yearling is Diamond Chief =73990, by the same sire, dam Lady Brant 7th, a cow of grand milking qualities. This is one of the plums of the young bulls, very thick and smooth. Other young bulls are a ten-months-old Rosebud, and a ten-months-old Lady Brant; visitors will not be disappointed in these young bulls. In Berkshires there are for sale several young sows safe in pig, daughters of Oxford Duchess, a sow that has produced eight litters that totalled exactly 100 pigs, and her daughters in breeding are just as prolific as their dam, which makes these young sows particularly desirable, and they are a grand, smooth lot. There is also for sale one ten-months-old boar, The Doctor, by Imp. Myrtle's Prince, dam Willowdale Daisy, by Imp. Polgate Doctor. This young hog will please the buyer, as his type and quality are right.

A WARNING TO WOMEN

AN EVENING PARTY AND ITS SEQUEL.

How lamentable and yet how true it is that our social pleasures are responsible for most of our ills. This is due largely to neglect and thoughtlessness. A slight chill or cold contracted on leaving an overheated room after the system has been lowered by breathing the poisoned air, develops more rapidly than otherwise. Neglect this cold or cough and you will have sown the seeds of disease which rapidly germinate. Mothers should therefore warn their loved ones to take the greatest care of themselves when forced to mix with large numbers of people in close confinement and at all times (if they would preserve good health) use Psychine, the greatest of tonics.



OFF TO THE PARTY

The pictures given here tell their own story. The timely use of PSYCHINE "The Greatest of All Tonics" has saved many of Canada's fair daughters and her sons from an early grave. The following testimonials prove this:—

CHILD'S LIFE SAVED!

Mrs. E. Obediah of Ohawekin, Ont., declares that PSYCHINE saved her child's life. It was then suffering from pneumonia. This was in March, 1907. On August 11th, 1908, 17 months after, she wrote: "The condition of my family's health is decidedly good. I give PSYCHINE to each member of my family, eight in number, and I consider their good health is due to PSYCHINE which we recognize and believe to be the greatest of Tonics. My husband and myself pin our faith to PSYCHINE because it has done so much for us in times past when hard pressed with sickness. I would be glad if you referred me to any skeptical person and you can use my name for this purpose."



AFTER EFFECTS

MOTHER AND BABY BENEFITED.

Mrs. Wm. Haystead of Falding, Ont., says:—"I was very weak and run down when I commenced using PSYCHINE. I used two bottles and now feel like a new person, I also gave PSYCHINE to my little boy who had pneumonia, with good success. I shall always recommend PSYCHINE."

NO USE FOR DOCTOR NOW.

"I am glad to tell you I have not had to have the doctor since I have used PSYCHINE. I am now in good health, also the family. I used PSYCHINE for my boys who were growing too fast and were always pale and languid. PSYCHINE is now our family remedy," writes Mrs. Agnes Comber, 92 Wellington St., London, Ont.

WHAT PSYCHINE IS AND DOES

PSYCHINE is the greatest strength restorer and system builder known to medical science. PSYCHINE regulates and tones up all the vital organs. It cures stomach troubles, aids digestion, destroys disease germs in the system. The greatest of tonics, it makes the blood pure, rich and healthy, giving renewed vigor and energy to those who are weak and tired and run down.

USE YOUR OWN JUDGMENT!

There are times when a choice has to be made between following the advice of a physician and taking the responsibility of using Psychine without or in opposition to his advice. You have the fullest assurance that you will be perfectly safe and justifiable in taking Psychine irrespective of any physician's advice, and even contrary to it. The physician that opposes its use is either out of date and not in touch with the most successful systems of treatment, or his own interests are put before those of his patient. Such a system of treatment as Psychine, which has thousands of the most wonderful cures standing to its credit, cannot but be endorsed by every physician to whom the life and health of his patient is a matter of first importance. The best physicians, who have without prejudice looked into the great work Psychine is doing for humanity, are recommending it to many of their patients, and are unstinted in their praise of this remedy, the equal of which the world has never seen.

TRIAL OF PSYCHINE FREE

Send this coupon with name and address to Dr. T. A. Slocum, Limited, Toronto, and a TRIAL BOTTLE of PSYCHINE will be mailed you FREE.

TRY IT AT ONCE, DON'T WAIT UNTIL YOU ARE WORSE. F. A., LONDON.

Use PSYCHINE for COLDS, LOSS OF APPETITE, WEARINESS, ETC.

PSYCHINE

PRONOUNCED SI-KEEN

THE GREATEST OF TONICS FOR HEALTH AND ENERGY

CALDWELL'S MEAL

A SHORT CUT TO RESULTS.

If you want early maturity, fat and healthy stock, more and better milk, or if you are getting animals ready for the show-ring, try a ton of Caldwell's Meal. Aside from its own enormous feeding value, its delicate bouquet and unique digestive action make it indispensable to the thrifty feeder. It costs nothing extra to use, as it is substituted for part of the ordinary feed, and not added. Shipped to any railway station in Ontario, freight prepaid, at \$34 per ton. Manufactured by:

A. C. CALDWELL, EAST TORONTO, ONT.

BRACELET WATCH

GIVEN FOR SELLING

This Dainty and Reliable Ladies' Watch, in a neat leather Bracelet, is given for selling \$4.50 worth of lovely picture postcards, Valentine, Easter, fancy, birthday, flower, views, etc., highest quality, beautifully colored. At 6 for 10c they go, like hot cakes. This watch can be worn with the bracelet or not, as they go, like hot cakes. This watch can be worn with the bracelet or not, as they go, like hot cakes. This watch can be worn with the bracelet or not, as they go, like hot cakes. This watch can be worn with the bracelet or not, as they go, like hot cakes. This watch can be worn with the bracelet or not, as they go, like hot cakes.

I Cured My Rupture

I Will Show You How to Cure Yours FREE!

I was helpless and bed-ridden for years from a double rupture. I wore many different kinds of trusses. Some were tortures, some positively dangerous, and none would hold the rupture. The doctors told me I could not cure it without a surgical operation. But I fooled them all, and cured myself by a simple method which I discovered. Anyone can use it, and I will send the cure free by mail, postpaid, to anyone who writes for it. Fill out the coupon below and mail it to me to-day.

Free Rupture-Cure Coupon.

CAPT. W. A. COLLINGS,
Box 555, Watertown, N. Y.

Dear Sir,—I wish you would send me your New Discovery for the Cure of Rupture.

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

Little Billie—Mayn't I stay up, ma, and hear Mr. Smith sing? (Mr. Smith sings.) Little Billie (going cheerfully)—I'd as soon 'ave bin in bed.

Draft Springs Pay for Themselves.

GREAT DISPERSION SALE

AT ANNANDALE STOCK FARM, TILLSONBURG, ONTARIO, ON
Thursday and Friday, March 11 and 12, 1909.

100 Registered Holsteins and Ayrshires 100
20 BROOD SOWS, 20 SHOATS, AND 2 BOARS.

Heavy and Light Horses, Farm Machinery, etc. Absolutely everything goes, as the owner is retiring from farming.

Of the Holsteins: There is one daughter of Calamity Jane, and one of Calamity Jane 2nd; 28 of the get of PRINCE POSCH CALAMITY, son of Calamity Jane, 25.1 lbs. butter a week, sire's dam, Alta Posch, 27.1 lbs.—world's record for a 2-yr.-old; 7 of the get of King Veeman De Kol, dam Jessie Veeman A, 26.25 lbs., sire's dam, Sadie Vale Concordia, over 30 lbs. butter in 7 days. The blood of the best performers is found in members of this herd, and nearly all those old enough to be in milk are in the A. R. with large records. Idaline Pauline De Kol, record 90.5 lbs. milk 1 day, 593.6 lbs. in 7 days. A son and daughter of hers, and many other goods, will be sold. The service bulls are Paladin Ormsby and Idaline Paul Veeman, whose 3 nearest dams average 27 lbs. butter in 7 days. These bulls will be sold, many of their get, and cows with calf to them.

The Ayrshires include the great public test cows: Jean Armour, Annie Laurie 2nd, and their sons and daughters. There will be 13 Ayrshire cows; all that are milking are entered in the Record of Performance, and there are many good young things: the get of Scottie, whose dam has a record of 12,733 lbs. of milk in ten months, and of Stodocana Advance, whose dam, Lily, and her dam, Almedia, are R. of P. cows, the latter with a record of 11,357 lbs. milk in 1 year. He will be sold, and a son of his from Jean Armour and others. Catalogue tells all about them.

The horses include: 1 CLYDE MARE, 8 yrs. old; wt. 1,710 lbs.; with foal. SPAN OF HACKNEYS, 2 and 3 yrs. old, and several A1 work horses used to 3 and 4 horse hitches.

All the farm machinery: Potato Cutter, Planter, Sorter, Sprayer and Digger, Upright Boiler (6 h. p.), 2 Choppers, Haying and Grain Harvesting Machinery—for fast work and labor-saving—3 and 4 horse hitches.

SEED CORN, SEED POTATOES, CLOVER SEED.

Everything, in fact, of use on a large, up-to-date farm.

Meeting will be held in opera house nights of sale. Addressed by able speakers.

Terms: Time, up to 1 year, to suit purchaser, on approved notes bearing 6 per cent. interest. Sale, under cover, commences at 1 p.m. 11th, and 9 a.m. 12th. Cattle will be sold 12th March. Everything else 11th.

AUCTIONEERS:

Maj. E. R. Almas, Maj. T. M. Moore, Maj. E. J. House, Col. D. L. Perry, Col. L. G. Pearce,
Norwich, Springfield, Tillsonburg, Columbus, Ohio, Tillsonburg.

Catalogues by 26th February. Write:

GEO. RICE, PROP., TILLSONBURG, ONTARIO

SCAB

If the Canadian sheep men can succeed in removing scab from their flocks, it is most likely that the American Quarantine of 30 days against Canadian sheep will be removed.

COOPER'S FLUID OR POWDER DIP

will cure and prevent Scab, and is approved of by the Governments of Great Britain, Australia, New Zealand, the Argentine and the United States as a cure for Scab. Use COOPER'S FLUID on your sheep and you will have

NO SCAB, NO TICKS, NO LICE.

FREE BOOK.—Mention the name of this paper, and tell us how many head of sheep you have, and we will send, free, valuable booklet: "Sheep Scab and How To Cure It."

Wm. Cooper & Nephews, 152 Bay Street, Toronto.

Choice Farm Lands

FOR SALE ON EASY PAYMENTS.

In Western Canada there are great opportunities for the willing farmer. He can make money and success of farming. We have for sale the very choicest of Farm Lands in Saskatchewan, and guarantee to please the most particular. Let us tell you about them, and how others are making money here. Write at once for maps and pamphlets and full information. Our years of experience are at your disposal. All we want is to know if you are interested. Write at once.

FRACKSELL, ANDERSON & CO., REGINA, SASK.

British Columbia Office: 1210 Broad St., Victoria.

QUESTIONS AND ANSWERS. Miscellaneous.

TRUSTEES' AUTHORITY.

Have school trustees the right, or power, to build a new schoolhouse without asking, or against the wishes of the ratepayers of the section?

Ans.—Trustees have power to build a new schoolhouse on the old site without consulting the ratepayers. If money is required to be raised by debenture debt, the consent of the ratepayers would then require to be obtained.

A. H. U. COLQUHOUN,
Deputy Minister of Education.

CONTAGIOUS ABORTION.

1. What are the symptoms of contagious abortion?

2. Is there a cure, and what is it, if there is?

3. What is the proper method of disinfection of stables?

4. Will it affect calves four or five months old, having been in contact with cows affected?

W. J. L.

Ans.—1. Contagious abortion in cows is due to a germ which finds its way from one affected cow to another, by contact, or by the cows lying on the same ground or bedding. The symptoms are usually somewhat similar to those of approaching parturition, the udders enlarging, the vulva swelling, and a reddish discharge from the genitals. Abortion early in pregnancy is often undetected, and the herdsman knows nothing of it until the cow shows signs of heat.

2. Preventive measures are more satisfactory than treatment. 25 drops of carbolic acid, diluted with water and mixed with feed, or given as a drench three times a day, and continued every other week for three months, is advised as best treatment for prevention and cure, together with daily washing of the hind parts and sprinkling the stable floors with a disinfectant, consisting of 1 part of corrosive sublimate to 2,000 parts of water, heated to 100 degrees Fahr. The sheath of the bull used should also be syringed with the same solution. Corrosive sublimate is a deadly poison, and should be handled as such. Creolin 1 to 1,000 of water may be used instead.

3. Sprinkling or spraying the solutions above named, or with any of the coal-tar solutions advertised.

4. It is quite possible, and even probable, though we are not aware of a certainty of such occurrence.

BREEDING MARE—STERILE HEIFER.

1. I have a Thoroughbred mare I would like to breed to a horse so as to get a colt that would make a salable horse for city purposes. She is dark brown, stands 16 hands 1 inch high, and weighs 1,250 pounds. What should I breed her to, and when?

2. I also have a two-year-old heifer that has been to the bull three or four times without any result. She comes in season every three weeks. Is there any chance of getting her with calf?

J. A. S.

Ans.—If the mare is eligible to registry as a Thoroughbred, we would advise breeding her to the best Thoroughbred horse available. If she is mixed breeding, it would be as well to breed her to a first-class Hackney horse. We do not think there is any advantage in having foals come early in the spring. We would not breed her earlier than the middle of May, which would bring the foal about the middle of April next year, if she proved in foal to the first service. If not, there would be no disadvantage in having the foal come any time in May or June.

2. Try a change of bull, and use a young bull. If she still fails to breed have the os. or opening to the uterus, opened or distended when she is in season. The operation may be performed by a rotary motion of the forefinger, distending the passage until two fingers pass through. In some cases it is necessary to use a pointed piece of hardwood to effect an entrance. Some breeders claim to have had satisfactory results from this operation. The cow should be served within an hour or two after the operation. If she does not conceive to the first service, she may at the next period of oestrus.

Nitrate of Soda

(Plant Food)

NITRATE SOLD IN ORIGINAL BAGS.

The Nitrate Agencies
Company

1103 Temple Building,
TORONTO, CANADA.

Orders Promptly Filled—Write
for Quotations and Literature.

For Lamé Horses

For curb, splints, spavin, wind puffs, sprains or swellings of any kind, use Tuttle's Elixir. Results are quick and permanent. Tens of thousands of farmers, the owners of great city stables, the race horse men, all swear by

Tuttle's Elixir

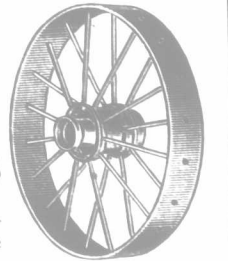
Best for colic, distemper and founder. Also makes the most effective leg and body wash.

Only 50 cents a bottle at all dealers. Keep Tuttle's Worm Powders, Condition Powders and Hoof Ointment on hand also. If not at your dealers, we'll ship by express.

Valuable Veterinary Book Free. Write for a copy today. Full of important pointers to every horse owner. A 100-page illustrated guide free, but it is worth dollars.

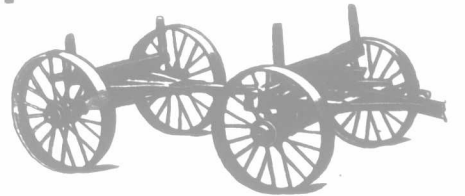
Tuttle's Elixir Co.
66 Beverly St., Boston, Mass.
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End Your Tire Troubles



No bother-some, expensive resetting of tires. No wooden spokes to rot. You end your tire troubles with our Low, Wide-tire Steel Wheels. Lighter, stronger, cheaper than wooden wheels. Guaranteed not to break in coldest weather or on rockiest road. Fit any size axle. Catalogue free.

Dominion Wrought Iron Wheel Co., Limited, Ontario.
Orillia.



GIVEN

FOR SELLING
PICTURE POSTCARDS
6 FOR 10c.



Guaranteed Silver Nickel Stemwind Ma.'s Watch for selling only \$3 worth of Lovely Picture Postcards, Valentine, Easter, Views, Birthday, Flower, etc., highest quality, beautifully colored. At 6 for 10c they go like hot cakes. Send your name and address plainly written. The Gold Medal Premium Co., Card Dept. 42 A Toronto.

FOR SALE: IMP. HACKNEY STALLION,
St. Regulus (252) 9000

Color chestnut. Very superior action. Age 7 years. Sure stock-getter. Any desired information cheerfully furnished. Apply to:

**JAMES BLACKBURN, CREEMORE, ONT.
MR. A. I. HICKMAN**

Court Lodge, Egerton, Kent, England, exports pedigree live stock of every description to all parts of the world. During the spring months the export of light and heavy horses will be a specialty. Breeders should write and learn how to get in right. Mr. A. I. Hickman will be at the Bell Hotel, Gloucester, Eng., during the week of the Royal Show, and will be pleased to meet all foreign and colonial visitors there.

FOR SALE: Three Registered Clydesdale Stallions, rising four years old, also one registered brood mare, in foal to imported sire, four years old. One of these stallions is imported, others Canadian-bred. All three good heavy ones, with lots of quality. Apply to: R. T. Brownlee, Hemmingford, Que.

FREE Lightning Insurance Policy With Every Roof Covered With SAFE LOCK SHINGLES

EVERY Canadian farmer who expects to build or re-roof his house or barn should write us to-day for details of our Free Lightning Insurance Policy in connection with Safe Lock Metal Shingles.

We give it to you without any conditions whatsoever, except that you roof with Safe Lock Shingles.

Such an offer is unprecedented, but we can afford to make it because we know absolutely that Safe Lock Shingles will insure safety from lightning.

It is absolutely free. You do not have to pay one cent for this protection, either directly or indirectly.

Insurance records show that nearly one-half the fire losses on barns in Canada result from lightning. This loss, running into the hundreds of thousands of dollars, can be entirely prevented if Safe Lock Shingles are used.

We know this, and we back up our statement with a Free Insurance Policy payable under its terms in cash.

Safe Lock Shingles are sold at the same price as shingles known to be inferior in quality of steel, galvanizing and construction.

We have been manufacturing Safe Lock Shingles for over ten years, and roofs laid when we started in business are still "as good as new," to quote from hundreds of letters we have on file in our office from our pleased and satisfied customers.

In all this time these roofs have not cost one cent for repairs of any sort.

In all these years no building covered with Safe Lock Roofing has ever been destroyed by lightning.

Do you know that Safe Lock Shingles fully meet the rigid requirements of the British Government for Admiralty and other public service. Think what that means. Let us illustrate.

Every farmer knows from experience that ordinary galvanized fencing seldom lasts longer than two or three years without showing signs of rust. On the other hand, galvanized wire for Government use gives years and years of service, owing to the splendid galvanizing insisted upon.

Safe Lock Shingles are galvanized the same as Government wire, and therefore may be depended upon to give long service. We really do not know how long they will last. Safe

Lock Shingles in use for more than ten years show no signs of wear.

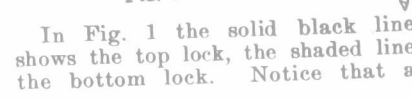
To-day we are using better material in their construction than ever, the steel is of higher grade, and the galvanizing is heavier. We have also made several improvements in manufacturing. For instance, every shingle is cut accurately to size before it is galvanized, thus protecting the edges of the shingles instead of leaving them raw and exposed to the decaying action of moisture.

We want you to remember the

thus causing a leaky roof. Safe Lock Shingles cannot be blown off, nor can they be pulled apart by warping of the sheeting, or any other cause.

Study the small illustrations on this page, and you will be convinced of the truth of this statement.

FIG. 1 In Fig. 1 the solid black line shows the top lock, the shaded line the bottom lock. Notice that a



contraction due to heat and cold. They cannot unlock.

Illustrations 3, 4 and 5 show the construction of other metal shingles.

FIG. 3 No. 3 is the old-fashioned cleat shingle now almost entirely driven from the market by the Safe Lock.

These do not always shed water, and it is almost impossible to keep them from leaking after they have been on for a season or two.

FIG. 4 Note in No. 4 that the nail is only about half way driven into the sheeting, leaving a large surface exposed to the weather.

This makes a very insecure fastening for a roof, and this is still further weakened by the springiness of the steel, which has a tendency to pull out the nails, causing a loose, leaky, rattling roof.

FIG. 5 No. 5 is a side slip pattern, similar to many now on the market.

The one shingle slips into the other, but does not lock. Shingles constructed in this way pull apart easily and must not be confused with the positive lock in our Safe Lock Shingles, as shown in Fig. 2.

Safe Lock Shingles are absolutely uniform. We have spent time and money to perfect their construction, which is fully protected by patent. They are now easier than ever to lay, and a Safe Lock roof cannot leak, if the shingles are laid in accordance with our printed instructions.

SAFE LOCK SHINGLES are the only shingles that—

1. Give you a positive guaranty against Lightning, backed up by a policy signed and guaranteed by the manufacturers.
2. Meet fully the rigid requirements of the British Government for Public work.
3. Lock on four sides, and cannot be pulled apart.
4. Have three (3) thicknesses of metal along upper edge at point of greatest strain.
5. Completely protect nails from weather.
6. Have edges galvanized after being cut to exact size.

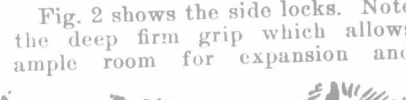
name Safe Lock. No other shingle has that name. No other shingle is a Safe Lock Shingle.

Safe Lock Shingles lock positively on all four sides. Other shingles grip only on two sides. This is not enough for a permanent, durable roof. We know of many instances of buildings covered with these shingles being entirely unroofed in a stiff breeze. Another objection is that these shingles are apt to spread apart owing to the warping of the sheeting to which they are nailed,

double fold forms the top lock instead of a single fold, thus giving twice the strength at the point where the greatest strain comes.

With Safe Lock Shingles the nails are driven full length into the sheeting, and are protected by the peculiar lock construction from any possibility of water backing up and starting rust.

FIG. 2 Fig. 2 shows the side locks. Note the deep firm grip which allows ample room for expansion and



The Metal Shingle and Siding Co.

Limited
Roofers to the Farmers of Canada
Queen St. Factory
Preston, Ont.
Branch Factory
Montreal

THE METAL SHINGLE AND SIDING COMPANY Limited
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QUESTIONS AND ANSWERS. Miscellaneous.

LAMPAS.

Two-year-old colt has lampas. Is natural to colts, or should anything be done? He does not eat his hay well, rather thin. He has had a cough for a week, and I think from the fact he sneezes, his throat is sore. There is a discharge from his nose and no discharge from his mouth. What is the dose?

3. Have you any idea why some horses never lie down in the stable, although they will roll every chance they get?

Ans.—1. Lampas is a congested or swollen state of the gums, behind the incisors, most common in horses from three to five years old. As a rule, it is better left alone. In extreme cases it is good practice to have a veterinarian scarify the swollen parts slightly with an ordinary lancet, being careful, however, not to cut back past the second bar. As a rule, the only treatment necessary is to prevent quacks and greenhorns from burning and other barbarous modes of treat-

ment. If cough continues, take 3 ozs. pulverized gum opium, 1 oz. powdered digitalis, 4 drams arsenious acid, 4 ozs. powdered liquorice root, mix and make into 24 powders. Give a powder every night in damp food. Repeat the prescription if necessary.

2. Antimony is not a safe medicine unless very carefully administered as to quantity and quality. Better consult a veterinarian as to this.

3. It is difficult to determine. Some horses are of more nervous temperament than others, which may account for the habit of standing rather than lying down. A box stall is best for such.

MAY REEVE BE SCHOOL TRUSTEE?

May a reeve hold the office of school trustee? J. McF. Ontario.

Ans.—There is no provision in the Public Schools Act that would prohibit a reeve from holding the office of school trustee; but the Municipal Act provides that no member of a public or separate school board or board of education of any city, town, or village, shall be qualified to be a member of the council of such city, town, or village.

A. H. U. COLQUHOUN, Deputy Minister of Education.

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T. Brownlee.

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QUESTIONS AND ANSWERS. Veterinary.

LYMPHANGITIS.

Horse is sore on inside of one hind leg and is somewhat swollen in the hock. I thought it was lymphangitis and gave him an aloetic purgative, but he is not much better. H. D.

Ans.—Your diagnosis is doubtless correct. Feed lightly on bran and hay. Bathe the sore and swollen parts well four or five times daily with hot water, and after bathing, rub with camphorated liniment, with which any druggist will supply you, or you can buy the drugs and make it yourself. Take 4 drams camphor, 4 drams oil of turpentine, 2 ozs. tincture of arnica, and 8 ozs. alcohol. Mix in a 10-oz. bottle. Allow rest until the soreness and lameness disappear; then give regular exercise. The swelling will doubtless reappear at night for a time. In order to avoid a recurrence of the trouble, see that he gets daily and considerable exercise. V.

ERUPTIONS ON FETLOCK JOINT

Mare's fetlock swelled last spring and she went lame. The swelling increased and broke. There was a large opening. It healed, and lameness disappeared, but a thickening remained. In the fall it again swelled, but she did not go lame. It broke in several places. Lately another abscess formed and broke six or eight inches above the fetlock. W. J. McL.

Ans.—This is an eruptive trouble that will prove hard to treat. The opening should be enlarged so that the skin will not heal until the inner tissues have become healthy. The wounds should be dressed three times daily with a 5 per cent. solution of carbolic acid. Give her a purgative of 8 drams aloes and 2 drams ginger, and follow up with 4 drams hyposulphite of soda three times daily for two weeks. While careful treatment should result in checking the recurrence of abscesses, it is probable a chronic thickening of the leg will remain. V.

Miscellaneous.

CARRIAGE OF MAIL.

1. Has a mail-carrier any right to both wheel tracks when meeting vehicles on the road?
2. If so, has he any right to carry boxes or crates, one on either side of his vehicle, making a load in the neighborhood of ten feet wide?

A SUBSCRIBER.

Ontario.
Ans.—1. Not unless it is really necessary in order to avoid delay in the conveyance of the mail.
2. We think not.

HENS EATING EGGS.

We have a flock of 27 pullets. They have been fed on oats, corn, warm mash, meat, and plenty of milk. Have all the plaster they want and plenty of gravel and dirt to scratch in, but eat all their eggs immediately after they are laid. What can we do to stop them, or to break the habit? Is there anything more they require should be fed, if so, what is it? OLD SUBSCRIBER.

Ans.—Egg-eating is a habit, and while it is thought to be induced in part by lack of sufficient lime in the food, yet once the chickens have commenced, they are inclined to continue, no matter what the food. Try dark nests. Have them face toward the wall, with just a wide enough passage between for the hens to reach the nests. Then make the nests as dark as possible. This will probably suffice, but, if not, you will need to make special nests, with an inclined bottom, down which the egg will roll gently to a receptacle out of reach of the hen. The principal objection to this is the trouble of making it, and danger of the eggs being broken or cracked. There does not seem to be anything particular lacking in the ration fed, except bone. Green bone, cut with a grinder, or smashed up with an axe, should be fed, and although the plaster should afford plenty of lime, it might be worth while buying a quarter's worth of oyster-shell and feeding in a small hopper.

Ring-Bone

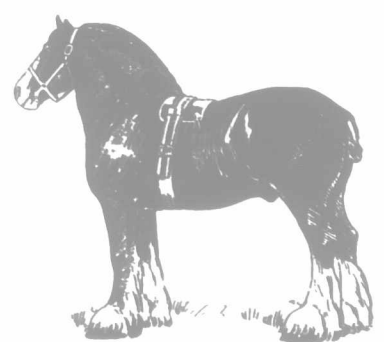
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Fleming's Spavin and Ringbone Paste to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on Sidebone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of **Fleming's Vest-Pocket Veterinary Adviser**

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C. F. PETERSON & CO.
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New Windsor, Ill.—Last fall I ordered from you a bottle of spavin cure to treat a puff upon a horse's leg, which I had been endeavoring to remove for some time, but without success. A few treatments of your medicine did the work. I lost the book you sent me and would ask you if you will kindly send me another one. EUGENE F. PETERSON,
Cassopolis, Mich., Nov. 24, 1908.

Troy Chemical Co., Binghamton, N. Y.
Enclosed \$3.00, please send me a bottle of "Save-the-Horse." My first bottle was used on a pacing horse with two bad spavins that had received no end of treatments before I got him, such as blistering, firing, etc. He was very lame. I used one bottle, treating both spavins at the same time, and "Save-the-Horse" entirely cured the lameness. I used another bottle of "Save-the-Horse" on a ringbone and am more than pleased with results. You need not send any guarantee, for, having used two bottles, I know pretty well what it will do; consequently the guarantee is useless to me. H. D. BADGLEY.

\$5.00 a bottle with signed guarantee or contract. Send for copy, booklet and letters from business men and trainers on every kind of case. Permanently cures Spavin, Thoroughpin, Ringbone (except low), Curb, Splint, Capped Hock, Windpuff, Shoe Ball, Injured Tendons and all Lameness. No fear of loss of hair. Horse works as usual. Dealers or Express Paid. Troy Chemical Co., Binghamton, N. Y., and 145 Van Horn St., Toronto, Ontario.

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At Woodstock Sale Pavilion, on March 4, '09, 1 p. m.

The offering comprises many animals of high merit and breeding, two of the bulls being imported, and the others mostly eligible for American Herdbook. The females are young and mostly bred to first-class bulls. Contributors are:

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FOR SALE: Some of the best strains. Several fine heifers; also cows and a couple of bulls. Apply: **MANAGER,**

GRAPE GRANGE FARM, CLARKSBURG, ONT.

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QUESTIONS AND ANSWERS. Miscellaneous.

SHAREHOLDERS DIFFERING.

Can the majority in a stock company sell out against the wish of the minority?

2. If two or three of the shareholders do not want to sell, and the rest wish to sell their shares to an individual, can the others retain their shares in spite of them, there being about thirty shareholders in all, and most of them having three shares? **SUBSCRIBER,**
Ontario.

Ans.—1. Yes; unless there is provision in the charter or by-laws of the corporation to the contrary, or a binding agreement between the shareholders prohibiting it.

2. Yes.

MUNICIPAL AUDITS.

1. Is it legal for a municipal council in an incorporated town to appoint the chairman of the public school board to the position of auditor, the auditors in incorporated towns having to audit the accounts of the school board, said chairman as a school trustee having to audit his own accounts?

2. Would such an audit be legal, and, if not, what steps should be taken to secure a proper audit?

3. Is it legal and proper for the town council to substitute the treasurer's statement, which is published in pamphlet form, for the auditor's report, same having not been published in any form for some years?

Ans.—1 and 2.—We do not consider it illegal.

3. We think not.

TREES ON ROAD ALLOWANCE.

1. Can a municipal council grant permission to a farmer to cut and sell for his own private gain, pine trees on a concession line?

2. Who own any trees that are exactly on the line between a concession or any other township road and private farm property?

3. What are the penalties for a private party cutting trees of any kind on a public road allowance in a township?

4. Can a municipal council demand the price of any tree, or trees, so cut?

5. Please refer us to the Statutes (date and chapter, etc.), governing trees on road allowance.

Ontario.

Ans.—1. Yes.

2. Both the municipal corporation and the owner of the farm.

3 and 4. The person so cutting trees, unless he does it with the permission of the council, is liable to be prosecuted before a magistrate as a trespasser, and subject to a fine and costs, and also to be sued by the corporation for damages.

5. There are several statutes that more or less directly relate to the matter, but we would refer you especially to The Ontario Tree-planting Act, Chap. 243, Revised Statutes of Ontario, 1897. The Consolidated Municipal Act, 1903, Chap. 19, Sec. 247, 248, 257, 258, 259, 261, 262, 263, 264, 265, and 266.

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AT CLOVER LEA STOCK FARM, PINE RIVER, ONT.

Second annual sale of young bulls, heifers and young cows in calf to Golden Cross (imp.). Eight miles from Ripley, Ontario, G. T. R., on

THURSDAY, MARCH 4th, 1909, R. H. Reid & Sons will sell 16 head of Shorthorns: 6 young bulls from 10 to 15 months, also 7 heifers and 3 young cows in calf. Terms: 8 months' credit on approved paper, or 6 per cent. per annum off for cash. Parties coming to Ripley the night before will find good accommodation at Royal Hotel, where they will be met next morning by teams and taken to the farm. Teams will also meet noon trains on day of sale and take you to the farm, where lunch will be ready. Send for catalogue.



R. H. REID & SONS, PINE RIVER, ONT.
John Purvis, Auctioneer.

HAWTHORN HERD
OF DEEP-MILKING
Shorthorns
For Sale: 6 young bulls and 10 heifers, sired by Aberdeen Hero (imp.) = 28840=, Some bred to the Lavender bull, Lavender Lorne = 68706=.

WM. GRAINGER & SON, Londesboro, Ontario.

SHORTHORNS!

Five bulls, sired by Lord Lieutenant, imp., one from imported dam. Cows and heifers from Lord Lieutenant, and now bred to Good Morning, imp., our present stock bull. All will be priced low, considering quality and breeding. Office near both stations.

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M. C. Ry. P. M. Ry.

WE ARE PRICING VERY REASONABLY

10 Chocely-bred Young Shorthorn Bulls

Also one extra good imported bull, 22 months old. We have always something good to offer in females. Imported or home-bred. Write for what you want, or come and see them. Bell phone at each farm. **W. G. PETTIT & SONS,** Farms close to Burlington Jct. Sta., G. T. R. **FREEMAN, ONTARIO.**

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We offer for sale our herd bull, imp. Lord Roseberry, also young bulls and females all ages, either imp. or from imp. stock. Prices right. Long-distance phone

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Our herd of the most noted Scotch families is headed by Benachie (imp.) = 69954= (bred by Alex. T. Gordon), sire Scottish Farmer, dam Beatrice 22nd, which produced Bandmaster, first-prize bull calf at the Royal in 1908. Sold for 600 guineas. The young stock of either sex for sale are mostly sired by the former stock bull, the famous Joy of Morning (imp.) **Geo. D. Fletcher, Binkham P. O., Erin Sta., C. P. R., Ontario.**

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Combining **Substantial Individuals** with **Rare Breeding.** A few heifers will be sold cheap. **MAPLE SHADE FARM.** STATIONS: MYRTLE, C. P. R., BROOKLIN, G. T. R. Long-distance telephone. **JOHN DRYDEN & SON, BROOKLIN, ONT.**

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Our herd is pure Scotch imp. and home-bred, selected from the best. Our present crop of young bulls is the best we ever had. A visit to the great stock bull, imp. Bapton Chance, will show you the quality of our stock. Including this fall Toronto winners. **KYLE BROS., AYR, ONT., P. O. and STATION.**



QUESTIONS AND ANSWERS.
Miscellaneous.

MATING AND HATCHING OF PIGEONS.

How can one tell the hens and cocks apart in pigeons? How old do they have to be before they will hatch?

R. T.

Ans.—Young pigeons will begin to mate at four months old, so there is no difficulty in telling the sex at that age. If allowed, they will mate, lay and hatch at from five to six months old, but I would prefer not to mate them before seven or eight months, as one then gets stronger birds.
WM. O'NEIL.
London, Ont.

LAND GRANTS.

Can a volunteer who served in the Northwest Rebellions in 1870 and 1885, get a Government land grant, or is it too late to apply? He is now living in the United States.
A. MCP.
Manitoba.

Ans.—In order to determine whether the party is entitled to receive a warrant for military bounty-land scrip, a search of orders in council and perusal of same would be necessary, having regard to the provisions of the Dominion Lands Act, (R. S. C. Chap. 55, and particularly Secs. 94-99), and a solicitor should be instructed to make the requisite investigation.

SOW FAILING TO BREED.

I have a sow which will be two years old next May. Last spring she brought eight splendid pigs, by a Yorkshire boar, her first litter. In July I bred her again to the same boar, but she brought no pigs, so I thought I would try her again, and took her to a Berkshire boar. She was served on December 8th, and should come in about March 29th, but she shows no sign, and I think she is going to fool me again. What do you think is the cause, and would you try her again?

SUBSCRIBER.

Ans.—It may be that the sow has been in heat since the service date given, unnoticed, or it may be that she is in pig, and will show it later on. If she has become barren, we cannot assign a cause. If she comes in season we should advise breeding her again.

PURCHASE OF MARE.

What liabilities would a man have who sold a mare at an auction sale, which was said to be in foal, and the service of the horse was paid by the first owner? He bought her in March, her time being up in May. The last buyer comes in January and tells the party the mare is not in foal.

1. Can he claim for any loss?
2. Or, can he take the mare back after having her so long?

Ontario.

Ans.—1. It is possible that he may be entitled to damages, but we cannot speak definitely without better particulars of the representation made at the time of the auction, and more especially of the statement, if any, contained in the printed advertisement of such auction, and relating to the matter of foal.

2. We do not see that he has the legal right to do so.

TRANSFER OF PEDIGREE.

1. A sells a registered mare to B. B does not get pedigree for four months, and then A just hands it to B, it being still in A's name. Can B make a legally transfer it to him, as A has refused? If he can, what steps should be taken?

2. Please say, through the columns of your paper, how to legally transfer a pedigree.

Your paper seems to be about as near the happy medium in all its utterances as I have ever read.
W. D. B.

Ans.—It is impossible for us to answer this question fully, as we do not know to what breed the mare you refer to belongs, and the rules in connection with transfer vary in the different associations. If the mare is a Clydesdale, the Pedigree Committee has power, on production of sufficient evidence to prove sale, to make the transfer without the signature of the seller, as this can only be done where it is clearly shown that the seller refuses to sign the transfer, and it can be clearly proved that the sale was a bona-fide one, and the full purchase price been paid.

PERMANENT NATIONAL LIVE-STOCK RECORDS.

A \$5,000 DAN PATCH STALLION FREE

This New Picture of **DAN PATCH 1:55** in Six Brilliant Colors
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DAN PATCH 1:55.

This new picture of Dan Patch 1:55, is the Finest I have ever gotten out for framing. It is priced in six brilliant colors and is free of advertising. It gives his age and a list of all the fast miles paced by Dan. Being made from a "Speed Photograph" it shows Dan as lifelike as if you stood on the track and saw him in one of his marvelous and thrilling speed exhibitions. You ought to have a fine picture of the King of all Harness Horse Creation and the Fastest Harness Horse the world has ever seen. I will mail you one of these Large, Beautiful, Colored Pictures of Dan Patch 1:55 free With Postage Prepaid and full particulars concerning my plan of Giving Away a \$5,000.00 Dan Patch stallion if you will simply write me.

A \$5,000 DAN PATCH STALLION FREE

An Absolutely Free Hair Counting Contest Without Money or Purchase Consideration And Open To Any Farmer, Stockman or Poultry Breeder. Can you count the number of hairs drawn in a picture of "Forest Patch," sired by Dan Patch, dam by Monaco by Belmont. Write for one of the Above Dan Patch Pictures, I will also mail you a photo engraving of "Forest Patch," the fine Registered Stallion to be given away and ALSO Drawing showing hairs to be counted and also stating easy conditions. Every stock owner will want to count the hairs on this Splendid \$5,000.00 Dan Patch Stallion because it means a small fortune free for someone. We paid \$60,000 for Dan Patch and have been offered \$180,000. We would have lost money if we had sold Dan for One Million Dollars. "Forest Patch" might make you a fortune of \$25,000 to \$50,000 as a great stock horse for any community because he will make a 1200lb. stallion with great style and beautiful conformation.
E. B. SAVAGE, Toronto, Ont., International Stock Food Co.

Mail this Free Coupon To-Day to E. B. SAVAGE, Toronto, Ont.

You MUST FILL IN THE THREE BLANK LINES IN THIS FREE COUPON

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I own..... Cattle..... Hogs..... Horses..... Sheep

Name..... Province..... 2

Post Office.....

10 Imported Scotch Shorthorn Bulls 10

Personally selected from the leading Scotch herds. Now in quarantine. Will be for sale at my farm first week in January. They are of such noted families as Broadhooks, Butterfly, Claret, Clara, Roan Lady and Jill. I also have for sale four bull calves from imp. sire and dam, and a number of good young cows and heifers. Catalogue being prepared. Write for one. Prices, as well as quality and breeding, will please you. Farm ¼ mile from Burlington Junction station, G. T. R.

FRED. BARNETT, MANAGER. J. F. MITCHELL, BURLINGTON, ONT.

SHORTHORNS

Nine bulls from 8 to 20 months old, reds and roans; 10 yearling heifers and a few cows. Will sell very cheap to make room in stables.

CLYDESDALES

One pair of bay mares and one dark brown, heavy draft and two spring colts.

JAMES McARTHUR, Gobles, Ontario.

1854 MAPLE LODGE 1908 STOCK FARM 1908

A few extra good young SHORTHORN bulls and heifers for sale.

LEICESTER ram lambs by the grand champion ram, "Sanford." Right good ones, and a few choice ewes.

A. W. SMITH, MAPLE LODGE P. O., ONT.
Lucan Crossing Station, G. T. Ry.

Shorthorns!

BELMAR PARC

John Douglas, Peter White, Manager, Pembroke, Ont.

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

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

Females, imported and from imported stock, in call to these bulls.

An unsurpassed lot of yearling heifers.

Shorthorn Cattle AND LINCOLN SHEEP.

Females of all ages for sale of the thick-fleshed, low-down kind that have been raised naturally, neither stuffed nor starved. Twenty-five Lincoln ewes, bred to our best imported stud ram, also a few choice yearling rams. Prices very reasonable for quick sale.

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P. O. Box 378, Guelph, Ontario,

Breeds SCOTCH SHORTHORNS Exclusively

Twelve of the most noted Scotch tribes have representatives in my herd. Herd bulls: Scottish Hero (imp.) = 52042 = (90065) 295765 A. H. B.; Gloster King = 63703 = 233804 A. H. B. Young stock for sale. Long-distance 'phone in house.

WILL MAKE PRICES ON THE FOLLOWING LIST OF Two imported bulls, tried sires, very valuable, will sell or exchange at moderate price. One Clydesdale filly coming three, from imported sire and dam, amongst the best. The filly is good and has the quality wanted in a show mare. A small number of imported cows and heifers, and some splendid young bulls and heifers from imported sires and dams Good young Shropshire and Cotswold ewes in lamb to high-class imported sires.

That No Man Keeping Live Stock Can Afford To Overlook: ROBERT MILLER, Stouffville, Ont.

VALLEY HOME

Shorthorns and Berkshires

For sale: Six young bulls fit for service, and young cows and heifers; some are choice show animals. Also ten fine young Berkshire sows of prolific strains. Write, or come and see our stock. Visitors welcome.

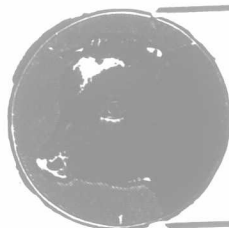
S. J. Pearson, Son & Co., Meadowvale, Ont.

Stations: Meadowvale, C. P. R., and Brampton, G. T. R.

Pleasant Valley Herd

Present offering: 7 high-class young bulls by Imp. Ben Lomond = 45160 = (80468) and Bud's Emblem = 63850 =, and good imp. and Canadian-bred dams. Write for particulars and prices, or visit personally.

GEO. AMOS & SON, Moffat Station and P. O. Moffat is 11 miles east of Guelph on C. P. R.



SOME SHOW PROPOSITIONS IN BOTH MALE AND FEMALE

SHORTHORNS

as well as a number of the useful sort of both sexes. Prices right. Large lot to select from. Up-to-date in breeding, etc. Catalogue.

JOHN CLANCY, H. Cargill & Son, Cargill, Ont. Manager.

Scotch Shorthorns



Four young bulls recently imported, one Brawith Bud, a grandson of Bampton Diamond; two Kibbale Beautys and one a Marr Emma; also Canadian-bred bulls, and a grand lot of heifers.

H. J. Davis, Woodstock, Ont.

Long-distance Bell 'phone. C. P. R. & G. T. R.

MAPLE HOME SHORTHORNS



Our present offering is several very choice and richly-bred one- and two-year-old heifers, and three yearling bulls. Away above the average. Pure Scotch and Scotch-topped.

A. D. SCHMIDT & SONS Elmira, Ont.

Glen Gow Shorthorns



Our present offering is 9 bulls from 6 to 14 months of age, sired by imp. Ben Loman and imp. Joy of Morning, and out of imp. and Canadian-bred cows. Also a number of very choice heifers. No fancy prices asked. Long-distance 'phone.

WM. SMITH, Columbus, Ontario Brooklin and Myrtle Sts.

Shorthorns, Cotswolds, Berkshires.



In Shorthorns, over 50 head—cows, heifers and calves from 2 to 8 months. In Cotswolds, shearing ewes and ram and ewe lambs. In Berkshires, a few young sows.

Chas. E. Bonnycastle, Campbellford, Ont. Post Office and Station.

Spruce Lodge Shorthorns and Leicesters.

In Shorthorns, we are offering young bulls and heifers, by imp. sires and out of heavy-milking dams. In Leicesters, we have a grand lot of shearing rams and ram lambs, and one and two year old ewes of No. 1 quality.

W. A. DOUGLAS, TUSCARORA P. O., ONT. Coledonia Station.

CLOVER DELL SHORTHORNS



My herd are profitable milking Shorthorns. For sale are a few females and two good red bulls, of good milking dams, for spring service. I. A. Wakely, Bolton, Ont. P. O. and Station. Farm within ½ mile of station.

Athelstane Shorthorns For sale: 5 young bulls and females—all ages. Some extra choice heifers. All of popular Scotch families. Roan Chief (imp.) = 60865 = heads the herd. WM. WALDIE, Box 324, Stratford, Ontario.

Brownlee Shorthorns Three young bulls left yet, 14 to 16 months. Will sell at a bargain. Also a few heifers. Very reasonable. Good milking strains. C. P. R. station. D. BROWN, AYE, ONT.

Subscribe for "Farmer's Advocate"

Lump Jaw

The first remedy to cure Lump Jaw was Fleming's Lump Jaw Cure and it remains today the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in Fleming's Vest-Pocket Veterinary Adviser.

Most complete veterinary book ever printed to be given away. Durable bound, indexed and illustrated. Write us for a free copy.

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

BOYS! GIRLS!
Your Choice **FREE**

For selling only \$1.50 worth of our Vegetable and Flower Seeds. You can have any one of the above-illustrated articles of Jewelry—Lady's Gold Brooch set with 8 flashy brilliants, with pearl and colored stone centre, pair Men's Gold-plated Lever Cuff Links with pretty cut stone setting, or Lady's large cut stone centre. The seeds are assorted varieties, in 5c. (small) and 10c. (large) packages. Are fast sellers. Send at once—your name and address. A post card will do. **The Reliable Premium Co., Dept. X, Waterloo, Ont.**

Cattle and Sheep Metal ear labels, with owner's name and address, and numbers. Sample and prices mailed free. **F. G. James, Bowmanville, Ont.**

In a southern town a lady was approached by her colored maid. "Well, Jenny," she asked, seeing that something was in the air.

"Please, Mis' Mary, might I have the aft'noon off three weeks from Wednesday?" Then, noticing an undecided look in her mistress's face, she added hastily: "I want to go to my fiance's funeral."

"Goodness me!" answered the lady. "Your fiance's funeral! Why, you don't know that he's even going to die, let alone the date of his funeral. That is something we can't any of us be sure about—when we are going to die."

"Yes'm," said the girl, doubtfully; then, with a triumphant note in her voice, "I'm sure about him, Mis', 'cos he's goin' to be hung!"

JUST CURED HIM THAT WAS ALL

What Dodd's Kidney Pills Did for Thomas Moon.

Doctors Could Not Cure His Dropsy, but Dodd's Kidney Pills Cleared it out Completely.

Maidstone, Sask., Feb.—(Special).—"Cured me completely. That's what Dodd's Kidney Pills did for me." Such is the statement made by Thomas Moon, a well-known resident of this place, who for two years suffered with Dropsical Swellings brought on by diseased kidneys.

"I had pains in the small of my back," Mr. Moon continues, "and across the loins. The swelling commenced first in my legs, and gradually got to my body. I tried different doctors, but kept getting worse every day, until I was swollen up to an awful size."

"One doctor sent me to the hospital, where I got a little benefit, but the swelling soon all came back."

"Then I used Dodd's Kidney Pills, and, as I said before, they cured me completely."

Dropsical Swellings are caused by diseased kidneys failing to take the surplus water out of the blood. Cure the kidneys with Dodd's Kidney Pills and the dropsy naturally cures itself.

QUESTIONS AND ANSWERS. Miscellaneous.

CONDITION OF DAIRY HEIFER—RATION FOR MAXIMUM MILK PRODUCTION.

1. Is there any scientific reason for the theory, or is it a mere whim, that a heifer is injured for heavy milk-production by becoming fat?
2. Will you kindly formulate an ideal, or perfectly balanced ration, selected from all, or any, of the known feedstuffs—said ration being especially designed for the making of large milk records regardless of cost.

YOUNG DAIRYMAN.

Ans.—1. It is a theory, pressed too far by zealots, but undoubtedly having a basis in fact, that maintenance of a heifer in gross condition tends to establish a disposition to keep her body well padded with flesh and fat to the sacrifice of milk production. In other words, she gets into the habit of laying the feed on her back instead of sending it to the udder. The greater the weight of flesh and fat habitually carried, beyond a reasonable limit, the larger the amount of nutriment required to maintain such normal condition, and, moreover, the more pronounced the tendency to fleshiness, the more inclined will the heifer be to fatten excessively when fed liberally for high production. There is such a thing as a breeding female being "too good to herself."

The general experience is that heifers kept in high condition do not, as a rule, prove so satisfactory, either as breeders or as milkers, as those kept in more moderate flesh. This is the one extreme. The other is in skipping the animal, and stunting its growth for the lack of sufficient nourishment. Of the two extremes, we would rather take chances on the heifer too generously than on one too sparingly fed.

2. Any one of a great variety of combinations might be employed, and it is impossible to compound any ration and justifiably declare it is the best for the purpose. Indeed, what will suit one cow best, may require to be modified for another. Palatability and individual peculiarities, even caprices, have to be considered. We have, however, calculated a ration intended for a cow of 12 cwt. or over, which should give good results, as a standard to be varied as necessity might demand:

Lbs. digestible carbohydrates	3,96	Lbs. ether extract	.12
3,89	.27		.04
2,16	.44		.081
1,16	.366		.007
.518	.108		.046
.946	.184		.086
1,314	.158		.58
.342	.412		
13,826	3,098		1,218

Multiplying the pounds of ether extract, or fat, by 2.3, to reduce it to the equivalent of pounds of carbohydrates, then adding this to the pounds of carbohydrates, and dividing the sum by the pounds of protein, we find a nutritive ratio of about 1 part protein to 5.4 of carbohydrates and fat, which is about right.

It is possible that for some cows the

(Continued on next page)

Made In Canada For 24 Years

Some Metal Shingles are guaranteed to "last a lifetime," by firms which have been making Metal Goods only a few years.

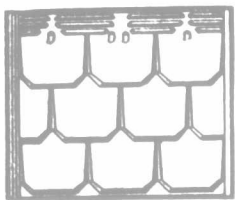
How can they know how long their shingles will wear?

"Perhaps" such shingles will last.

"Perhaps" they are lightning-proof and weather-proof.

You are the one who must take the chances.

There are no "perhaps" about



"EASTLAKE" METALLIC SHINGLES

ON THE ROOFS SINCE 1885

They have defied lightning and fire—resisted snow and rain—protected against leaks and rust—for 24 years. You buy certainty—not supposition—when you buy "Eastlake" Shingles. Because "Eastlake" Metallic Shingles have proved, by 24 years' wear on the roofs, that they are practically indestructible.

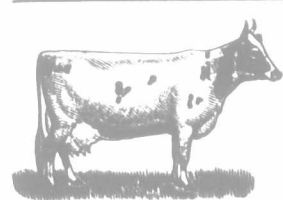
Don't buy "a pig in a poke." Don't take chances. Get "Eastlake" shingles, which are sold with a guarantee worth having.

Write for catalogue, which tells about the "Eastlake" side Lock, the new Cleat and other exclusive features, as well as explaining all about the Shingles themselves.

The Metallic Roofing Co., Limited

TORONTO Manufacturers WINNIPEG

Agents wanted in some districts. Write for particulars naming this paper.



Stoneycroft Ayrshires

Choice young bulls and heifers of the very best breeding, combining show and dairy quality. Large Improved Yorkshire Pigs from imported sires and dams, now ready to ship. Stoneycroft Stock Farm, Ste. Anne de Bellevue, Que.

AYRSHIRES Bull and heifer calves from producing dams. Right good ones.

Hickory Hill Stock Farm. Dundas Station and telegraph. N. DYMENT, Clappison, Ont.

HOWGLEN AYRSHIRES!

For sale: 75 pure-bred registered Ayrshires, all ages; prizewinners; many imported. Apply to ALLAN P. BLUE, Eustis, Quebec

Prizewinning Ayrshires

FOR SALE: 5 High-class Bulls, from 6 to 24 months of age; 10 Cows and Heifers, from 6 months to 5 years of age. All bred from the deepest-milking strains. A. Kennedy & Son, Vernon, Ontario. Hillview Stock Farm. Winchester station. C. P. R.

BURNSIDE AYRSHIRES

are in such demand that I have decided to make another importation. I intend attending the great dispersion sale of the world-renowned Barcheske Herd, belonging to Mr. And. Mitchell, Kirkcudbright, Scot., where some 300 of the choicest Ayrshires ever offered will be sold. Orders entrusted to me will be carefully attended to. Breeders, take advantage of this great sale, and replenish with a few good ones. Correspondence solicited and satisfaction guaranteed. Long-distance phone in house.



R. R. NESS, HOWICK, QUE.

DEHORN YOUR CATTLE
Wonderful how it improves them. Heifers develop into better milkers. Steers fatten quicker.

KEYSTONE DEHORNER
does it. Cuts clean—hurts little—does not bruise flesh or crush bone. Write for free booklet.

R. H. MCKENNA, Late of Picton, Ont.
219 Robert St. Toronto

Subscribe for "Farmer's Advocate"

Ayrshires from a Prizewinning Herd— Have some nice bull and heifer calves for sale at reasonable prices. For particulars, etc., write to **WM. STEWART & SON, Campbellford Stn. Menie P.O., Ont.**

Ayrshire Bulls from cows that averaged 1,300 lbs. of 3.9 milk during January. Only two left—one yearling fit for service and one fall calf. Orders booked for spring calves, males only. Cheap for quick sales. **James Begg, Box 88, St. Thomas, Ont.**

Poultry Tonic

INCREASES EGG PRODUCTION. CURES DISEASE

1 1/2 lbs., 25c. By Mail, 35c.

MADE IN CANADA



Louse Killer

KILLS LICE ON POULTRY AND STOCK.

SATISFACTION GUARANTEED

1-lb. Can, 25c. By Mail, 35c.

THE HACKNEY STOCK TONIC COMPANY, TORONTO, ONTARIO.

FEBRUARY 18, 1909

QUESTIONS AND ANSWERS. Miscellaneous.

(Continued from page 272)

amount of mangels would have to be reduced and the hay increased. Some cows would consume more meals to advantage, others would not. If alfalfa hay were not available, good clover might be substituted, and a little more bran fed. If cost were a consideration, oil cake might be substituted for part or all of the flaxseed.

CROOKED FENCE.

My farm is 60 rods and 4 feet on the concession road, and at the blind line is the same, and in the center it is only 59 rods and 6 feet.

1. Can my neighbor stop me from straightening that fence, that is, to have it 60 rods 4 feet in the center? My farm runs along a sideroad and my neighbor has the 14 feet of land. The fence has not been overhauled for about eight years. The back end runs through a swamp.

2. What do you think is the cause of the fence being in that shape?

3. Do you think it the surveyors' fault, or the fault of the party that built the fence? I bought the farm seven years ago, and will soon have to fix the fence again, and would like to have it right, if possible.

4. Hens are not laying. They have red heads and are in good condition; have plenty of water. I feed them oats and barley mixed. They have a large run, and are outside every day. Do you think that they should have different feed?

5. What is good for killing cattle lice? W. H. G.

Ans.—1. Probably not; assuming that the 60 rods 4 feet in front and rear is correct.

2. Careless fence-building, most likely.

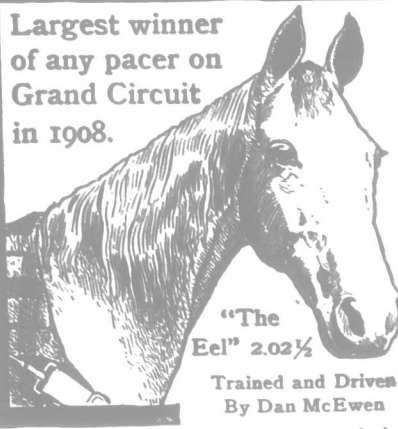
3. More probably the latter. 4. It is in no way surprising that these hens do not lay, for in all probability they lack lime, grit, meat food, and perhaps vegetable feed as well. Even the grain ration is not very suitable. Oats and barley do very well as part of the ration, but for main reliance, wheat is better and more profitable, while a little corn is good to feed at night, and buckwheat is also good to add variety to the ration and compel exercise. Also give oyster-shell or plaster, lean meat, green cut (or smashed) bone, and grit of some kind; clean, sharp gravel makes fair grit, as also does broken crockery and stone china-ware. See that the chickens get exercise; a good way to compel it is to bury their morning feed of grain in six inches of clean, dry chaff. At noon, give a mash of shorts, chop, table scraps, and milk. For vegetable feed, steamed clover leaves or lawn clippings, chopped onions, bits of cabbage, and mangels are good. Read the experience of poultry readers published from week to week.

5. A mixture of one part insect powder (pyrethrum) to four parts of dry cement, sifted into the hair of the animals, is a cheap and effective remedy.

LUMP JAW.

About two weeks after I commenced feeding a steer I noticed a lump form on the face, just below the left eye. The lump is quite hard, and immovable. The animal does not appear to be doing as well as he should. I am feeding about five pounds barley chop, with one pound oil cake, besides cut cornstalks. Could these rations be improved, and in what way? J. C.

Ans.—This is evidently a case of lump jaw, which, in the early stages, is often arrested by the iodide of potassium treatment, which consists in giving one dram iodide of potassium three times daily, in bran or in a pint of water, as a drench, gradually increasing the dose till appetite fails, water is refused, or tears run from the eyes and saliva from the mouth. When any of these symptoms appear, cease giving the potash. If the animal is in good enough condition to be turned into beef, it may be more profitable to slaughter him now, as the trouble will probably become more acute, and, if in advanced stage, the sale of his flesh would be illegal. Good clover hay added to the feeding ration would be an improvement.



Largest winner of any pacer on Grand Circuit in 1908. "The Eel" 2.02 1/2 Trained and Driven By Dan McEwen

Dan McEwen Feeds Royal Purple Stock Specific Regularly to "The Eel"

Dan McEwen speaks very highly of Royal Purple Stock Specific. In his letter of Sept. 14th he says in part: "I have used Royal Purple persistently in the feeding of 'The Eel' and 'Henry Winters.' I consider it the best article I have ever used in conditioning race horses. These horses have never been off their feed since I commenced using Royal Purple Stock Specific, almost a year ago, and you can rest assured I will always have it in my stables."



Royal Purple is being fed to "Henry Winters" (Trial mile 2.09 1/4) brother of "Allen Winters," winner of \$36,000 in trotting stakes in 1908.

FREE

A valuable booklet on diseases of cattle and poultry mailed free to any person applying for same. Also contains reliable cooking receipts. Explains Royal Purple fully.

Our Guarantee:—Money refunded if not satisfied after material is used.

Royal Purple Stock and Poultry Specifics W. A. JENKINS, MFG. CO., LONDON, CANADA The Wise Ones are Using Royal Purple Now. The Others Will Come in Later.

RAW FURS and HIDES Write for Weekly Price Lists. Shipments Solicited. JOHN HALLAM - TORONTO, ONT.

Riverside Holsteins Centre and Hillview Holsteins For sale: Seven young bulls from two to nine months old out of Record of Merit cows, sired by Sir Pieterje Posch De Boer, whose dam and sire's dam average in official test 25.87 lbs. butter in 7 days, and 87.6 lbs. milk in 1 day. J. W. Richardson, Caledonia, Ont.

OIL CAKE The finest feed known for stock. Once a user, always a user. Sold either fine or coarse ground. Write: J. & J. Livingston Brand DOMINION LINSEED OIL CO., LIMITED, BADEN, ONTARIO, 31 Mill St., MONTREAL, QUE.

FAIRVIEW HERD HOLSTEINS The greatest A. R. O. herd of in northern New York. Headed by Pontiac Korndyke, the greatest sire of the breed, having five daughters whose seven-day records average 29 1/4 pounds each, and over 4 3/4% fat. Assisted by Rag Apple Korndyke, a son of Pontiac Korndyke, out of Pontiac Rag Apple, 31.62 pounds butter in 7 days, and heifers in calf to the above 4 years old. Cows and heifers in calf to the above two bulls for sale, also young bulls sired by them out of large-record cows. Write, or come and inspect our herd, E. H. DOLLAR, Heuvelton, St. Law. Co., N. Y., near Prescott, Ont.

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 Pentiac. All leading breeds represented. Putnam station, near Ingersoll. H. E. GEORGE, Crampton, Ont.

The Maples Holstein Herd! RECORD-OF-MERIT COWS. Headed by Lord Wayne Mechthilde Calamity, also in the Record of Merit. S-veral choice bull and heifer calves; also one bull fit for service. WALBURN RIVERS, Folden's Corners Ont.

LAKEVIEW HOLSTEINS Herd headed by Count Hengerveld Payne De Kol. His dam, Grace Payne 2nd, 26.30 lbs. butter in 7 days, is dam of world's champion 4-year-old butter cow, Sire Count Hengerveld De Kol, 70 A. R. O. daughters, including world's champion milk cow. For sale: 1 service bull; 10 bull calves, by 20-lb. butter cows. 75 head to select from. W. D. BRECKON, Mgr., Bronte, Ont.

WOODBINE STOCK FARM Offers a few fine young Holstein bulls and bull calves, sired by Sir Mechthilde Posch. Sire's dam holds world's largest two-day public test record, dam Ianthe Jewel Mechthilde, 27.65 lbs. butter in 7 days; average test, 4.46 per cent. fat; out of dams with superior breeding and quality. Shipping stations—Paris, G. T. R.; Ayr, C. P. R. A. KENNEDY, Ayr, Ont.

IMPERIAL HOLSTEINS! For sale: 13 bulls of serviceable age, sired by Tidy Abbe Kirk Mercedes Posch, whose 7 nearest dams have records within a fraction of 27 lbs. Out of show cows, with high official records. A high-class lot of young bulls. W. H. SIMMONS, New Durham, Ont., Oxford County.

Now in bulls from R. O. M. dams? Or better yet, call and see us. E. & F. MALLORY, FRANKFORD, ONTARIO.

DON'T Buy a HOLSTEIN BULL till you get my prices on choice goods from 14 months to 1 month old, from best producing strains. "Fairview Stock Farm." FRED ABBOTT, Harrietsville, Ont.

HOLSTEINS Choice bull calves from high-producing and Record of Merit dams. White Rocks and Bull Orpingtons. Winners of silver cup and sixteen regular and special prizes at Galt and Hespeler shows. David Rife & Sons, Hespeler, Ont.

Maple Glen For sale: Two bull calves born April 28th. One sired by Brightest HOLSTEINS Canary; dam of calf has 22 1/2 lbs. butter record, over 4 per cent. fat. The other from 19.45-lb. 2-year-old A. R. O. test, sired by a bull with a 22 1/2-lb. tested dam, with 93 lbs. milk 1 day. Also a 4-year-old cow due in Oct., sire's g. dam sister of Carmen Sylvia. G. A. Gilroy, Glen Buell, Ont.

HOLSTEINS FOR SALE. Both male and female, including my present stock bull, Cornucopia Alban De Kol, in ported. J. A. CASKEY, MADOC ONT.

Ridgedale Farm Holsteins—For sale: 4 bull calves from one to ten months old; 2 heifer calves. All bred from choice dams. Also a pair of choice cows supposed to be in calf. R. W. WALKER, Utica P. O., Ont. Port Perry (G. T. R.) and Myrtle (C. P. R.) stations, Ontario Co.

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Mail, 35c.

ONTARIO.

DR. WOOD'S NORWAY PINE SYRUP

Is A Remedy Without An Equal For COUGHS, COLDS, And All Affections Of The THROAT and LUNGS.

Coughs and Colds do not call for a minute recital of symptoms as they are known to everyone, but their dangers are not understood so well. All the most serious affections of the throat, the lungs and the bronchial tubes, are, in the beginning, but coughs and colds.

Too much stress cannot be laid upon the admission to all persons affected by the insidious earlier stages of throat and lung disease, as failure to take hold at once will cause many years of suffering, and in the end that terrible scourge of "Consumption."

Dr. Wood's Norway Pine Syrup is not sold as a Cure for Consumption but for affections tributary to, and that result in, that disease. It combines all the lung healing virtues of the Norway pine tree with other absorbent, expectorant and soothing medicines of recognized worth, and is absolutely harmless, prompt and safe. So great has been the success of this wonderful remedy, it is only natural that numerous persons have tried to imitate it. Don't be humbugged into taking anything but "Dr. Woods." Put up in a yellow wrapper; three pine trees the trade mark; price 25 cents.

THE CLEANEST THE LIGHTEST THE MOST COMFORTABLE

POMMEL SLICKER

and cheapest in the end because it wears longest

EVERY GARMENT GUARANTEED WATERPROOF

TOWER CANADIAN CO. LTD. TORONTO CAN.

Little Harold had been directed by the teacher to write the word "folly."

"I can't," said Harold, "cause my pencil's busted."

"Why, Harold! What did you say was wrong with your pencil?"

"It's busted."

"Dear me! Children, can any of you tell what Harold means? I'm sure he hasn't used the right word."

"Up went the hand of little Marjorie.

"Ah, Marjorie, dear, I thought you would know. What does Harold mean?"

"He meant that with pencil with buth-ticated."—Chicago Record-Herald.

DODD'S KIDNEY PILLS

FOR ALL KIDNEY DISEASES

CURES RHEUMATISM BRIGHT'S DISEASE DIABETES BACKACHE

Continued use of Dodd's Kidney Pills is the only way to get relief from these ailments. Sold only in bottles.

QUESTIONS AND ANSWERS. Miscellaneous.

WOLF TEETH.

Two-year-old filly has wolf teeth. Would you advise pulling them? They do not interfere with her feeding in any way. Is there any danger of them causing blindness? J. G.

Ans.—Unless the teeth are causing some irritation, it is better not to meddle with them. We have not known a case of their causing blindness. If they cause irritation, better have them pulled.

BUILDING CEMENT SILO.

How many yards of gravel will it take to build a silo 30 feet high and 12 feet diameter, inside? I have plenty of small stone and old, plain wire, that has been in a fence and is rusty. How thick would the wall need to be so as not to crack? How thick would cement need to be on the floor? Would the old wire be better twisted in a rope or should I get new? Should there be a tile out of bottom of silo for extra water to escape? How many barrels of cement are needed? How many wire ropes? What proportion should gravel and cement be mixed? H. J. M. T.

Ans.—A few years ago the practice was to build cement silos about 12 inches thick at the base and 8 inches at the top. Lately, it has been found that considerably thinner walls, with proper foundation below frost line, when properly reinforced with iron rods or wire, are satisfactory. Perhaps 8 inches thickness at base and 4 inches at top would suit your case. The wall, when built, exclusive of foundation, will comprise about 566 cubic feet of concrete; add 100 cubic feet for foundation. Allowing for waste, 125 cubic feet of gravel, or small stones, are required for 100 feet of wall. This means you should have on hand about 832 cubic feet, or, approximately, 6 1/2 cords of gravel and fine stone. Two inches of concrete should suffice for flooring. As to using the wire on hand, it all depends on how badly it is rusted. New wire would be better. For general use, a quarter-inch, or five-sixteenths-inch round iron, is imbedded every 2 1/2 feet. The nearer you approach that strength with wire the better. It is advisable to have a small tile leading from the center of a saucer-shaped bottom. About 30 barrels of Portland cement are required. Twelve wire ropes will give ample support. A fair proportion consists of one of cement to eight of good gravel.

FERTILIZER VALUE OF WHEAT STRAW.

Will you kindly answer, through your Questions and Answers column, what is the fertilizer value of wheat straw, tramped and rotted in a good barnyard, leaving out of account all animal excretions? J. A. W.

Ans.—Absolute values cannot be given. The value of all manure is relative, depending upon the use that is to be made of it, cost of hauling and application, value of the crops produced, etc. There is also the somewhat problematical degree of loss that occurs in rotting. It is, on the other hand, difficult to know just what allowance should be made for the physical benefit resulting from the addition of humus to the soil. Taking the matter first of all from a chemical point of view, a ton of wheat straw would contain 11.8 pounds of nitrogen, 2.4 lbs. of phosphoric acid, and 10.2 lbs. potash. In rotting, the straw would lose, possibly, a third, or may be half, of its nitrogen, and a little potash, depending upon the conditions. Value the nitrogen left at 16 cents a pound, the phosphoric acid at 5 cents, and the potash at 6 cents, we would have left, say, \$1.25 worth of nitrogen, 12 cents worth of phosphoric acid, and 50 cents worth of potash, or a total of \$1.87 per ton of straw. In some cases the value of the straw in furnishing humus might pay for the work of hauling it out; in other cases it might not. In general, we should say that on any, except very rich farms, or farms so situated that the produce sells for very low prices, one might better apply his straw to the land than sell it for less than a dollar a ton in stack, or now, and in most cases it would be poor business to sell it for a dollar and a half. This is calculated on a fertilizer basis merely, not taking into consideration the value of the straw as bedding, or as fuel.

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 telephone at farm.

B. H. BULL & SON,

BRAMPTON, ONT.

Southdown Sheep

Unequaled for fine quality of both mutton and wool, hardiness of constitution, and earliness of maturity.

STRIDE & SON,

Will sell by auction at CHICHESTER, SUSSEX, ENGLAND, on AUGUST 18th and 19th, next, 1909, 6,000 Southdown ewes (August 18th), 500 Southdown rams and ram lambs (August 19th). On SEPTEMBER 15th, next, 1909, 4,000 Southdown ewes, 500 Southdown rams and ram lambs. Commissions at these sales, or any other time, carefully executed. Telegrams and cables: STRIDE, CHICHESTER, ENGLAND. Postal address: Stride & Son, Chichester, Sussex, England.

IMPORTED HORNED DORSETS

I have for sale a few of both sexes, the get of last year's champion all round the circuit, Imp. Romulus 2nd. Canada's banner flock of Dorsets. JAS. ROBERTSON & SONS, Milton P.O. and Sta., C.P.R. and G.T.R.

SOUTHDOWNS AND COLLIES.

Long-distance Telephone.

10 good yearling rams, including the first and third prize winners at London. Also some good breeding ewes, which must be sold, as the flock is being reduced. ROBT. McEWEN, Byron, Ont. Ry. Stn., London, Ont.

OXFORD DOWN SHEEP AT FARNHAM FARM.

We have 50 yearling ewes, all bred to our imported ram, champion at Toronto Exhibition, 1908, which we will sell at especially reduced prices for the next thirty days, in lots to suit purchaser. Also a few yearling rams and ram lambs by imported sires. Terms reasonable. HENRY ARKELL & SON, ARKELL, ONTARIO. Arkell, C. P. R.

Shropshire and Cotswold Ewes

I am offering 20 choice shearing Shropshire ewes of my own breeding, from imp. Minton and Buttar dams, and bred to a first-class imp. ram; also 20 extra good Cotswold ewes of first-class breeding. They must be sold to make room.

JOHN MILLER, Brougham, Ontario. Claremont Stn., C.P.R.

FAIRVIEW SHROPSHIRE EWES

For sale at very moderate prices. They were sired by a champion ram. And are being bred to another champion. Are of first-class type and quality. Write for circular and prices.

J. & D. J. CAMPBELL, WOODVILLE, ONTARIO.

Maple Villa Oxfords, Yorkshires

The demand for Oxford Down sheep and Yorkshires has been the best I ever had. I have still for sale shearing ewes and ewe lambs, and young sows safe in pig. These will certainly give satisfaction.

J. A. CERSWELL, BONDHEAD P. O., ONTARIO. Simcoe County.

Oxford Down Sheep, Shorthorn Cattle

Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons, Buena Vista Farm, Harriston, Ont.

POPLAR LODGE SOUTHDOWNS AND BERKSHIRES.

At right prices, 2 aged, 3 shearing rams, 2 ram lambs. Flock headers. Berkshires all ages, both sexes. Ideal type. Correct description guaranteed. S. Lemon, Kettleby, Ont., P. O. and Sta., also Aurora Sta. Long-distance phone.

CLAYFIELD Buy now of the Champion Cotswold Flock of America, 1906.

Flock headers, ranch rams, ewes of different FARM! ages. All of first-class quality, and prices reasonable. Write, or call on J. C. ROSS, Box 61, Jarvis, Ont.

HIGHEST PRICES PAID FOR ALL KINDS OF HIDES, SKINS AND

RAW FURS

Write for our COMPLETE PRICE LISTS. Issued every little while.

E. T. CARTER & CO., 84 Front St., East, Toronto, Ont.

We pay all EXPRESS CHARGES. PROMPT RETURNS.

SUNNYMOUNT BERKSHIRES

Highest standard of type and quality. For sale: Sows of all ages, and 4 yearling boars. A grand, good lot. Also younger ones. Pairs not akin. JOHN McLEOD, C.P.R. & G.T.R. Milton P.O., Ont.

Willowdale Berkshires!

Won the leading honors at Toronto this fall. For sale are both sexes and all ages, from imp. stock on both sides. Show things a specialty. Everything guaranteed as represented. J. J. WILSON, MILTON, ONT., P. O. AND STATION. C. P. R. AND G. T. R.

ELMFIELD YORKSHIRES

50 young pigs for sale, both sexes. Young sows bred to imported boar, also sows to Canadian-bred boar due to farrow about 1st October. G. B. Muma, Avy, Ont. C.P.R.; Paris, G.T.R.

Hilton Stock Farm Holsteins and Tamworths.

Present offering: 6 yearling heifers and several younger ones. All very choice. Of Tamworths, pigs of all ages and both sexes, pairs not akin. R. O. MORROW & SON, HILTON, Ont. Brighton Tel. and Stn.

Hampshire Swine

I will have some choice ones to offer for sale this spring, and parties wishing to start a good herd should write to me at once. Orders booked now. H. A. BUCK, Sydenham, 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

Newcastle Stock Farm

I have a splendid lot of TAMWORTH SOWS well forward in pig, and well worth looking after; also grand selection of boars, 3 months to 10 months old, several prizewinners, and a lot of dams that have been prizewinners all over this part of Ontario. I have also a few choice Shorthorn heifers well forward in calf to my Cargill-bred bull, and others ready to breed. All will be sold well worth the money. A. A. COLWILL, NEWCASTLE, ONT.

DUROC-JERSEY SWINE

Imported and home-bred. Sows ready to breed. Boars fit for service, and younger ones either sex. Also Embden geese. MAC CAMPBELL & SONS, HARWICH, ONT.

Pine Grove Yorkshires

At the late Guelph Winter Show we won decidedly the best of it in the bacon sale. Our Yorkshires are noted for superior excellence. Both sexes and all ages for sale. J. Featherstone & Son, Streetsville, Ont.

Pine Grove Berkshires!

Present offering: Sows bred and ready to breed, including six winners at the late Winter Fair, Guelph. Boars in for service. Young ones of both sexes. Standard accepted. Sent to you on application.

Maple Grove Yorkshires!

It's Yorkshires you want, we have a very choice bunch of sows bred and ready to breed. A few boars ready for service and younger. In fact types in all stages of development. M.G. Champion—20102—, Toronto's champion boar in 1907, is our main sow's sire. Our sows are mostly imported, and are as good as the best. A square deal or none in our motto. H. S. McDiarmid, Fingal P. O., Ont. Stock Station.

W. W. BROWNIDGE ASHGROVE, ONTARIO. Mpls. C. P. R. & G. T. R.

Be Up to Date Use Draft Springs

STRENGTH FOR THE WEAK

Relief for the Pain-Worn

DO YOU SUFFER FROM

Nervous Debility, Loss of Strength, Rheumatism, Back-ache, Indigestion and Constipation? They are Quickly and Forever Cured by the Grand Product of Nature, DR. McLAUGHLIN'S Electric Belt. Send for My Free Book About It.



If you have doctored and dosed yourself without benefit, if you are tired of paying money for useless treatment and ruining your stomach with nasty drugs, like thousands of others, you will come to me as a last resort, and I want you to come now. Don't delay. If I say I can cure you, you can depend upon it. Will you try me? Do it now.

No person should be weak, no person should suffer the loss of that vitality which renders life worth living. No one should allow themselves to become less a man than nature intended; no one should suffer when there is at hand a certain cure for their weakness and loss of vitality.

Most of the pains, most of the weakness of stomach, heart, brain and nerves from which many suffer are due to an early loss of nature's reserve power. You need not suffer. You can be restored. The very element which you have lost you can get back, and you may be as happy as any one that lives.

My Dr. McLaughlin's Electric Belt

will restore your strength. It will give back the old vigor of youth. The loss of your health causes Kidney Trouble, Rheumatism and Stomach ailments. You know it's a loss of vital power and affects every organ of the body. Most of the ailments from which you suffer can be traced to it.

The confidence I have in the wonderful curative powers of my Belt allows me to offer any man or woman who can give me reasonable security the use of the Belt at my risk, and they can

PAY WHEN CURED

I have cured thousands who have squandered the savings of years in useless doctoring. My Belt is easy to use; put it on when you go to bed; feel the glow of heat from it (no sting or burn, as in the old-style belts), and you feel the nerves tingle with the new life flowing into them. You get up in the morning feeling like a two-year-old.

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

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

Dear Sir,—I am pleased to tell you I am quite cured of rheumatism, and I thank you again for what your Belt has done for me. I have been able to work like another man, now that I am cured, and if I can be of any assistance to you in recommending your Belt, I will be pleased to do so. I tell every one who asks me about the change in me, and I tell them it was your Belt that did the work. They hardly believe it, but I can walk now without crippling, and stand upright, which I could not do before for years. I can say that it was the best use I ever made of my money when I bought your Belt. I can hardly express my feelings in giving it enough praise. Yours truly,
W. ATWELL, Bolton, Ont.

you and your Belt, which I only wore for three weeks, and have it laid aside as good as new. To put the whole thing in a nutshell, every joint in my body and my back is working like a new clock. My work is no bother to me, and I thank you again for the cure of my back and stomach, and for my whole system. Do not be afraid of letting any one see this, and if they are not satisfied with this, send them to me and I will prove it to them. After suffering for the most of four years, you and your Belt cured me. I came here from Scotland for that cure, and I am for stopping in this country now. I am here to witness all I have said. Wishing you all kinds of prosperity and success for your good remedy, I close, remaining,
JOSEPH ARMSTRONG, London, Ont.

Dear Sir,—About three years ago I bought one of your Electric Belts for Rheumatism in the legs, and after a few weeks' wear of the Belt I was so much better that I left it off. My wife was troubled with Neuralgia in the head, which was so severe as to almost drive her out of her mind. At my suggestion she tried your Belt for it, and it gave her almost instant relief, and she has had no return of the severe pain since. I consider it was worth many times what I paid for it, as I had tried many kinds of medicine and many doctors, and they had all failed to even give relief. It is the best thing I ever saw for Neuralgia and Rheumatism, and I can heartily recommend it to all who suffer from these troubles. Thanking you sincerely for your help, I remain, Yours very truly,
WILLIAM BROCK, Listowel, Ont.

Dear Sir,—I am glad to say that I never felt better in all my life, and all the praise is due to

No. 173 Rectory St.

WRITE TO-DAY FOR MY FREE ILLUSTRATED BOOK AND FULL INFORMATION.

CALL TO-DAY

IF YOU CAN'T CALL SEND COUPON FOR FREE BOOK.

DR. M. S. McLAUGHLIN, 112 Yonge St., Toronto, Can. Dear Sir,—Please forward me one of your books as advertised.

Name Address Office Hours—9 a.m. to 6 p.m.; Wednesday and Saturday till 9 p.m. WRITE PLAIN.

TRADE TOPIC.

WHY WESTERNERS ARE SO PROUD OF THEIR COUNTRY.—

Can Grow Best Wheat on Earth. Both the story and the success of Purity Flour begin in the rich, black, heavy soil, the gumbo, as it is called, that characterizes the plains of Western Canada. After examination by the world's foremost scientists, this soil has been proclaimed the richest on the earth's surface in every constituent that goes to the making of wheat. Western Canada must, therefore, be looked to for their wheat by all the wheat-eating countries that want the best flour, or require full hard wheat. So that the reason for the existence of the great St. Boniface mill of the Western Canada Flour Mills Company at Winnipeg lies in the fact that it

stands at the door of the Province which possess this rich wheat soil.

The Western Canada Flour Mills Company has a far-reaching system of storehouses scattered throughout the entire West, which are used both as purchasing depots and flour warehouses. Along the main and branch lines of the Western railroads there are at present over 75 of these, and this number is being constantly added to as new lines of railroad open up virgin wheat country. They have a capacity of over two and a half million bushels. As fast as the wheat is bought, and required at any of the company's mills, it is shipped to Brandon, Winnipeg, or Goderich, in which cities the company's mills are located.

The St. Boniface mill is one of the show places of Winnipeg. Among millers it is famous as one of the most per-

fectly-equipped, large, modern mills in the world. In extent, the property covers over 12 acres. The mills, which were completed in 1906, cost over \$1,000,000. The mill proper is seven stories in height, with a floor space of 75,000 square feet; and apart from the mill, there are 14 tanks, with a capacity, including the warehouse, of over 500,000 bushels; an elevator that has a capacity of 45,000 bushels, and an electric-power plant from which is distributed power, light and heat for the entire establishment.

The mechanical equipment is nothing short of marvellous. Its amazing completeness may be estimated from the fact that in the huge seven-story building of the mill itself there are less than ten men employed; the entire work being carried on by automatic machinery.

Is it any wonder these Westerners are proud, proud of their country and its soil, their wheat, and of the product of that wheat, i. e., Purity Flour?

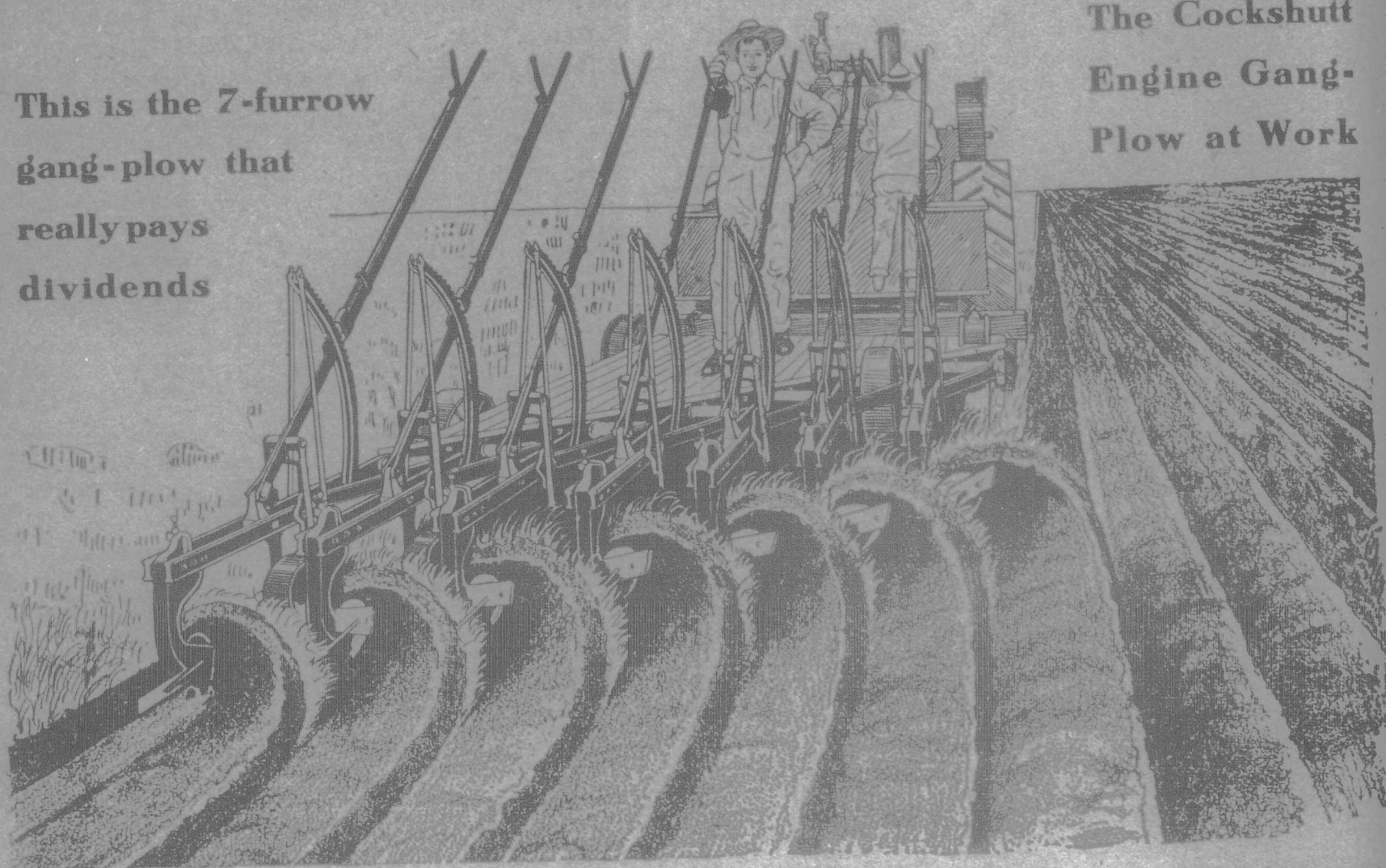
A story is told of a west country bishop who rebuked the sporting parson for his hunting proclivities. "I hear you go fox hunting a good deal," he observed one day. "You ought not to do this; there is plenty of work to be accomplished in the parish." "But," protested the vicar, "fox hunting is merely healthy exercise; besides, I hear you were at a ball the other night." "In a sense that is so," replied the bishop, "but, truly speaking, I was three or four rooms away from the ballroom."

The vicar smiled, and then retorted: "I am always three or four beds behind the fox, so what's the difference?"

You, or any man with your gumption and push, can make real big money by buying this gang-plow. And you can make it year after year, whether your own farm is big or small, in any section of Canada. Write and ask questions and we will tell you how to go about it. Get at it early—get at it right NOW.

This is the 7-furrow gang-plow that really pays dividends

The Cockshutt Engine Gang-Plow at Work



Men buy this Cockshutt Gang Plow in the West and do plowing by the day, or by the acre, for farmers who don't own such a fast and perfect plowing outfit. Often they travel over half a province in the course of the year, constantly busy with profitable plowing-jobs. Most of them are engaged a whole season ahead. One man cleared \$2,000 that way last year and paid for the whole outfit besides.

Working under hard conditions, in the tough and sticky soil of the Red River Valley, men have again and again plowed with this implement at a cost of only \$1.75 an acre! Out there they get \$3.50 an acre for contract plowing. Good money in that, don't you think? There is better money than that in it for you, in the lighter soils common to other sections. Think—How many farmers do you know who can do their own plowing for three-fifty an acre, counting everything? Couldn't you convince a lot of your neighbors that it would pay far better to contract with you for the work? And then figure, too, that this gang plow is easily good for twenty acres a day, and better plowing than the walking plow can do except in really expert hands.

Remarkably easy of draft, the Cockshutt Seven-Furrow Engine Gang. The plow's weight is carried on broad-tired wheels, with a direct centre-hitch from the platform that brings the plow close behind the engine and utilizes every possible ounce of power the tractor develops. Can be handled readily with either a gasoline tractor or the smaller steam kind.

Each plow is hinged to the frame individually, carried between wide jaws more than twice strong enough to stand any strain they will ever have to undergo. As the plow-beams are extra heavy, the shares will not wing-down in any kind of soil, and the bottom of the furrows will be always level, never 'slicked' nor 'plastered,' and each of exactly the same depth. The tilth produced by this gang-plow is more perfect than the most careful plowing will give with any other kind of a plow.

As shown in the picture, even when used as a breaking plow for virgin soils, the work is done evenly, every cut turning full on its side and burying the vegetation so thoroughly it must rot quickly. Specially the right plow for putting old pastures into planting condition.

One man, standing on the roomy and sensible platform, easily controls the plow's work. Each plow-bottom is independent of all the others, and is thrown into or out of the land by an easy pull of its lever, which moves upon a ratcheted segment of ample strength. No great muscular exertion is required to lift or lower the bottoms, as the length of the levers is sufficient to insure greatest lifting power needed even in wet or sticky lands. Levers all have adjustable stops that regulate the depth at which the bottoms are cutting,—set them in a moment, and they stay set till you change them.

The Cockshutt system of tempering, grinding and finishing all our plow-bottoms, and the use of special formula for the steel in them, makes sure these boards will scour clean and bright under all conditions.

The price is low. Will you write us to-day for descriptive booklet and proposition that will show you what there is for you in this gang-plow contracting idea?—even if your farm is not large enough to warrant your buying such a plow for your exclusive use.

THE COCKSHUTT LINE OF IMPLEMENTS

built right to farm right, includes not only more than 120 styles of plows—ranging from light garden plows to huge 12-furrow engine gangs—but also all styles of seeders, cultivators and harrows. Write us for details of the kind of implements the business farmer ought to buy.

COCKSHUTT

of Brantford

PLOW CO., Limited

Canada's Most Modern Plow Works

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